

# Swelio



# Table of Contents

|                                   |          |
|-----------------------------------|----------|
| <b>Symbol Reference</b>           | <b>1</b> |
| <b>Swelio.Engine Namespace</b>    | <b>1</b> |
| Address Class                     | 2        |
| Address.Address Constructor       | 3        |
| Address Methods                   | 3        |
| Address.Parse Method              | 3        |
| Address Properties                | 3        |
| Address.Municipality Property     | 3        |
| Address.Street Property           | 4        |
| Address.Zip Property              | 4        |
| Card Class                        | 4        |
| Card.Card Constructor             | 5        |
| Card Methods                      | 6        |
| DisplayCertificate Method         | 6        |
| Dispose Method                    | 6        |
| Card.EncodeCertificate Method     | 6        |
| EncodePhoto Method                | 7        |
| Card.ReadAddress Method           | 7        |
| Card.ReadCertificate Method       | 7        |
| Card.ReadIdentity Method          | 7        |
| Card.ReadPhoto Method             | 8        |
| Save Method                       | 8        |
| Card.SaveCertificate Method       | 8        |
| Card.SavePhoto Method             | 9        |
| Card.SaveQRCode Method            | 9        |
| Card.VerifyPinCode Method         | 9        |
| Card Properties                   | 9        |
| Card.AppletVersion Property       | 9        |
| Card.EidCard Property             | 10       |
| Card.Inserted Property            | 10       |
| Card.SerialNumber Property        | 10       |
| Card.Tag Property                 | 10       |
| CardDate Class                    | 10       |
| CardDate Methods                  | 11       |
| CardDate.ToDate Method            | 11       |
| CardDate.ToLongDateString Method  | 11       |
| CardDate.ToShortDateString Method | 12       |

|   |    |
|---|----|
| CardEventArgs Class                             | 12 |
| CardEventArgs.CardEventArgs Constructor         | 12 |
| CardEventArgs Properties                        | 13 |
| CardEventArgs.ReaderNumber Property             | 13 |
| CardNumber Class                                | 13 |
| CardNumber Methods                              | 13 |
| CardNumber.ToString Method                      | 13 |
| CardReader Class                                | 14 |
| CardReader.CardReader Constructor               | 15 |
| CardReader Fields                               | 15 |
| CardReader.card Field                           | 15 |
| CardReader Methods                              | 15 |
| CardReader.ActivateCard Method                  | 16 |
| CardReader.DeactivateCard Method                | 16 |
| Dispose Method                                  | 16 |
| GetCard Method                                  | 16 |
| CardReader Properties                           | 17 |
| CardReader.CardActivated Property               | 17 |
| CardReader.CardPresent Property                 | 17 |
| CardReader.Index Property                       | 17 |
| CardReader.Name Property                        | 17 |
| CardReader.Selected Property                    | 17 |
| CardReader.Tag Property                         | 17 |
| DocumentContainer Class                         | 18 |
| DocumentContainer.DocumentContainer Constructor | 18 |
| DocumentContainer Methods                       | 19 |
| DocumentContainer.AddFile Method                | 19 |
| DocumentContainer.Close Method                  | 19 |
| DocumentContainer.Save Method                   | 19 |
| SelectCertificate Method                        | 19 |
| EIDAddress Class                                | 20 |
| EIDAddress Fields                               | 21 |
| EIDAddress.municipality Field                   | 21 |
| EIDAddress.street Field                         | 21 |
| EIDAddress.zip Field                            | 21 |
| EIDCertificate Class                            | 21 |
| EIDCertificate Fields                           | 22 |
| EIDCertificate.certificate Field                | 22 |
| EIDCertificate.certificateLength Field          | 22 |
| EIDDataLength Class                             | 22 |
| EIDDataLength Fields                            | 24 |

|   |    |
|---|----|
| EIDDataLength.EidMaxBirthDateLen Field                  | 24 |
| EIDDataLength.EidMaxBirthplaceLen Field                 | 24 |
| EIDDataLength.EidMaxBrexitMention1Len Field             | 24 |
| EIDDataLength.EidMaxBrexitMention2Len Field             | 24 |
| EIDDataLength.EidMaxCardNumberLen Field                 | 24 |
| EIDDataLength.EidMaxCertLen Field                       | 24 |
| EIDDataLength.EidMaxChipNumberLen Field                 | 25 |
| EIDDataLength.EidMaxDateAndCountryOfProtectionLen Field | 25 |
| EIDDataLength.EidMaxDateBeginLen Field                  | 25 |
| EIDDataLength.EidMaxDateEndLen Field                    | 25 |
| EIDDataLength.EidMaxDeliveryMunicipalityLen Field       | 25 |
| EIDDataLength.EidMaxDocumentTypeLen Field               | 25 |
| EIDDataLength.EidMaxDuplicateLen Field                  | 25 |
| EIDDataLength.EidMaxFirstNameLen Field                  | 25 |
| EIDDataLength.EidMaxMemberOfFamilyLen Field             | 26 |
| EIDDataLength.EidMaxMiddleNameLen Field                 | 26 |
| EIDDataLength.EidMaxMunicipalityName Field              | 26 |
| EIDDataLength.EidMaxNameLen Field                       | 26 |
| EIDDataLength.EidMaxNationalityLen Field                | 26 |
| EIDDataLength.EidMaxNationalNumberLen Field             | 26 |
| EIDDataLength.EidMaxNobleConditionLen Field             | 26 |
| EIDDataLength.EidMaxPictureLen Field                    | 27 |
| EIDDataLength.EidMaxRegionalFileNumberLen Field         | 27 |
| EIDDataLength.EidMaxSexLen Field                        | 27 |
| EIDDataLength.EidMaxSpecialOrganizationLen Field        | 27 |
| EIDDataLength.EidMaxSpecialStatusLen Field              | 27 |
| EIDDataLength.EidMaxStreetNameLen Field                 | 27 |
| EIDDataLength.EidMaxVAT1Len Field                       | 27 |
| EIDDataLength.EidMaxVAT2Len Field                       | 28 |
| EIDDataLength.EidMaxWorkPermitTypeLen Field             | 28 |
| EIDDataLength.EidMaxZipLen Field                        | 28 |
| EIDError Class  | 28 |
| EIDError Fields   | 29 |
| EIDError.Code Field                                     | 29 |
| EIDError.Description Field                              | 29 |
| EIDIdentity Class                                       | 29 |
| EIDIdentity Fields                                      | 31 |
| EIDIdentity.birthDate Field                             | 31 |
| EIDIdentity.birthLocation Field                         | 31 |
| EIDIdentity.brexitMention1 Field                        | 31 |
| EIDIdentity.brexitMention2 Field                        | 31 |

|   |    |
|---|----|
| EIDIdentity.cardNumber Field                      | 31 |
| EIDIdentity.chipNumber Field                      | 31 |
| EIDIdentity.dateAndCountryOfProtection Field      | 32 |
| EIDIdentity.documentType Field                    | 32 |
| EIDIdentity.duplicate Field                       | 32 |
| EIDIdentity.extendedMinority Field                | 32 |
| EIDIdentity.firstName1 Field                      | 32 |
| EIDIdentity.firstName2 Field                      | 32 |
| EIDIdentity.memberOfFamily Field                  | 33 |
| EIDIdentity.municipality Field                    | 33 |
| EIDIdentity.name Field                            | 33 |
| EIDIdentity.nationality Field                     | 33 |
| EIDIdentity.nationalNumber Field                  | 33 |
| EIDIdentity.nobleCondition Field                  | 33 |
| EIDIdentity.regionalFileNumber Field              | 33 |
| EIDIdentity.sex Field                             | 34 |
| EIDIdentity.specialOrganization Field             | 34 |
| EIDIdentity.validityDateBegin Field               | 34 |
| EIDIdentity.validityDateEnd Field                 | 34 |
| EIDIdentity.vat1 Field                            | 34 |
| EIDIdentity.vat2 Field                            | 34 |
| EIDIdentity.whiteCane Field                       | 35 |
| EIDIdentity.workPermitType Field                  | 35 |
| EIDIdentity.yellowCane Field                      | 35 |
| EIDPicture Class                                  | 35 |
| EIDPicture Fields                                 | 35 |
| EIDPicture.picture Field                          | 36 |
| EIDPicture.pictureLength Field                    | 36 |
| Encryption Class                                  | 36 |
| Encryption Methods                                | 37 |
| Encryption.CheckFileMD5 Method                    | 37 |
| Encryption.CheckFileSHA1 Method                   | 37 |
| CheckMD5 Method                                   | 37 |
| CheckSHA1 Method                                  | 38 |
| DecryptFile Method                                | 38 |
| EncryptFile Method                                | 39 |
| Encryption.GenerateAuthenticationSignature Method | 39 |
| Encryption.GenerateNonRepudiationSignature Method | 40 |
| Encryption.GetFileMD5 Method                      | 40 |
| Encryption.GetFileSHA1 Method                     | 40 |
| GetMD5 Method                                     | 40 |

|  |    |
|--|----|
| GetSHA1 Method                                     | 41 |
| Encryption.VerifySignature Method                  | 41 |
| FileOperations Class                               | 42 |
| FileOperations Methods                             | 44 |
| FileOperations.ClearFileAttributes Method          | 44 |
| FileOperations.CopyFile Method                     | 44 |
| FileOperations.CreateUnicodeFile Method            | 44 |
| FileOperations.DeleteFile Method                   | 44 |
| FileOperations.DeleteToRecycleBin Method           | 44 |
| FileOperations.DirectoryExists Method              | 45 |
| FileOperations.ExcludeTrailingPathDelimiter Method | 45 |
| FileOperations.FileExists Method                   | 45 |
| FileOperations.FileExtensionIs Method              | 45 |
| FileOperations.FileIsAnimatedGif Method            | 45 |
| FileOperations.FileIsExe Method                    | 45 |
| FileOperations.FileIsIcon Method                   | 46 |
| FileOperations.FileIsImage Method                  | 46 |
| FileOperations.FileIsLink Method                   | 46 |
| FileOperations.FileOrFolderExists Method           | 46 |
| FileOperations.FullPath Method                     | 46 |
| FileOperations.GetExtension Method                 | 47 |
| FileOperations.GetFilesCount Method                | 47 |
| FileOperations.GetFileSize Method                  | 47 |
| FileOperations.IncludeTrailingPathDelimiter Method | 47 |
| FileOperations.IsDirectory Method                  | 47 |
| FileOperations.IsUnicodeFile Method                | 48 |
| FileOperations.IsValidFileName Method              | 48 |
| FileOperations.IsValidPathName Method              | 48 |
| FileOperations.RenameFile Method                   | 48 |
| FileOperations.ShellCopyFile Method                | 48 |
| FileOperations.StripFileName Method                | 48 |
| FileOperations.UnExpandPath Method                 | 49 |
| Identity Class                                     | 49 |
| Identity Methods                                   | 51 |
| Identity.Clear Method                              | 51 |
| Identity Properties                                | 51 |
| Identity.BirthDate Property                        | 51 |
| Identity.BirthLocation Property                    | 51 |
| Identity.BrexitMention1 Property                   | 51 |
| Identity.BrexitMention2 Property                   | 51 |
| Identity.CardNumber Property                       | 52 |

|  |    |
|--|----|
| Identity.ChipNumber Property                 | 52 |
| Identity.DateAndCountryOfProtection Property | 52 |
| Identity.DocumentType Property               | 52 |
| Identity.Duplicate Property                  | 52 |
| Identity.ExtendedMinority Property           | 52 |
| Identity.FirstName1 Property                 | 53 |
| Identity.FirstName2 Property                 | 53 |
| Identity.MemberOfFamily Property             | 53 |
| Identity.Municipality Property               | 53 |
| Identity.Nationality Property                | 53 |
| Identity.NationalityISO Property             | 53 |
| Identity.NationalNumber Property             | 54 |
| Identity.NobleCondition Property             | 54 |
| Identity.RegionalFileNumber Property         | 54 |
| Identity.Sex Property                        | 54 |
| Identity.SpecialOrganization Property        | 54 |
| Identity.Surname Property                    | 54 |
| Identity.ValidityDateBegin Property          | 54 |
| Identity.ValidityDateEnd Property            | 55 |
| Identity.Vat1 Property                       | 55 |
| Identity.Vat2 Property                       | 55 |
| Identity.WhiteCane Property                  | 55 |
| Identity.WorkPermitType Property             | 55 |
| Identity.YellowCane Property                 | 55 |
| InteropHelper Class                          | 56 |
| InteropHelper Methods                        | 57 |
| InteropHelper.ClearUnusedMemory Method       | 57 |
| InteropHelper.GetStartup Method              | 57 |
| InteropHelper.SetStartup Method              | 57 |
| InteropHelper.ShowScreenKeyboard Method      | 57 |
| InteropHelper.ShowWindowsError Method        | 58 |
| InteropHelper.TurnMonitorOff Method          | 58 |
| InteropHelper.TurnMonitorOn Method           | 58 |
| InteropHelper Properties                     | 58 |
| InteropHelper.IsMediaCenter Property         | 58 |
| InteropHelper.IsMultiTouchReady Property     | 58 |
| InteropHelper.IsTabletPC Property            | 58 |
| InteropHelper.MetroActive Property           | 59 |
| InteropHelper.RunningOnVista Property        | 59 |
| InteropHelper.RunningOnWin10 Property        | 59 |
| InteropHelper.RunningOnWin7 Property         | 59 |



|   |    |
|---|----|
| InteropHelper.RunningOnWin8 Property    | 59 |
| InteropHelper.RunningOnXP Property      | 59 |
| Manager Class                           | 60 |
| Manager.Manager Constructor             | 61 |
| Manager Methods                         | 61 |
| Manager.Dispose Method                  | 61 |
| GetReader Method                        | 61 |
| Manager.GetReaderName Method            | 62 |
| Manager.ListReaders Method              | 62 |
| Manager.ReloadReadersList Method        | 62 |
| Manager.SendAPDU Method                 | 62 |
| Manager.SetDefaultReader Method         | 62 |
| Manager Properties                      | 63 |
| Manager.Active Property                 | 63 |
| Manager.ReaderCount Property            | 63 |
| Manager.TraceEvents Property            | 63 |
| Manager.TraceHardwareEvents Property    | 63 |
| Manager.TraceServiceEvents Property     | 63 |
| Manager Events                          | 63 |
| Manager.CardInserted Event              | 64 |
| Manager.CardRemoved Event               | 64 |
| Manager.ReadersListChanged Event        | 64 |
| NationalNumber Class                    | 64 |
| NationalNumber Methods                  | 64 |
| NationalNumber.ToString Method          | 65 |
| NativeMethods Class                     | 65 |
| NativeMethods Methods                   | 73 |
| NativeMethods.ActivateCardEx Method     | 73 |
| NativeMethods.AddFileToContainer Method | 73 |
| NativeMethods.CardDecryptFile Method    | 73 |
| NativeMethods.CardEncryptFile Method    | 74 |
| NativeMethods.CardSignCadesT Method     | 74 |
| NativeMethods.CardSignCadesTEx Method   | 74 |
| NativeMethods.CardSignCMS Method        | 74 |
| NativeMethods.CardSignCMSEx Method      | 74 |
| NativeMethods.CertSignCadesT Method     | 74 |
| NativeMethods.CertSignCadesTData Method | 75 |
| NativeMethods.CertSignCadesTEx Method   | 75 |
| NativeMethods.CertSignCMS Method        | 75 |
| NativeMethods.CertSignCMSData Method    | 75 |
| NativeMethods.CertSignCMSEx Method      | 75 |

|  |    |
|--|----|
| NativeMethods.CheckMD5 Method                          | 75 |
| NativeMethods.CheckSHA1 Method                         | 76 |
| NativeMethods.ClearFileAttributes Method               | 76 |
| NativeMethods.ClearUnusedMemory Method                 | 76 |
| NativeMethods.ContainerCertificate Method              | 76 |
| NativeMethods.ContainerEidCertificate Method           | 76 |
| NativeMethods.ContainerPickCertificate Method          | 76 |
| NativeMethods.CreateCardBuffer Method                  | 77 |
| NativeMethods.CreateUnicodeFile Method                 | 77 |
| NativeMethods.CurrentIPAddress Method                  | 77 |
| NativeMethods.DeactivateCardEx Method                  | 77 |
| NativeMethods.DecryptFileAES Method                    | 77 |
| NativeMethods.DeleteCardBuffer Method                  | 77 |
| NativeMethods.DeleteObject Method                      | 78 |
| NativeMethods.DeleteToRecycleBin Method                | 78 |
| NativeMethods.DirectoryExists Method                   | 78 |
| NativeMethods.DisplayCertificate Method                | 78 |
| NativeMethods.EmptyRecycleBin Method                   | 78 |
| NativeMethods.EncodeCertificate Method                 | 78 |
| NativeMethods.EncodePhoto Method                       | 79 |
| NativeMethods.EncryptFileAES Method                    | 79 |
| NativeMethods.FileCopy Method                          | 79 |
| NativeMethods.FileDelete Method                        | 79 |
| NativeMethods.FileExists Method                        | 79 |
| NativeMethods.FileExtensionIs Method                   | 79 |
| NativeMethods.FileGetSize Method                       | 80 |
| NativeMethods.FileIsExe Method                         | 80 |
| NativeMethods.FileIsIcon Method                        | 80 |
| NativeMethods.FileIsImage Method                       | 80 |
| NativeMethods.FileIsLink Method                        | 80 |
| NativeMethods.FileOrFolderExists Method                | 80 |
| NativeMethods.FileRename Method                        | 81 |
| NativeMethods.FreeContainer Method                     | 81 |
| NativeMethods.FullPath Method                          | 81 |
| NativeMethods.GenerateAuthenticationSignatureEx Method | 81 |
| NativeMethods.GenerateBMP Method                       | 81 |
| NativeMethods.GenerateNonRepudiationSignatureEx Method | 81 |
| NativeMethods.GeneratePNG Method                       | 82 |
| NativeMethods.GenerateQRCodeEx Method                  | 82 |
| NativeMethods.GetCardBufferA Method                    | 82 |
| NativeMethods.GetCardBufferSize Method                 | 82 |

|  |    |
|--|----|
| NativeMethods.GetCardBufferW Method            | 82 |
| NativeMethods.GetCardSerialNumber Method       | 82 |
| NativeMethods.GetCardVersion Method            | 83 |
| NativeMethods.GetEncodedCertificateSize Method | 83 |
| NativeMethods.GetEncodedPhotoSize Method       | 83 |
| NativeMethods.GetFileMD5 Method                | 83 |
| NativeMethods.GetFilesCount Method             | 83 |
| NativeMethods.GetFileSHA1 Method               | 83 |
| NativeMethods.GetHBitmap Method                | 84 |
| NativeMethods.GetISOCODE Method                | 84 |
| NativeMethods.GetMD5 Method                    | 84 |
| NativeMethods.GetReaderIndex Method            | 84 |
| NativeMethods.GetReaderName Method             | 84 |
| NativeMethods.GetReaderNameLen Method          | 84 |
| NativeMethods.GetReadersCount Method           | 85 |
| NativeMethods.GetSelectedReaderIndex Method    | 85 |
| NativeMethods.GetSHA1 Method                   | 85 |
| NativeMethods.GetStartup Method                | 85 |
| NativeMethods.HibernateWindows Method          | 85 |
| NativeMethods.IgnoreHardwareEvents Method      | 85 |
| NativeMethods.IgnoreServiceEvents Method       | 86 |
| NativeMethods.InitializeContainer Method       | 86 |
| NativeMethods.IsAnimatedGIF Method             | 86 |
| NativeMethods.IsCardActivatedEx Method         | 86 |
| NativeMethods.IsCardPresentEx Method           | 86 |
| NativeMethods.IsCardStillInsertedEx Method     | 86 |
| NativeMethods.IsConnectedToInternet Method     | 87 |
| NativeMethods.IsDirectory Method               | 87 |
| NativeMethods.IsEIDCardEx Method               | 87 |
| NativeMethods.IsEngineActive Method            | 87 |
| NativeMethods.IsMale Method                    | 87 |
| NativeMethods.IsMediaCenter Method             | 87 |
| NativeMethods.IsMetroActive Method             | 88 |
| NativeMethods.IsMultiTouchReady Method         | 88 |
| NativeMethods.IsTabletPC Method                | 88 |
| NativeMethods.IsUnicodeFile Method             | 88 |
| NativeMethods.IsValidFileName Method           | 88 |
| NativeMethods.IsValidPathName Method           | 88 |
| NativeMethods.IsWindows10 Method               | 89 |
| NativeMethods.IsWindows7 Method                | 89 |
| NativeMethods.IsWindows8 Method                | 89 |

|  |    |
|--|----|
| NativeMethods.IsWindowsVista Method                  | 89 |
| NativeMethods.IsWindowsXP Method                     | 89 |
| NativeMethods.IsWOW64 Method                         | 89 |
| NativeMethods.LoadCertificate Method                 | 90 |
| NativeMethods.LoadPhoto Method                       | 90 |
| NativeMethods.PathUnExpandEnvStrings Method          | 90 |
| NativeMethods.PortAvailable Method                   | 90 |
| NativeMethods.ReadAddressEx Method                   | 90 |
| NativeMethods.ReadAuthenticationCertificate Method   | 90 |
| NativeMethods.ReadCaCertificate Method               | 91 |
| NativeMethods.ReadIdentityEx Method                  | 91 |
| NativeMethods.ReadNonRepudiationCertificate Method   | 91 |
| NativeMethods.ReadPhotoEx Method                     | 91 |
| NativeMethods.ReadRootCaCertificate Method           | 91 |
| NativeMethods.ReadRrnCertificate Method              | 91 |
| NativeMethods.RecycleBinEmpty Method                 | 92 |
| NativeMethods.ReloadReadersList Method               | 92 |
| NativeMethods.RemoveCallback Method                  | 92 |
| NativeMethods.RemoveStartup Method                   | 92 |
| NativeMethods.SaveAuthenticationCertificateEx Method | 92 |
| NativeMethods.SaveCaCertificateEx Method             | 92 |
| NativeMethods.SaveCardToToXMLStreamExA Method        | 93 |
| NativeMethods.SaveCardToToXMLStreamExW Method        | 93 |
| NativeMethods.SaveCardToXmlEx Method                 | 93 |
| NativeMethods.SaveCardToXmlExAnsi Method             | 93 |
| NativeMethods.SaveContainer Method                   | 93 |
| NativeMethods.SaveNonRepudiationCertificateEx Method | 93 |
| NativeMethods.SavePersonCsvToStreamA Method          | 94 |
| NativeMethods.SavePersonCsvToStreamW Method          | 94 |
| NativeMethods.SavePersonToCsvEx Method               | 94 |
| NativeMethods.SavePersonToCsvExAnsi Method           | 94 |
| NativeMethods.SavePhotoAsBitmapEx Method             | 94 |
| NativeMethods.SavePhotoAsJpegEx Method               | 94 |
| NativeMethods.SaveRootCaCertificateEx Method         | 95 |
| NativeMethods.SaveRrnCertificateEx Method            | 95 |
| NativeMethods.SelectReader Method                    | 95 |
| NativeMethods.SelectReaderByName Method              | 95 |
| NativeMethods.SendAPDU Method                        | 95 |
| NativeMethods.SetCallback Method                     | 95 |
| NativeMethods.SetStartup Method                      | 96 |
| NativeMethods.ShellCopyFile Method                   | 96 |

|   |     |
|---|-----|
| NativeMethods.ShowError Method          | 96  |
| NativeMethods.ShutdownWindows Method    | 96  |
| NativeMethods.StartEngine Method        | 96  |
| NativeMethods.StopEngine Method         | 96  |
| NativeMethods.StripFileName Method      | 97  |
| NativeMethods.SuspendWindows Method     | 97  |
| NativeMethods.TurnMonitorOff Method     | 97  |
| NativeMethods.TurnMonitorOn Method      | 97  |
| NativeMethods.VerifyPinEx Method        | 97  |
| NativeMethods.VerifySignature Method    | 97  |
| Network Class                           | 98  |
| Network Methods                         | 98  |
| Network.PortAvailable Method            | 98  |
| Network Properties                      | 98  |
| Network.CurrentIPAddress Property       | 99  |
| Network.IsConnectedToInternet Property  | 99  |
| PostalAddress Class                     | 99  |
| PostalAddress.PostalAddress Constructor | 100 |
| PostalAddress Properties                | 100 |
| PostalAddress.House Property            | 100 |
| PostalAddress.Municipality Property     | 100 |
| PostalAddress.Street Property           | 100 |
| PostalAddress.Zip Property              | 100 |
| QRCode Class                            | 101 |
| QRCode Methods                          | 101 |
| GenerateBitmap Method                   | 101 |
| GeneratePng Method                      | 102 |
| GetBitmap Method                        | 102 |
| RecycleBin Class                        | 103 |
| RecycleBin Methods                      | 103 |
| RecycleBin.Clear Method                 | 104 |
| RecycleBin.Send Method                  | 104 |
| RecycleBin.SendSilent Method            | 104 |
| RecycleBin Properties                   | 104 |
| RecycleBin.IsEmpty Property             | 104 |
| WindowsOperations Class                 | 104 |
| WindowsOperations Methods               | 105 |
| WindowsOperations.Hibernate Method      | 105 |
| WindowsOperations.Shutdown Method       | 105 |
| WindowsOperations.Suspend Method        | 105 |
| Swelio.Engine.CardEvent Enumeration     | 105 |

|  |            |
|--|------------|
| Swelio.Engine.CertificateType Enumeration                | 106        |
| Swelio.Engine.ChangeWindowMessageFilterFlags Enumeration | 106        |
| Swelio.Engine.DocumentType Enumeration                   | 106        |
| Swelio.Engine.ErrorCorrectionLevel Enumeration           | 107        |
| Swelio.Engine.ExportFormat Enumeration                   | 107        |
| Swelio.Engine.FileEncoding Enumeration                   | 107        |
| Swelio.Engine.Gender Enumeration                         | 108        |
| Swelio.Engine.PhotoFormat Enumeration                    | 108        |
| Swelio.Engine.ShutdownOption Enumeration                 | 108        |
| Swelio.Engine.ReaderCallbackDelegate Type                | 109        |
| <b>Files</b>   | <b>109</b> |
| Address.cs   | 112        |
| Card.cs  | 113        |
| CardDate.cs  | 113        |
| CardEvent.cs   | 113        |
| CardEventArgs.cs   | 113        |
| CardNumber.cs  | 114        |
| CardReader.cs  | 114        |
| CertificateType.cs                                       | 114        |
| DocumentContainer.cs                                     | 114        |
| DocumentType.cs  | 114        |
| Encryption.cs  | 115        |
| ExportFormat.cs  | 115        |
| FileEncoding.cs  | 115        |
| FileOperations.cs  | 115        |
| Gender.cs  | 116        |
| Identity.cs  | 116        |
| InteropHelper.cs   | 116        |
| Manager.cs   | 116        |
| NationalNumber.cs  | 117        |
| NativeMethods.cs   | 117        |
| NativeTypes.cs   | 117        |
| Network.cs   | 117        |
| PhotoFormat.cs   | 118        |
| PostalAddress.cs   | 118        |
| QRCode.cs  | 118        |
| RecycleBin.cs  | 118        |
| WindowsOperations.cs                                     | 118        |

## Index


























## a

# 1 Symbol Reference











## 1.1 Swelio.Engine Namespace

This is namespace Swelio.Engine.

### Classes

|   | Name   | Description   |
|---|--|---|
|    | Address ( <a href="#">see page 2</a> )             | Represents a postal address of the person   |
|    | Card ( <a href="#">see page 4</a> )                | This class represents a Belgian EID card  |
|    | CardDate ( <a href="#">see page 10</a> )           | Handles dates conversion between internal EID format and YYYYMMDD format  |
|    | CardEventArgs ( <a href="#">see page 12</a> )      | This is class Swelio.Engine.CardEventArgs.  |
|    | CardNumber ( <a href="#">see page 13</a> )         | EID card number formatter. This class takes EID card number in raw form as input and return formatted EID card number   |
|    | CardReader ( <a href="#">see page 14</a> )         | The physical smart card ( <a href="#">see page 15</a> ) reader  |
|   | DocumentContainer ( <a href="#">see page 18</a> )  | ASiC document container. Associated Signature Containers (ASiC) specifies the use of container structures to bind together one or more signed objects with either advanced electronic signatures or timestamp tokens into one single digital container. |
|  | EIDAddress ( <a href="#">see page 20</a> )         | EID address information, stored on the card   |
|  | EIDCertificate ( <a href="#">see page 21</a> )     | Certificate, stored on EID card   |
|  | EIDDataLength ( <a href="#">see page 22</a> )      | Maximum length of EID fields  |
|  | EIDError ( <a href="#">see page 28</a> )           | This is class Swelio.Engine.EIDError.   |
|  | EIDIdentity ( <a href="#">see page 29</a> )        | Identity ( <a href="#">see page 49</a> ) information stored on EID card   |
|  | EIDPicture ( <a href="#">see page 35</a> )         | Raw picture ( <a href="#">see page 36</a> ) data from EID card  |
|  | Encryption ( <a href="#">see page 36</a> )         |   |
|  | FileOperations ( <a href="#">see page 42</a> )     | Helper class for common file operations   |
|  | Identity ( <a href="#">see page 49</a> )           | Holds identity information that is stored on EID card   |
|  | InteropHelper ( <a href="#">see page 56</a> )      | Helper class for accessing native Windows API and resources Not recommended to use it directly without deep understanding of Windows API  |
|  | Manager ( <a href="#">see page 60</a> )            | The Swelio Engine Manager class used to activate and deactivate engine and gives an access to the smart card readers, connected to the PC   |
|  | NationalNumber ( <a href="#">see page 64</a> )     | National number formatter   |
|  | NativeMethods ( <a href="#">see page 65</a> )      | This is class Swelio.Engine.NativeMethods.  |
|  | Network ( <a href="#">see page 98</a> )            | This is class Swelio.Engine.Network.  |
|  | PostalAddress ( <a href="#">see page 99</a> )      | This is class Swelio.Engine.PostalAddress.  |
|  | QRCode ( <a href="#">see page 101</a> )            | QR Code encoder class   |
|  | RecycleBin ( <a href="#">see page 103</a> )        | Send ( <a href="#">see page 104</a> ) files directly to the recycle bin.  |
|  | WindowsOperations ( <a href="#">see page 104</a> ) | Windows power management class  |

## Enumerations

|   | Name  | Description  |
|---|---|--|
|  | CardEvent ( <a href="#">see page 105</a> )                      | The code of the card event                                   |
|  | CertificateType ( <a href="#">see page 106</a> )                | The type of the certificate                                  |
|  | ChangeWindowMessageFilterFlags ( <a href="#">see page 106</a> ) | This is record Swelio.Engine.ChangeWindowMessageFilterFlags. |
|  | DocumentType ( <a href="#">see page 106</a> )                   | This is record Swelio.Engine.DocumentType.                   |
|  | ErrorCorrectionLevel ( <a href="#">see page 107</a> )           | This is record Swelio.Engine.ErrorCorrectionLevel.           |
|  | ExportFormat ( <a href="#">see page 107</a> )                   | This is record Swelio.Engine.ExportFormat.                   |
|  | FileEncoding ( <a href="#">see page 107</a> )                   | This is record Swelio.Engine.FileEncoding.                   |
|  | Gender ( <a href="#">see page 108</a> )                         | This is record Swelio.Engine.Gender.                         |
|  | PhotoFormat ( <a href="#">see page 108</a> )                    | This is record Swelio.Engine.PhotoFormat.                    |
|  | ShutdownOption ( <a href="#">see page 108</a> )                 | Windows shutdown options                                     |

## Types

| Name  | Description  |
|---|--|
| ReaderCallbackDelegate ( <a href="#">see page 109</a> ) | This is type Swelio.Engine.ReaderCallbackDelegate. |

# 1.1.1 Address Class

Represents a postal address of the person

## Inheritance Hierarchy

Swelio.Engine.Address

## C#


```
[Browsable(false)]
public class Address;
```

## File

Address.cs ([see page 112](#))

## Members




### Methods

|   | Name                                   | Description                                      |
|---|--|--|
|  | Address ( <a href="#">see page 3</a> ) | Initializes a new instance of the Address class. |

### Address Methods


|   | Name                                 | Description   |
|---|--------------------------------------|---|
|  | Parse ( <a href="#">see page 3</a> ) | Parses address string to street name and house number |

### Address Properties


|   | Name  | Description  |
|---|---|--------------|
|  | Municipality ( <a href="#">see page 3</a> ) | Municipality |
|  | Street ( <a href="#">see page 4</a> )       | Street name  |
|  | Zip ( <a href="#">see page 4</a> )          | ZIP code     |









Methods

|   | Name                   | Description                                      |
|---|------------------------|--|
|  | Address (🔗 see page 3) | Initializes a new instance of the Address class. |

Address Methods

|   | Name                 | Description   |
|---|----------------------|---|
|  | Parse (🔗 see page 3) | Parses address string to street name and house number |

Address Properties

|   | Name                        | Description  |
|---|-----------------------------|--------------|
|   | Municipality (🔗 see page 3) | Municipality |
|   | Street (🔗 see page 4)       | Street name  |
|   | Zip (🔗 see page 4)          | ZIP code     |

### 1.1.1.1 Address.Address Constructor

Initializes a new instance of the Address (🔗 see page 2) class.

C#

```
public Address(string street, string zip, string municipality);
```

Parameters

| Parameters          | Description       |
|---------------------|-------------------|
| string street       | The street.       |
| string zip          | The zip code.     |
| string municipality | The municipality. |

### 1.1.1.2 Address Methods

#### 1.1.1.2.1 Address.Parse Method

Parses address string to street name and house number

C#

```
public PostalAddress Parse();
```

Returns

The postal address

### 1.1.1.3 Address Properties

#### 1.1.1.3.1 Address.Municipality Property

Municipality

C#

```
[Description("Municipality")]
public string Municipality;
```

### 1.1.1.3.2 Address.Street Property

Street name

```
C#
[Description("Street name")]
public string Street;
```

### 1.1.1.3.3 Address.Zip Property

ZIP code

```
C#
[Description("ZIP code")]
public string Zip;
```

## 1.1.2 Card Class

This class represents a Belgian EID card

#### Inheritance Hierarchy



```
C#
public sealed class Card : IDisposable;
```

File  
Card.cs (see page 113)

#### Members






##### Methods

|  | Name              | Description                                   |
|--|-------------------|---|
|  | Card (see page 5) | Initializes a new instance of the Card class. |


##### Card Methods

|  | Name                            | Description  |
|--|---------------------------------|--|
|  | DisplayCertificate (see page 6) | Displays the certificate.  |
|  | Dispose (see page 6)            | Performs application-defined tasks associated with freeing, releasing, or resetting unmanaged resources. |
|  | EncodeCertificate (see page 6)  | Encodes the certificate.   |
|  | EncodePhoto (see page 7)        | Encodes the photo.   |
|  | ReadAddress (see page 7)        | Reads the address of the person from the card.   |
|  | ReadCertificate (see page 7)    | Reads the certificate.   |
|  | ReadIdentity (see page 7)       | This is ReadIdentity, a member of class Card.  |
|  | ReadPhoto (see page 8)          | Reads the photo.   |
|  | Save (see page 8)               | Saves information from the card to the string.   |
|  | SaveCertificate (see page 8)    | Saves the certificate.   |
|  | SavePhoto (see page 9)          | Saves the photo.   |
|  | SaveQRCode (see page 9)         | Saves the QR code.   |
|  | VerifyPinCode (see page 9)      | Verifies the pin code.   |














**Card Properties**

|   | Name   | Description  |
|---|--|--|
|  | AppletVersion ( <a href="#">see page 9</a> ) | This is AppletVersion, a member of class Card.                           |
|  | EidCard ( <a href="#">see page 10</a> )      | Gets a value indicating whether the card is eid card.                    |
|  | Inserted ( <a href="#">see page 10</a> )     | Gets a value indicating whether the Card is inserted in the card reader. |
|  | SerialNumber ( <a href="#">see page 10</a> ) | This is SerialNumber, a member of class Card.                            |
|  | Tag ( <a href="#">see page 10</a> )          | This is Tag, a member of class Card.                                     |






**Methods**

|   | Name                                | Description                                   |
|---|-------------------------------------|---|
|  | Card ( <a href="#">see page 5</a> ) | Initializes a new instance of the Card class. |

**Card Methods**

|   | Name  | Description  |
|---|---|--|
|    | DisplayCertificate ( <a href="#">see page 6</a> ) | Displays the certificate.  |
|    | Dispose ( <a href="#">see page 6</a> )            | Performs application-defined tasks associated with freeing, releasing, or resetting unmanaged resources. |
|    | EncodeCertificate ( <a href="#">see page 6</a> )  | Encodes the certificate.   |
|    | EncodePhoto ( <a href="#">see page 7</a> )        | Encodes the photo.   |
|    | ReadAddress ( <a href="#">see page 7</a> )        | Reads the address of the person from the card.   |
|    | ReadCertificate ( <a href="#">see page 7</a> )    | Reads the certificate.   |
|    | ReadIdentity ( <a href="#">see page 7</a> )       | This is ReadIdentity, a member of class Card.  |
|  | ReadPhoto ( <a href="#">see page 8</a> )          | Reads the photo.   |
|  | Save ( <a href="#">see page 8</a> )               | Saves information from the card to the string.   |
|  | SaveCertificate ( <a href="#">see page 8</a> )    | Saves the certificate.   |
|  | SavePhoto ( <a href="#">see page 9</a> )          | Saves the photo.   |
|  | SaveQRCode ( <a href="#">see page 9</a> )         | Saves the QR code.   |
|  | VerifyPinCode ( <a href="#">see page 9</a> )      | Verifies the pin code.   |

**Card Properties**

|   | Name   | Description  |
|---|--|--|
|  | AppletVersion ( <a href="#">see page 9</a> ) | This is AppletVersion, a member of class Card.                           |
|  | EidCard ( <a href="#">see page 10</a> )      | Gets a value indicating whether the card is eid card.                    |
|  | Inserted ( <a href="#">see page 10</a> )     | Gets a value indicating whether the Card is inserted in the card reader. |
|  | SerialNumber ( <a href="#">see page 10</a> ) | This is SerialNumber, a member of class Card.                            |
|  | Tag ( <a href="#">see page 10</a> )          | This is Tag, a member of class Card.                                     |

**1.1.2.1 Card.Card Constructor**

Initializes a new instance of the Card ([see page 4](#)) class.

**C#**

```
internal Card(CardReader reader) ;
```

**Parameters**

| Parameters        | Description |
|-------------------|-------------|
| CardReader reader | The reader. |

## 1.1.2.2 Card Methods

### 1.1.2.2.1 DisplayCertificate Method

#### 1.1.2.2.1.1 Card.DisplayCertificate Method (CertificateType)

Displays the certificate.

```
C#  
  
public void DisplayCertificate(CertificateType certificate);
```

Parameters

| Parameters                  | Description      |
|-----------------------------|------------------|
| CertificateType certificate | The certificate. |

#### 1.1.2.2.1.2 Card.DisplayCertificate Method (string)

Displays the certificate.

```
C#  
  
public void DisplayCertificate(string fileName);
```

Parameters

| Parameters      | Description       |
|-----------------|-------------------|
| string fileName | Name of the file. |

### 1.1.2.2.2 Dispose Method

#### 1.1.2.2.2.1 Card.Dispose Method ()

Performs application-defined tasks associated with freeing, releasing, or resetting unmanaged resources.

```
C#  
  
public void Dispose();
```

#### 1.1.2.2.2.2 Card.Dispose Method (bool)

Releases unmanaged and - optionally - managed resources

```
C#  
  
internal void Dispose(bool disposing);
```

Parameters

| Parameters     | Description   |
|----------------|---|
| bool disposing | true to release both managed and unmanaged resources;<br>false to release only unmanaged resources. |

### 1.1.2.2.3 Card.EncodeCertificate Method

Encodes the certificate.

```
C#  
  
public byte[] EncodeCertificate(CertificateType certificate);
```

**Parameters**

| Parameters                  | Description      |
|-----------------------------|------------------|
| CertificateType certificate | The certificate. |

## 1.1.2.2.4 EncodePhoto Method

### 1.1.2.2.4.1 Card.EncodePhoto Method ()

Encodes the photo.

**C#**

```
public byte[] EncodePhoto();
```

### 1.1.2.2.4.2 Card.EncodePhoto Method (string)

Encodes the photo.

**C#**

```
public byte[] EncodePhoto(string fileName);
```

**Parameters**

| Parameters      | Description       |
|-----------------|-------------------|
| string fileName | Name of the file. |

## 1.1.2.2.5 Card.ReadAddress Method

Reads the address of the person from the card.

**C#**

```
public Address ReadAddress();
```

**Returns**

Returns the postal adress of the person

## 1.1.2.2.6 Card.ReadCertificate Method

Reads the certificate.

**C#**

```
public byte[] ReadCertificate(CertificateType certificate);
```

**Parameters**

| Parameters                  | Description      |
|-----------------------------|------------------|
| CertificateType certificate | The certificate. |

## 1.1.2.2.7 Card.ReadIdentity Method

**C#**

```
public Identity ReadIdentity();
```

**Remarks**

This is ReadIdentity, a member of class Card.

### 1.1.2.2.8 Card.ReadPhoto Method

Reads the photo.

**C#**

```
public Image ReadPhoto();
```

### 1.1.2.2.9 Save Method

#### 1.1.2.2.9.1 Card.Save Method (ExportFormat)

Saves information from the card to the string.

**C#**

```
public string Save(ExportFormat format);
```

**Parameters**

| Parameters          | Description       |
|---------------------|-------------------|
| ExportFormat format | The format.       |
| fileName            | Name of the file. |
| encoding            | The encoding.     |

#### 1.1.2.2.9.2 Card.Save Method (string, ExportFormat)

Saves information from the card to the file with specified file name.

**C#**

```
public bool Save(string fileName, ExportFormat format);
```

**Parameters**

| Parameters          | Description               |
|---------------------|---------------------------|
| string fileName     | Name of the file.         |
| ExportFormat format | The format of the export. |

#### 1.1.2.2.9.3 Card.Save Method (string, ExportFormat, FileEncoding)

Saves information from the card to the file with specified file name.

**C#**

```
public bool Save(string fileName, ExportFormat format, FileEncoding encoding);
```

**Parameters**

| Parameters            | Description       |
|-----------------------|-------------------|
| string fileName       | Name of the file. |
| ExportFormat format   | The format.       |
| FileEncoding encoding | The encoding.     |

### 1.1.2.2.10 Card.SaveCertificate Method

Saves the certificate.

**C#**

```
public void SaveCertificate(string fileName, CertificateType certificate);
```

**Parameters**

| Parameters                  | Description       |
|-----------------------------|-------------------|
| string fileName             | Name of the file. |
| CertificateType certificate | The certificate.  |

**1.1.2.2.11 Card.SavePhoto Method**

Saves the photo.

**C#**

```
public bool SavePhoto(string fileName, PhotoFormat format);
```

**Parameters**

| Parameters         | Description       |
|--------------------|-------------------|
| string fileName    | Name of the file. |
| PhotoFormat format | The format.       |

**1.1.2.2.12 Card.SaveQRCode Method**

Saves the QR code.

**C#**

```
public bool SaveQRCode(string fileName);
```

**Parameters**

| Parameters      | Description       |
|-----------------|-------------------|
| string fileName | Name of the file. |

**1.1.2.2.13 Card.VerifyPinCode Method**

Verifies the pin code.

**C#**

```
public bool VerifyPinCode(string pinCode);
```

**Parameters**

| Parameters     | Description   |
|----------------|---------------|
| string pinCode | The pin code. |

**1.1.2.3 Card Properties****1.1.2.3.1 Card.AppletVersion Property****C#**

```
public int AppletVersion;
```

**Remarks**

This is AppletVersion, a member of class Card.

### 1.1.2.3.2 Card.EidCard Property

Gets a value indicating whether the card is eid card.

#### C#

```
public bool EidCard;
```

#### Description

true if the card is eid card; otherwise, false.

### 1.1.2.3.3 Card.Inserted Property

Gets a value indicating whether the Card ( see page 4) is inserted in the card reader.

#### C#

```
public bool Inserted;
```

#### Description

true if inserted; otherwise, false.

### 1.1.2.3.4 Card.SerialNumber Property

#### C#

```
public string SerialNumber;
```

#### Remarks

This is SerialNumber, a member of class Card.

### 1.1.2.3.5 Card.Tag Property

#### C#

```
public int Tag;
```

#### Remarks

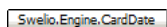
This is Tag, a member of class Card.

---

## 1.1.3 CardDate Class

Handles dates conversion between internal EID format and YYYYMMDD format


#### Inheritance Hierarchy

 Swelio.Engine.CardDate

#### C#




```
public static class CardDate;
```

#### File




CardDate.cs ( see page 113)



**Members****CardDate Methods**

|   | Name  | Description  |
|---|---|--|
|  | ToDate ( <a href="#">see page 11</a> )            | Converts from the internal EID representation to System.DateTime                           |
|  | ToLongDateString ( <a href="#">see page 11</a> )  | Converts the value from YYYYMMDD format to its equivalent long date string representation  |
|  | ToShortDateString ( <a href="#">see page 12</a> ) | Converts the value from YYYYMMDD format to its equivalent short date string representation |

**CardDate Methods**

|   | Name  | Description  |
|---|---|--|
|  | ToDate ( <a href="#">see page 11</a> )            | Converts from the internal EID representation to System.DateTime                           |
|  | ToLongDateString ( <a href="#">see page 11</a> )  | Converts the value from YYYYMMDD format to its equivalent long date string representation  |
|  | ToShortDateString ( <a href="#">see page 12</a> ) | Converts the value from YYYYMMDD format to its equivalent short date string representation |

## 1.1.3.1 CardDate Methods

### 1.1.3.1.1 CardDate.ToDateTime Method

Converts from the internal EID representation to System.DateTime

**C#**

```
public static DateTime ToDate(string date);
```

**Parameters**

| Parameters  | Description                 |
|-------------|-----------------------------|
| string date | The unformatted date string |

**Returns**

System.DateTime

### 1.1.3.1.2 CardDate.ToLongDateString Method

Converts the value from YYYYMMDD format to its equivalent long date string representation

**C#**

```
public static string ToLongDateString(string date);
```

**Parameters**

| Parameters  | Description |
|-------------|-------------|
| string date | The date.   |

**Returns**

A string containing the name of the day of the week, the name of the month, the numeric day of the month, and the year equivalent to the date value

### 1.1.3.1.3 CardDate.ToShortDateString Method

Converts the value from YYYYMMDD format to its equivalent short date string representation

C#

```
public static string ToShortDateString(string date);
```

Parameters

| Parameters  | Description |
|-------------|-------------|
| string date | The date.   |

Returns

A string containing the numeric month, the numeric day of the month, and the year equivalent to the date value

## 1.1.4 CardEventArgs Class

Inheritance Hierarchy



C#

```
public class CardEventArgs : EventArgs;
```

File

CardEventArgs.cs (🔗 see page 113)

Remarks

This is class Swelio.Engine.CardEventArgs.

Members

Methods

|   | Name                          | Description  |
|---|-------------------------------|--|
| 🔗 | CardEventArgs (🔗 see page 12) | Initializes a new instance of the CardEventArgs class. |

CardEventArgs Properties

|     | Name                         | Description             |
|-----|------------------------------|-------------------------|
| 🔗 R | ReaderNumber (🔗 see page 13) | Gets the reader number. |

Methods

|   | Name                          | Description  |
|---|-------------------------------|--|
| 🔗 | CardEventArgs (🔗 see page 12) | Initializes a new instance of the CardEventArgs class. |

CardEventArgs Properties

|     | Name                         | Description             |
|-----|------------------------------|-------------------------|
| 🔗 R | ReaderNumber (🔗 see page 13) | Gets the reader number. |

### 1.1.4.1 CardEventArgs.CardEventArgs Constructor

Initializes a new instance of the CardEventArgs (🔗 see page 12) class.

```
C#  
  
public CardEventArgs(int readerNumber);
```

Parameters

| Parameters       | Description        |
|------------------|--------------------|
| int readerNumber | The reader number. |

### 1.1.4.2 CardEventArgs Properties

#### 1.1.4.2.1 CardEventArgs.ReaderNumber Property

Gets the reader number.

```
C#  
  
public int ReaderNumber;
```

Description

The reader number.

## 1.1.5 CardNumber Class

EID card number formatter. This class takes EID card number in raw form as input and return formatted EID card number

Inheritance Hierarchy



```
C#  
  
public static class CardNumber;
```

File

CardNumber.cs (📄 see page 114)

Members

CardNumber Methods

|    | Name                     | Description  |
|----|--------------------------|--|
| 💡🔗 | ToString (📄 see page 13) | Converts the value of the card number to its String representation |

CardNumber Methods

|    | Name                     | Description  |
|----|--------------------------|--|
| 💡🔗 | ToString (📄 see page 13) | Converts the value of the card number to its String representation |

### 1.1.5.1 CardNumber Methods

#### 1.1.5.1.1 CardNumber.ToString Method

Converts the value of the card number to its String representation

**C#**

```
public static string ToString(string cardNumber);
```

**Parameters**

| Parameters        | Description                 |
|-------------------|-----------------------------|
| string cardNumber | The unformatted card number |

**Returns**

Formatted card number

## 1.1.6 CardReader Class

The physical smart card ([see page 15](#)) reader

**Inheritance Hierarchy****C#**

```
public sealed class CardReader : IDisposable;
```

**File**

CardReader.cs ([see page 114](#))

**Members****Methods**

|  | Name                                       | Description   |
|--|--|---|
|  | CardReader ( <a href="#">see page 15</a> ) | Initializes a new instance of the CardReader class. |

**CardReader Fields**

|  | Name                                 | Description                                 |
|--|--------------------------------------|---|
|  | card ( <a href="#">see page 15</a> ) | This is card, a member of class CardReader. |


**CardReader Methods**

|  | Name   | Description  |
|--|--|--|
|  | ActivateCard ( <a href="#">see page 16</a> )   | Activates the card ( <a href="#">see page 15</a> ).  |
|  | DeactivateCard ( <a href="#">see page 16</a> ) | Deactivates the card ( <a href="#">see page 15</a> ).  |
|  | Dispose ( <a href="#">see page 16</a> )        | Performs application-defined tasks associated with freeing, releasing, or resetting unmanaged resources. |
|  | GetCard ( <a href="#">see page 16</a> )        | Gets the card ( <a href="#">see page 15</a> ).   |


**CardReader Properties**

|  | Name  | Description   |
|--|---|---|
|  | CardActivated ( <a href="#">see page 17</a> ) | Gets a value indicating whether [card ( <a href="#">see page 15</a> ) activated]. |
|  | CardPresent ( <a href="#">see page 17</a> )   | Gets a value indicating whether [card ( <a href="#">see page 15</a> ) present].   |
|  | Index ( <a href="#">see page 17</a> )         | Gets the index of the smart card ( <a href="#">see page 15</a> ) reader.          |
|  | Name ( <a href="#">see page 17</a> )          | Gets the name of the smart card ( <a href="#">see page 15</a> ) reader.           |
|  | Selected ( <a href="#">see page 17</a> )      | Gets a value indicating whether this CardReader is selected.                      |
|  | Tag ( <a href="#">see page 17</a> )           | Gets or sets the tag.   |





**Methods**

|   | Name                                       | Description   |
|---|--|---|
|  | CardReader ( <a href="#">see page 15</a> ) | Initializes a new instance of the CardReader class. |







**CardReader Fields**

|   | Name                                 | Description                                 |
|---|--------------------------------------|---|
|  | card ( <a href="#">see page 15</a> ) | This is card, a member of class CardReader. |

**CardReader Methods**

|   | Name   | Description  |
|---|--|--|
|  | ActivateCard ( <a href="#">see page 16</a> )   | Activates the card ( <a href="#">see page 15</a> ).  |
|  | DeactivateCard ( <a href="#">see page 16</a> ) | Deactivates the card ( <a href="#">see page 15</a> ).  |
|  | Dispose ( <a href="#">see page 16</a> )        | Performs application-defined tasks associated with freeing, releasing, or resetting unmanaged resources. |
|  | GetCard ( <a href="#">see page 16</a> )        | Gets the card ( <a href="#">see page 15</a> ).   |

**CardReader Properties**

|   | Name  | Description   |
|---|---|---|
|    | CardActivated ( <a href="#">see page 17</a> ) | Gets a value indicating whether [card ( <a href="#">see page 15</a> ) activated]. |
|    | CardPresent ( <a href="#">see page 17</a> )   | Gets a value indicating whether [card ( <a href="#">see page 15</a> ) present].   |
|    | Index ( <a href="#">see page 17</a> )         | Gets the index of the smart card ( <a href="#">see page 15</a> ) reader.          |
|   | Name ( <a href="#">see page 17</a> )          | Gets the name of the smart card ( <a href="#">see page 15</a> ) reader.           |
|  | Selected ( <a href="#">see page 17</a> )      | Gets a value indicating whether this CardReader is selected.                      |
|  | Tag ( <a href="#">see page 17</a> )           | Gets or sets the tag.   |

## 1.1.6.1 CardReader.CardReader Constructor

Initializes a new instance of the CardReader ([see page 14](#)) class.

**C#**

```
internal CardReader();
```

## 1.1.6.2 CardReader Fields

### 1.1.6.2.1 CardReader.card Field

**C#**

```
internal Card card;
```

**Remarks**

This is card, a member of class CardReader.

## 1.1.6.3 CardReader Methods

1.1.6.3.1 CardReader.ActivateCard Method

Activates the card (🔗 see page 15).

C#

```
public bool ActivateCard();
```

1.1.6.3.2 CardReader.DeactivateCard Method

Deactivates the card (🔗 see page 15).

C#

```
public void DeactivateCard();
```

1.1.6.3.3 Dispose Method

1.1.6.3.3.1 CardReader.Dispose Method ()

Performs application-defined tasks associated with freeing, releasing, or resetting unmanaged resources.

C#

```
public void Dispose();
```

1.1.6.3.3.2 CardReader.Dispose Method (bool)

Releases unmanaged and - optionally - managed resources

C#

```
internal void Dispose(bool disposing);
```

Parameters

| Parameters     | Description   |
|----------------|---|
| bool disposing | true to release both managed and unmanaged resources;<br>false to release only unmanaged resources. |

1.1.6.3.4 GetCard Method

1.1.6.3.4.1 CardReader.GetCard Method ()

Gets the card (🔗 see page 15).

C#

```
public Card GetCard();
```

1.1.6.3.4.2 CardReader.GetCard Method (bool)

Gets the card (🔗 see page 15).

C#

```
public Card GetCard(bool activate);
```

Parameters

| Parameters    | Description                |
|---------------|----------------------------|
| bool activate | if set to true [activate]. |

## 1.1.6.4 CardReader Properties

### 1.1.6.4.1 CardReader.CardActivated Property

Gets a value indicating whether [card (see page 15) activated].

**C#**

```
public bool CardActivated;
```

**Description**

true if [card (see page 15) activated]; otherwise, false.

### 1.1.6.4.2 CardReader.CardPresent Property

Gets a value indicating whether [card (see page 15) present].

**C#**

```
public bool CardPresent;
```

**Description**

true if [card (see page 15) present]; otherwise, false.

### 1.1.6.4.3 CardReader.Index Property

Gets the index of the smart card (see page 15) reader.

**C#**

```
public int Index;
```

### 1.1.6.4.4 CardReader.Name Property

Gets the name of the smart card (see page 15) reader.

**C#**

```
public string Name;
```

### 1.1.6.4.5 CardReader.Selected Property

Gets a value indicating whether this CardReader (see page 14) is selected.

**C#**

```
public bool Selected;
```

**Description**

true if selected; otherwise, false.

### 1.1.6.4.6 CardReader.Tag Property

Gets or sets the tag.

**C#**

```
public int Tag;
```

Description

The tag.

1.1.7 DocumentContainer Class

ASiC document container. Associated Signature Containers (ASiC) specifies the use of container structures to bind together one or more signed objects with either advanced electronic signatures or timestamp tokens into one single digital container.

Inheritance Hierarchy

Swelio.Engine.DocumentContainer

C#


```
public class DocumentContainer;
```

File





DocumentContainer.cs (see page 114)

Members


Methods

|   | Name                            | Description  |
|---|---------------------------------|--|
|  | DocumentContainer (see page 18) | Initializes a new instance of the DocumentContainer class. |





DocumentContainer Methods

|   | Name                            | Description   |
|---|---------------------------------|---|
|  | AddFile (see page 19)           | Add file to the container   |
|  | Close (see page 19)             | Closes container. No any future calls are possible after closing container  |
|  | Save (see page 19)              | Saves container to the file with specified file name. By default the file extension for ASiC containers is asice. |
|  | SelectCertificate (see page 19) | Selects the certificate.  |

Methods

|   | Name                            | Description  |
|---|---------------------------------|--|
|  | DocumentContainer (see page 18) | Initializes a new instance of the DocumentContainer class. |

DocumentContainer Methods

|   | Name                            | Description   |
|---|---------------------------------|---|
|  | AddFile (see page 19)           | Add file to the container   |
|  | Close (see page 19)             | Closes container. No any future calls are possible after closing container  |
|  | Save (see page 19)              | Saves container to the file with specified file name. By default the file extension for ASiC containers is asice. |
|  | SelectCertificate (see page 19) | Selects the certificate.  |

1.1.7.1 DocumentContainer.DocumentContainer Constructor

Initializes a new instance of the DocumentContainer (see page 18) class.

C#

```
public DocumentContainer();
```



## 1.1.7.2 DocumentContainer Methods

### 1.1.7.2.1 DocumentContainer.AddFile Method

Add file to the container

**C#**

```
public bool AddFile(string fileName);
```

**Parameters**

| Parameters      | Description          |
|-----------------|----------------------|
| string fileName | The name of the file |

### 1.1.7.2.2 DocumentContainer.Close Method

Closes container. No any future calls are possible after closing container

**C#**

```
public void Close();
```

### 1.1.7.2.3 DocumentContainer.Save Method

Saves container to the file with specified file name. By default the file extension for ASIC containers is asice.

**C#**

```
public bool Save(string fileName, int readerNumber);
```

**Parameters**

| Parameters       | Description                 |
|------------------|-----------------------------|
| string fileName  | Name of the file.           |
| int readerNumber | The EID card reader number. |

**Returns**

true, if success; otherwise - false.

### 1.1.7.2.4 SelectCertificate Method

#### 1.1.7.2.4.1 DocumentContainer.SelectCertificate Method ()

Selects the certificate.

**C#**

```
public bool SelectCertificate();
```

**Returns**

True - if certificate is selected, otherwise - false

#### 1.1.7.2.4.2 DocumentContainer.SelectCertificate Method (int)

Selects the certificate.

**C#**

```
public bool SelectCertificate(int readerNumber);
```

**Parameters**

| Parameters       | Description        |
|------------------|--------------------|
| int readerNumber | The reader number. |

**Returns**

True - if certificate is selected, otherwise - false

**1.1.7.2.4.3 DocumentContainer.SelectCertificate Method (string, string)**

Selects the certificate.

**C#**

```
public bool SelectCertificate(string fileName, string password);
```

**Parameters**

| Parameters      | Description                                |
|-----------------|--|
| string fileName | Name of the certificate file in pfx format |
| string password | The password.                              |

**Returns**

True - if certificate is selected, otherwise - false

## 1.1.8 EIDAddress Class

EID address information, stored on the card

**Inheritance Hierarchy**

Swelio.Engine.EIDAddress

**C#**

```
[StructLayout(LayoutKind.Sequential, CharSet = CharSet.Unicode)]  
[BestFitMapping(false, ThrowOnUnmappableChar = true)]  
internal class EIDAddress;
```

**File**

NativeTypes.cs (see page 117)

**Members****EIDAddress Fields**

|   | Name                       | Description  |
|---|----------------------------|--------------|
|  | municipality (see page 21) | Municipality |
|  | street (see page 21)       | Street name  |
|  | zip (see page 21)          | ZIP code     |

**EIDAddress Fields**

|   | Name                       | Description  |
|---|----------------------------|--------------|
|  | municipality (see page 21) | Municipality |
|  | street (see page 21)       | Street name  |

|   |                                     |          |
|---|-------------------------------------|----------|
|  | zip ( <a href="#">see page 21</a> ) | ZIP code |
|---|-------------------------------------|----------|

### 1.1.8.1 EIDAddress Fields

#### 1.1.8.1.1 EIDAddress.municipality Field

Municipality

C#

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxMunicipalityName + 1)]
internal string municipality;
```

#### 1.1.8.1.2 EIDAddress.street Field

Street name

C#

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxStreetNameLen + 1)]
internal string street;
```

#### 1.1.8.1.3 EIDAddress.zip Field

ZIP code

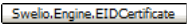
C#

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxZipLen + 1)]
internal string zip;
```

### 1.1.9 EIDCertificate Class

Certificate, stored on EID card

Inheritance Hierarchy



C#



```
[StructLayout(LayoutKind.Sequential, CharSet = CharSet.Unicode)]
internal class EIDCertificate;
```

File


NativeTypes.cs ([see page 117](#))

#### Members

##### EIDCertificate Fields

|   | Name  | Description                 |
|---|---|-----------------------------|
|  | certificate ( <a href="#">see page 22</a> )       | Certificate raw data buffer |
|  | certificateLength ( <a href="#">see page 22</a> ) | Certificate data length     |

##### EIDCertificate Fields

|   | Name  | Description                 |
|---|---|-----------------------------|
|  | certificate ( <a href="#">see page 22</a> ) | Certificate raw data buffer |

|   |   |                         |
|---|---|-------------------------|
|  | certificateLength ( <a href="#">see page 22</a> ) | Certificate data length |
|---|---|-------------------------|

## 1.1.9.1 EIDCertificate Fields

### 1.1.9.1.1 EIDCertificate.certificate Field

Certificate raw data buffer

**C#**

```
[MarshalAs(UnmanagedType.ByValArray, SizeConst = EIDDataLength.EidMaxCertLen + 1)]
internal byte[] certificate;
```

### 1.1.9.1.2 EIDCertificate.certificateLength Field

Certificate data length

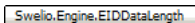
**C#**

```
[MarshalAs(UnmanagedType.I4)]
internal int certificateLength;
```

## 1.1.10 EIDDataLength Class

Maximum length of EID fields

**Inheritance Hierarchy**



**C#**













```
internal static class EIDDataLength;
```




















**File**

NativeTypes.cs ([see page 117](#))


























**Members**







**EIDDataLength Fields**

|   | Name  | Description   |
|---|---|---|
|  | EidMaxBirthDateLen ( <a href="#">see page 24</a> )                  | Max length of the birthdate                         |
|  | EidMaxBirthplaceLen ( <a href="#">see page 24</a> )                 | Max length of the birthplace                        |
|  | EidMaxBrexitMention1Len ( <a href="#">see page 24</a> )             | BREXIT mention                                      |
|  | EidMaxBrexitMention2Len ( <a href="#">see page 24</a> )             | BREXIT mention                                      |
|  | EidMaxCardNumberLen ( <a href="#">see page 24</a> )                 | Max length of the card number field                 |
|  | EidMaxCertLen ( <a href="#">see page 24</a> )                       | Max length of the certificate data                  |
|  | EidMaxChipNumberLen ( <a href="#">see page 25</a> )                 | Max length of the chip number field                 |
|  | EidMaxDateAndCountryOfProtectionLen ( <a href="#">see page 25</a> ) | Date and country of protection                      |
|  | EidMaxDateBeginLen ( <a href="#">see page 25</a> )                  | Max length of the begin date field                  |
|  | EidMaxDateEndLen ( <a href="#">see page 25</a> )                    | Max length of the end date field                    |
|  | EidMaxDeliveryMunicipalityLen ( <a href="#">see page 25</a> )       | Max length of the name of the delivery municipality |
|  | EidMaxDocumentTypeLen ( <a href="#">see page 25</a> )               | Max length of the document type field               |

|   |  |   |
|---|--|---|
|  | EidMaxDuplicateLen ( <a href="#">see page 25</a> )           | Duplicate                                 |
|  | EidMaxFirstNameLen ( <a href="#">see page 25</a> )           | Max length of the first name              |
|  | EidMaxMemberOfFamilyLen ( <a href="#">see page 26</a> )      | Member of family                          |
|  | EidMaxMiddleNameLen ( <a href="#">see page 26</a> )          | Max length of the first name              |
|  | EidMaxMunicipalityName ( <a href="#">see page 26</a> )       | Max length of the municipality name field |
|  | EidMaxNameLen ( <a href="#">see page 26</a> )                | Max length of the surname                 |
|  | EidMaxNationalityLen ( <a href="#">see page 26</a> )         | Max length of the nationality             |
|  | EidMaxNationalNumberLen ( <a href="#">see page 26</a> )      | Max length of the national number         |
|  | EidMaxNobleConditionLen ( <a href="#">see page 26</a> )      | Max length of the noble condition field   |
|  | EidMaxPictureLen ( <a href="#">see page 27</a> )             | Max length of the picture data            |
|  | EidMaxRegionalFileNumberLen ( <a href="#">see page 27</a> )  | Regional file number                      |
|  | EidMaxSexLen ( <a href="#">see page 27</a> )                 | Max length of the sex field               |
|  | EidMaxSpecialOrganizationLen ( <a href="#">see page 27</a> ) | Special organization                      |
|  | EidMaxSpecialStatusLen ( <a href="#">see page 27</a> )       | Max length of the special status field    |
|  | EidMaxStreetNameLen ( <a href="#">see page 27</a> )          | Max length of the street name field       |
|  | EidMaxVAT1Len ( <a href="#">see page 27</a> )                | VAT1                                      |
|  | EidMaxVAT2Len ( <a href="#">see page 28</a> )                | VAT2                                      |
|  | EidMaxWorkPermitTypeLen ( <a href="#">see page 28</a> )      | The type of the workpermit                |
|  | EidMaxZipLen ( <a href="#">see page 28</a> )                 | Max length of the ZIP code field          |

#### EIDDataLength Fields

|   | Name  | Description   |
|---|---|---|
|   | EidMaxBirthDateLen ( <a href="#">see page 24</a> )                  | Max length of the birthdate                         |
|  | EidMaxBirthplaceLen ( <a href="#">see page 24</a> )                 | Max length of the birthplace                        |
|  | EidMaxBrexitMention1Len ( <a href="#">see page 24</a> )             | BREXIT mention                                      |
|  | EidMaxBrexitMention2Len ( <a href="#">see page 24</a> )             | BREXIT mention                                      |
|  | EidMaxCardNumberLen ( <a href="#">see page 24</a> )                 | Max length of the card number field                 |
|  | EidMaxCertLen ( <a href="#">see page 24</a> )                       | Max length of the certificate data                  |
|  | EidMaxChipNumberLen ( <a href="#">see page 25</a> )                 | Max length of the chip number field                 |
|  | EidMaxDateAndCountryOfProtectionLen ( <a href="#">see page 25</a> ) | Date and country of protection                      |
|  | EidMaxDateBeginLen ( <a href="#">see page 25</a> )                  | Max length of the begin date field                  |
|  | EidMaxDateEndLen ( <a href="#">see page 25</a> )                    | Max length of the end date field                    |
|  | EidMaxDeliveryMunicipalityLen ( <a href="#">see page 25</a> )       | Max length of the name of the delivery municipality |
|  | EidMaxDocumentTypeLen ( <a href="#">see page 25</a> )               | Max length of the document type field               |
|  | EidMaxDuplicateLen ( <a href="#">see page 25</a> )                  | Duplicate   |
|  | EidMaxFirstNameLen ( <a href="#">see page 25</a> )                  | Max length of the first name                        |
|  | EidMaxMemberOfFamilyLen ( <a href="#">see page 26</a> )             | Member of family                                    |
|  | EidMaxMiddleNameLen ( <a href="#">see page 26</a> )                 | Max length of the first name                        |
|  | EidMaxMunicipalityName ( <a href="#">see page 26</a> )              | Max length of the municipality name field           |
|  | EidMaxNameLen ( <a href="#">see page 26</a> )                       | Max length of the surname                           |
|  | EidMaxNationalityLen ( <a href="#">see page 26</a> )                | Max length of the nationality                       |
|  | EidMaxNationalNumberLen ( <a href="#">see page 26</a> )             | Max length of the national number                   |
|  | EidMaxNobleConditionLen ( <a href="#">see page 26</a> )             | Max length of the noble condition field             |
|  | EidMaxPictureLen ( <a href="#">see page 27</a> )                    | Max length of the picture data                      |
|  | EidMaxRegionalFileNumberLen ( <a href="#">see page 27</a> )         | Regional file number                                |
|  | EidMaxSexLen ( <a href="#">see page 27</a> )                        | Max length of the sex field                         |
|  | EidMaxSpecialOrganizationLen ( <a href="#">see page 27</a> )        | Special organization                                |

|   |   |  |
|---|---|--|
|  | EidMaxSpecialStatusLen ( <a href="#">see page 27</a> )  | Max length of the special status field |
|  | EidMaxStreetNameLen ( <a href="#">see page 27</a> )     | Max length of the street name field    |
|  | EidMaxVAT1Len ( <a href="#">see page 27</a> )           | VAT1                                   |
|  | EidMaxVAT2Len ( <a href="#">see page 28</a> )           | VAT2                                   |
|  | EidMaxWorkPermitTypeLen ( <a href="#">see page 28</a> ) | The type of the workpermit             |
|  | EidMaxZipLen ( <a href="#">see page 28</a> )            | Max length of the ZIP code field       |

## 1.1.10.1 EIDDataLength Fields

### 1.1.10.1.1 EIDDataLength.EidMaxBirthDateLen Field

Max length of the birthdate

**C#**

```
public const int EidMaxBirthDateLen = 12;
```

### 1.1.10.1.2 EIDDataLength.EidMaxBirthplaceLen Field

Max length of the birthplace

**C#**

```
public const int EidMaxBirthplaceLen = 80;
```

### 1.1.10.1.3 EIDDataLength.EidMaxBrexitMention1Len Field

**C#**

```
public const int EidMaxBrexitMention1Len = 1;
```

**Remarks**

BREXIT mention

### 1.1.10.1.4 EIDDataLength.EidMaxBrexitMention2Len Field

**C#**

```
public const int EidMaxBrexitMention2Len = 1;
```

**Remarks**

BREXIT mention

### 1.1.10.1.5 EIDDataLength.EidMaxCardNumberLen Field

Max length of the card number field

**C#**

```
public const int EidMaxCardNumberLen = 12;
```

### 1.1.10.1.6 EIDDataLength.EidMaxCertLen Field

Max length of the certificate data

**C#**

```
public const int EidMaxCertLen = 2048;
```

### 1.1.10.1.7 EIDDataLength.EidMaxChipNumberLen Field

Max length of the chip number field

C#

```
public const int EidMaxChipNumberLen = 32;
```

### 1.1.10.1.8 EIDDataLength.EidMaxDateAndCountryOfProtectionLen Field

C#

```
public const int EidMaxDateAndCountryOfProtectionLen = 13;
```

Remarks

Date and country of protection

### 1.1.10.1.9 EIDDataLength.EidMaxDateBeginLen Field

Max length of the begin date field

C#

```
public const int EidMaxDateBeginLen = 10;
```

### 1.1.10.1.10 EIDDataLength.EidMaxDateEndLen Field

Max length of the end date field

C#

```
public const int EidMaxDateEndLen = 10;
```

### 1.1.10.1.11 EIDDataLength.EidMaxDeliveryMunicipalityLen Field

Max length of the name of the delivery municipality

C#

```
public const int EidMaxDeliveryMunicipalityLen = 80;
```

### 1.1.10.1.12 EIDDataLength.EidMaxDocumentTypeLen Field

Max length of the document type field

C#

```
public const int EidMaxDocumentTypeLen = 2;
```

### 1.1.10.1.13 EIDDataLength.EidMaxDuplicateLen Field

C#

```
public const int EidMaxDuplicateLen = 2;
```

Remarks

Duplicate

### 1.1.10.1.14 EIDDataLength.EidMaxFirstNameLen Field

Max length of the first name

**C#**

```
public const int EidMaxFirstNameLen = 95;
```

#### 1.1.10.1.15 EIDDataLength.EidMaxMemberOfFamilyLen Field

**C#**

```
public const int EidMaxMemberOfFamilyLen = 1;
```

**Remarks**

Member of family

#### 1.1.10.1.16 EIDDataLength.EidMaxMiddleNameLen Field

Max length of the first name

**C#**

```
public const int EidMaxMiddleNameLen = 3;
```

#### 1.1.10.1.17 EIDDataLength.EidMaxMunicipalityName Field

Max length of the municipality name field

**C#**

```
public const int EidMaxMunicipalityName = 67;
```

#### 1.1.10.1.18 EIDDataLength.EidMaxNameLen Field

Max length of the surname

**C#**

```
public const int EidMaxNameLen = 110;
```

#### 1.1.10.1.19 EIDDataLength.EidMaxNationalityLen Field

Max length of the nationality

**C#**

```
public const int EidMaxNationalityLen = 85;
```

#### 1.1.10.1.20 EIDDataLength.EidMaxNationalNumberLen Field

Max length of the national number

**C#**

```
public const int EidMaxNationalNumberLen = 11;
```

#### 1.1.10.1.21 EIDDataLength.EidMaxNobleConditionLen Field

Max length of the noble condition field

**C#**

```
public const int EidMaxNobleConditionLen = 50;
```



### 1.1.10.1.22 EIDDataLength.EidMaxPictureLen Field

Max length of the picture data

**C#**

```
public const int EidMaxPictureLen = 4096;
```

### 1.1.10.1.23 EIDDataLength.EidMaxRegionalFileNumberLen Field

**C#**

```
public const int EidMaxRegionalFileNumberLen = 18;
```

**Remarks**

Regional file number

### 1.1.10.1.24 EIDDataLength.EidMaxSexLen Field

Max length of the sex field

**C#**

```
public const int EidMaxSexLen = 1;
```

### 1.1.10.1.25 EIDDataLength.EidMaxSpecialOrganizationLen Field

**C#**

```
public const int EidMaxSpecialOrganizationLen = 1;
```

**Remarks**

Special organization

### 1.1.10.1.26 EIDDataLength.EidMaxSpecialStatusLen Field

Max length of the special status field

**C#**

```
public const int EidMaxSpecialStatusLen = 2;
```

### 1.1.10.1.27 EIDDataLength.EidMaxStreetNameLen Field

Max length of the street name field

**C#**

```
public const int EidMaxStreetNameLen = 80;
```

### 1.1.10.1.28 EIDDataLength.EidMaxVAT1Len Field

**C#**

```
public const int EidMaxVAT1Len = 13;
```

**Remarks**

VAT1

### 1.1.10.1.29 EIDDataLength.EidMaxVAT2Len Field

C#

```
public const int EidMaxVAT2Len = 13;
```

Remarks

VAT2

### 1.1.10.1.30 EIDDataLength.EidMaxWorkPermitTypeLen Field

C#

```
public const int EidMaxWorkPermitTypeLen = 1;
```

Remarks

The type of the workpermit

### 1.1.10.1.31 EIDDataLength.EidMaxZipLen Field

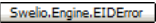
Max length of the ZIP code field

C#

```
public const int EidMaxZipLen = 4;
```

## 1.1.11 EIDError Class

Inheritance Hierarchy



C#

```
[StructLayout(LayoutKind.Sequential, CharSet = CharSet.Unicode)]
internal class EIDError;
```

File

NativeTypes.cs (🔗 see page 117)

Remarks

This is class Swelio.Engine.EIDError.

Members

EIDError Fields

|   | Name                        | Description                                      |
|---|-----------------------------|--|
| 🔗 | Code (🔗 see page 29)        | This is Code, a member of class EIDError.        |
| 🔗 | Description (🔗 see page 29) | This is Description, a member of class EIDError. |

EIDError Fields

|   | Name                        | Description                                      |
|---|-----------------------------|--|
| 🔗 | Code (🔗 see page 29)        | This is Code, a member of class EIDError.        |
| 🔗 | Description (🔗 see page 29) | This is Description, a member of class EIDError. |

## 1.1.11.1 EIDError Fields

### 1.1.11.1.1 EIDError.Code Field

#### C#

```
internal int Code;
```

#### Remarks

This is Code, a member of class EIDError.

### 1.1.11.1.2 EIDError.Description Field

#### C#

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = 255)]  
internal string Description;
```

#### Remarks

This is Description, a member of class EIDError.

## 1.1.12 EIDIdentity Class

Identity ([see page 49](#)) information stored on EID card

#### Inheritance Hierarchy

Swelio.Engine.EIDIdentity

#### C#










```
[StructLayout(LayoutKind.Sequential, CharSet = CharSet.Unicode)]  
[BestFitMapping(false, ThrowOnUnmappableChar = true)]  
internal class EIDIdentity;
```




















#### File

NativeTypes.cs ([see page 117](#))

























#### Members









##### EIDIdentity Fields

|   | Name   | Description  |
|---|--|--|
|  | birthDate ( <a href="#">see page 31</a> )                  | Birth date   |
|  | birthLocation ( <a href="#">see page 31</a> )              | Birth location   |
|  | brexitMention1 ( <a href="#">see page 31</a> )             | This is brexitMention1, a member of class EIDIdentity.             |
|  | brexitMention2 ( <a href="#">see page 31</a> )             | This is brexitMention2, a member of class EIDIdentity.             |
|  | cardNumber ( <a href="#">see page 31</a> )                 | Electronic ID card number  |
|  | chipNumber ( <a href="#">see page 31</a> )                 | Electronic ID card physical chip number                            |
|  | dateAndCountryOfProtection ( <a href="#">see page 32</a> ) | This is dateAndCountryOfProtection, a member of class EIDIdentity. |
|  | documentType ( <a href="#">see page 32</a> )               | Document type (Belgian citizen, European Community citizen, ...)   |
|  | duplicate ( <a href="#">see page 32</a> )                  | This is duplicate, a member of class EIDIdentity.                  |

|   |                                   |   |
|---|-----------------------------------|---|
|  | extendedMinority (see page 32)    | Extended minority   |
|  | firstName1 (see page 32)          | First name (see page 33)                                    |
|  | firstName2 (see page 32)          | First name (see page 33)                                    |
|  | memberOfFamily (see page 33)      | This is memberOfFamily, a member of class EIDIdentity.      |
|  | municipality (see page 33)        | Card (see page 4) delivery municipality                     |
|  | name (see page 33)                | Surname   |
|  | nationality (see page 33)         | Nationality   |
|  | nationalNumber (see page 33)      | National number   |
|  | nobleCondition (see page 33)      | Noble condition   |
|  | regionalFileNumber (see page 33)  | This is regionalFileNumber, a member of class EIDIdentity.  |
|  | sex (see page 34)                 | Sex   |
|  | specialOrganization (see page 34) | This is specialOrganization, a member of class EIDIdentity. |
|  | validityDateBegin (see page 34)   | Card (see page 4) validity date begin                       |
|  | validityDateEnd (see page 34)     | Card (see page 4) validity date end                         |
|  | vat1 (see page 34)                | This is vat1, a member of class EIDIdentity.                |
|  | vat2 (see page 34)                | This is vat2, a member of class EIDIdentity.                |
|  | whiteCane (see page 35)           | White cane allowed (blind people)                           |
|  | workPermitType (see page 35)      | This is workPermitType, a member of class EIDIdentity.      |
|  | yellowCane (see page 35)          | Yellow cane allowed (partially sighted people)              |

**EIDIdentity Fields**

|   | Name                                     | Description  |
|---|--|--|
|   | birthDate (see page 31)                  | Birth date   |
|  | birthLocation (see page 31)              | Birth location   |
|  | brexitMention1 (see page 31)             | This is brexitMention1, a member of class EIDIdentity.             |
|  | brexitMention2 (see page 31)             | This is brexitMention2, a member of class EIDIdentity.             |
|  | cardNumber (see page 31)                 | Electronic ID card number  |
|  | chipNumber (see page 31)                 | Electronic ID card physical chip number                            |
|  | dateAndCountryOfProtection (see page 32) | This is dateAndCountryOfProtection, a member of class EIDIdentity. |
|  | documentType (see page 32)               | Document type (Belgian citizen, European Community citizen, ...)   |
|  | duplicate (see page 32)                  | This is duplicate, a member of class EIDIdentity.                  |
|  | extendedMinority (see page 32)           | Extended minority  |
|  | firstName1 (see page 32)                 | First name (see page 33)   |
|  | firstName2 (see page 32)                 | First name (see page 33)   |
|  | memberOfFamily (see page 33)             | This is memberOfFamily, a member of class EIDIdentity.             |
|  | municipality (see page 33)               | Card (see page 4) delivery municipality                            |
|  | name (see page 33)                       | Surname  |
|  | nationality (see page 33)                | Nationality  |
|  | nationalNumber (see page 33)             | National number  |
|  | nobleCondition (see page 33)             | Noble condition  |
|  | regionalFileNumber (see page 33)         | This is regionalFileNumber, a member of class EIDIdentity.         |
|  | sex (see page 34)                        | Sex  |
|  | specialOrganization (see page 34)        | This is specialOrganization, a member of class EIDIdentity.        |
|  | validityDateBegin (see page 34)          | Card (see page 4) validity date begin                              |
|  | validityDateEnd (see page 34)            | Card (see page 4) validity date end                                |
|  | vat1 (see page 34)                       | This is vat1, a member of class EIDIdentity.                       |

|   |   |  |
|---|---|--|
|  | vat2 (  see page 34)           | This is vat2, a member of class EIDIdentity.           |
|  | whiteCane (  see page 35)      | White cane allowed (blind people)                      |
|  | workPermitType (  see page 35) | This is workPermitType, a member of class EIDIdentity. |
|  | yellowCane (  see page 35)     | Yellow cane allowed (partially sighted people)         |

## 1.1.12.1 EIDIdentity Fields

### 1.1.12.1.1 EIDIdentity.birthDate Field

Birth date

**C#**

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxBirthDateLen + 1)]
internal string birthDate;
```

### 1.1.12.1.2 EIDIdentity.birthLocation Field

Birth location

**C#**

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxBirthplaceLen + 1)]
internal string birthLocation;
```

### 1.1.12.1.3 EIDIdentity.brexitMention1 Field

**C#**

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxBrexitMention1Len + 1)]
internal string brexitMention1;
```

**Remarks**

This is brexitMention1, a member of class EIDIdentity.

### 1.1.12.1.4 EIDIdentity.brexitMention2 Field

**C#**

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxBrexitMention2Len + 1)]
internal string brexitMention2;
```

**Remarks**

This is brexitMention2, a member of class EIDIdentity.

### 1.1.12.1.5 EIDIdentity.cardNumber Field

Electronic ID card number

**C#**

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxCardNumberLen + 1)]
internal string cardNumber;
```

### 1.1.12.1.6 EIDIdentity.chipNumber Field

Electronic ID card physical chip number

**C#**

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxChipNumberLen + 1)]  
internal string chipNumber;
```

### 1.1.12.1.7 EIDIdentity.dateAndCountryOfProtection Field

**C#**

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst =  
EIDDataLength.EidMaxDateAndCountryOfProtectionLen + 1)]  
internal string dateAndCountryOfProtection;
```

**Remarks**

This is dateAndCountryOfProtection, a member of class EIDIdentity.

### 1.1.12.1.8 EIDIdentity.documentType Field

Document type (Belgian citizen, European Community citizen, ...)

**C#**

```
[MarshalAs(UnmanagedType.I4)]  
internal int documentType;
```

### 1.1.12.1.9 EIDIdentity.duplicate Field

**C#**

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxDuplicateLen + 1)]  
internal string duplicate;
```

**Remarks**

This is duplicate, a member of class EIDIdentity.

### 1.1.12.1.10 EIDIdentity.extendedMinority Field

Extended minority

**C#**

```
[MarshalAs(UnmanagedType.Bool)]  
internal bool extendedMinority;
```

### 1.1.12.1.11 EIDIdentity.firstName1 Field

First name (see page 33)

**C#**

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxFirstNameLen + 1)]  
internal string firstName1;
```

### 1.1.12.1.12 EIDIdentity.firstName2 Field

First name (see page 33)

**C#**

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxMiddleNameLen + 1)]  
internal string firstName2;
```

### 1.1.12.1.13 EIDIdentity.memberOfFamily Field

**C#**

```
[MarshalAs(UnmanagedType.Bool)]  
internal bool memberOfFamily;
```

**Remarks**

This is memberOfFamily, a member of class EIDIdentity.

### 1.1.12.1.14 EIDIdentity.municipality Field

Card (see page 4) delivery municipality

**C#**

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxDeliveryMunicipalityLen  
+ 1)]  
internal string municipality;
```

### 1.1.12.1.15 EIDIdentity.name Field

Surname

**C#**

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxNameLen + 1)]  
internal string name;
```

### 1.1.12.1.16 EIDIdentity.nationality Field

Nationality

**C#**

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxNationalityLen + 1)]  
internal string nationality;
```

### 1.1.12.1.17 EIDIdentity.nationalNumber Field

National number

**C#**

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxNationalNumberLen + 1)]  
internal string nationalNumber;
```

### 1.1.12.1.18 EIDIdentity.nobleCondition Field

Noble condition

**C#**

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxNobleConditionLen + 1)]  
internal string nobleCondition;
```

### 1.1.12.1.19 EIDIdentity.regionalFileNumber Field

**C#**

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxRegionalFileNumberLen +  
1)]  
internal string regionalFileNumber;
```

**Remarks**

This is regionalFileNumber, a member of class EIDIdentity.

**1.1.12.1.20 EIDIdentity.sex Field**

Sex

**C#**

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxSexLen + 1)]  
internal string sex;
```

**1.1.12.1.21 EIDIdentity.specialOrganization Field****C#**

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxSpecialOrganizationLen  
+ 1)]  
internal string specialOrganization;
```

**Remarks**

This is specialOrganization, a member of class EIDIdentity.

**1.1.12.1.22 EIDIdentity.validityDateBegin Field**

Card (see page 4) validity date begin

**C#**

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxDateBeginLen + 1)]  
internal string validityDateBegin;
```

**1.1.12.1.23 EIDIdentity.validityDateEnd Field**

Card (see page 4) validity date end

**C#**

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxDateEndLen + 1)]  
internal string validityDateEnd;
```

**1.1.12.1.24 EIDIdentity.vat1 Field****C#**

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxVAT1Len + 1)]  
internal string vat1;
```

**Remarks**

This is vat1, a member of class EIDIdentity.

**1.1.12.1.25 EIDIdentity.vat2 Field****C#**

```
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxVAT2Len + 1)]  
internal string vat2;
```

**Remarks**

This is vat2, a member of class EIDIdentity.



### 1.1.12.1.26 EIDIdentity.whiteCane Field

White cane allowed (blind people)

```
C#
[MarshalAs(UnmanagedType.Bool)]
internal bool whiteCane;
```

### 1.1.12.1.27 EIDIdentity.workPermitType Field

```
C#
[MarshalAs(UnmanagedType.ByValTStr, SizeConst = EIDDataLength.EidMaxWorkPermitTypeLen + 1)]
internal string workPermitType;
```

**Remarks**  
This is workPermitType, a member of class EIDIdentity.

### 1.1.12.1.28 EIDIdentity.yellowCane Field

Yellow cane allowed (partially sighted people)

```
C#
[MarshalAs(UnmanagedType.Bool)]
internal bool yellowCane;
```

## 1.1.13 EIDPicture Class

Raw picture (see page 36) data from EID card

**Inheritance Hierarchy**



```
C#
[StructLayout(LayoutKind.Sequential, CharSet = CharSet.Unicode)]
internal class EIDPicture;
```

**File**  
NativeTypes.cs (see page 117)

**Members**

**EIDPicture Fields**

|  | Name                        | Description                    |
|--|-----------------------------|--------------------------------|
|  | picture (see page 36)       | Picture raw data buffer        |
|  | pictureLength (see page 36) | Picture raw data buffer length |

**EIDPicture Fields**

|  | Name                        | Description                    |
|--|-----------------------------|--------------------------------|
|  | picture (see page 36)       | Picture raw data buffer        |
|  | pictureLength (see page 36) | Picture raw data buffer length |

### 1.1.13.1 EIDPicture Fields

### 1.1.13.1.1 EIDPicture.picture Field

Picture raw data buffer

**C#**

```
[MarshalAs(UnmanagedType.ByValArray, SizeConst = EIDDataLength.EidMaxPictureLen + 1)]
internal byte[] picture;
```

### 1.1.13.1.2 EIDPicture.pictureLength Field

Picture raw data buffer length

**C#**

```
[MarshalAs(UnmanagedType.I4)]
internal int pictureLength;
```

## 1.1.14 Encryption Class

### Inheritance Hierarchy

Swelio.Engine.Encryption

**C#**














```
public static class Encryption;
```

**File**



Encryption.cs ([see page 115](#))












### Members

#### Encryption Methods

|   | Name  | Description                              |
|---|---|--|
|  | CheckFileMD5 ( <a href="#">see page 37</a> )                    | Checks the file M d5.                    |
|  | CheckFileSHA1 ( <a href="#">see page 37</a> )                   | Checks the file SH a1.                   |
|  | CheckMD5 ( <a href="#">see page 37</a> )                        | Checks the M d5.                         |
|  | CheckSHA1 ( <a href="#">see page 38</a> )                       | Checks the SH a1.                        |
|  | DecryptFile ( <a href="#">see page 38</a> )                     | Decrypts the file.                       |
|  | EncryptFile ( <a href="#">see page 39</a> )                     | Encrypts the file.                       |
|  | GenerateAuthenticationSignature ( <a href="#">see page 39</a> ) | Generates the authentication signature.  |
|  | GenerateNonRepudiationSignature ( <a href="#">see page 40</a> ) | Generates the non repudiation signature. |
|  | GetFileMD5 ( <a href="#">see page 40</a> )                      | Gets the file M d5.                      |
|  | GetFileSHA1 ( <a href="#">see page 40</a> )                     | Gets the file SH a1.                     |
|  | GetMD5 ( <a href="#">see page 40</a> )                          | Gets the M d5.                           |
|  | GetSHA1 ( <a href="#">see page 41</a> )                         | Gets the SH a1.                          |
|  | VerifySignature ( <a href="#">see page 41</a> )                 | Verifies the signature.                  |

#### Encryption Methods

|   | Name  | Description            |
|---|---|------------------------|
|  | CheckFileMD5 ( <a href="#">see page 37</a> )  | Checks the file M d5.  |
|  | CheckFileSHA1 ( <a href="#">see page 37</a> ) | Checks the file SH a1. |

|   |   |  |
|---|---|--|
|  | CheckMD5 ( <a href="#">see page 37</a> )                        | Checks the M d5.                         |
|  | CheckSHA1 ( <a href="#">see page 38</a> )                       | Checks the SH a1.                        |
|  | DecryptFile ( <a href="#">see page 38</a> )                     | Decrypts the file.                       |
|  | EncryptFile ( <a href="#">see page 39</a> )                     | Encrypts the file.                       |
|  | GenerateAuthenticationSignature ( <a href="#">see page 39</a> ) | Generates the authentication signature.  |
|  | GenerateNonRepudiationSignature ( <a href="#">see page 40</a> ) | Generates the non repudiation signature. |
|  | GetFileMD5 ( <a href="#">see page 40</a> )                      | Gets the file M d5.                      |
|  | GetFileSHA1 ( <a href="#">see page 40</a> )                     | Gets the file SH a1.                     |
|  | GetMD5 ( <a href="#">see page 40</a> )                          | Gets the M d5.                           |
|  | GetSHA1 ( <a href="#">see page 41</a> )                         | Gets the SH a1.                          |
|  | VerifySignature ( <a href="#">see page 41</a> )                 | Verifies the signature.                  |

## 1.1.14.1 Encryption Methods

### 1.1.14.1.1 Encryption.CheckFileMD5 Method

Checks the file M d5.

**C#**

```
public static bool CheckFileMD5(string fileName, byte[] md5sum);
```

**Parameters**

| Parameters      | Description       |
|-----------------|-------------------|
| string fileName | Name of the file. |
| byte[] md5sum   | The md5sum.       |

### 1.1.14.1.2 Encryption.CheckFileSHA1 Method

Checks the file SH a1.

**C#**

```
public static bool CheckFileSHA1(string fileName, byte[] sha1sum);
```

**Parameters**

| Parameters      | Description       |
|-----------------|-------------------|
| string fileName | Name of the file. |
| byte[] sha1sum  | The sha1sum.      |

### 1.1.14.1.3 CheckMD5 Method

#### 1.1.14.1.3.1 Encryption.CheckMD5 Method (byte[], byte[])

Checks the M d5.

**C#**

```
public static bool CheckMD5(byte[] message, byte[] md5sum);
```

**Parameters**

| Parameters     | Description  |
|----------------|--------------|
| byte[] message | The message. |
| byte[] md5sum  | The md5sum.  |

**1.1.14.1.3.2 Encryption.CheckMD5 Method (string, byte[])**

Checks the M d5.

**C#**

```
public static bool CheckMD5(string message, byte[] md5sum);
```

**Parameters**

| Parameters     | Description  |
|----------------|--------------|
| string message | The message. |
| byte[] md5sum  | The md5sum.  |

**1.1.14.1.4 CheckSHA1 Method****1.1.14.1.4.1 Encryption.CheckSHA1 Method (byte[], byte[])**

Checks the SH a1.

**C#**

```
public static bool CheckSHA1(byte[] message, byte[] shalsum);
```

**Parameters**

| Parameters     | Description  |
|----------------|--------------|
| byte[] message | The message. |
| byte[] sha1sum | The sha1sum. |

**1.1.14.1.4.2 Encryption.CheckSHA1 Method (string, byte[])**

Checks the SH a1.

**C#**

```
public static bool CheckSHA1(string message, byte[] shalsum);
```

**Parameters**

| Parameters     | Description  |
|----------------|--------------|
| string message | The message. |
| byte[] sha1sum | The sha1sum. |

**1.1.14.1.5 DecryptFile Method****1.1.14.1.5.1 Encryption.DecryptFile Method (CardReader, string, string)**

Decrypts the file.

**C#**

```
public static bool DecryptFile(CardReader reader, string source, string destination);
```

**Parameters**

| Parameters         | Description      |
|--------------------|------------------|
| CardReader reader  | The reader.      |
| string source      | The source.      |
| string destination | The destination. |

**1.1.14.1.5.2 Encryption.DecryptFile Method (string, string, string)**

Decrypts the file.

**C#**

```
public static bool DecryptFile(string sourceFileName, string destinationFileName, string password);
```

**Parameters**

| Parameters                 | Description                   |
|----------------------------|-------------------------------|
| string sourceFileName      | Name of the source file.      |
| string destinationFileName | Name of the destination file. |
| string password            | The password.                 |

**1.1.14.1.6 EncryptFile Method****1.1.14.1.6.1 Encryption.EncryptFile Method (CardReader, string, string)**

Encrypts the file.

**C#**

```
public static bool EncryptFile(CardReader reader, string source, string destination);
```

**Parameters**

| Parameters         | Description      |
|--------------------|------------------|
| CardReader reader  | The reader.      |
| string source      | The source.      |
| string destination | The destination. |

**1.1.14.1.6.2 Encryption.EncryptFile Method (string, string, string)**

Encrypts the file.

**C#**

```
public static bool EncryptFile(string sourceFileName, string destinationFileName, string password);
```

**Parameters**

| Parameters                 | Description                   |
|----------------------------|-------------------------------|
| string sourceFileName      | Name of the source file.      |
| string destinationFileName | Name of the destination file. |
| string password            | The password.                 |

**1.1.14.1.7 Encryption.GenerateAuthenticationSignature Method**

Generates the authentication signature.

**C#**

```
public static byte[] GenerateAuthenticationSignature(CardReader reader, string pinCode, byte[] dataHash, int hashSize);
```

**Parameters**

| Parameters        | Description       |
|-------------------|-------------------|
| CardReader reader | The reader.       |
| string pinCode    | The pin code.     |
| byte[] dataHash   | The data hash.    |
| int hashSize      | Size of the hash. |

### 1.1.14.1.8 Encryption.GenerateNonRepudiationSignature Method

Generates the non repudiation signature.

**C#**

```
public static byte[] GenerateNonRepudiationSignature(CardReader reader, string pinCode, byte[] dataHash, int hashSize);
```

**Parameters**

| Parameters        | Description       |
|-------------------|-------------------|
| CardReader reader | The reader.       |
| string pinCode    | The pin code.     |
| byte[] dataHash   | The data hash.    |
| int hashSize      | Size of the hash. |

### 1.1.14.1.9 Encryption.GetFileMD5 Method

Gets the file M d5.

**C#**

```
public static byte[] GetFileMD5(string fileName);
```

**Parameters**

| Parameters      | Description       |
|-----------------|-------------------|
| string fileName | Name of the file. |

### 1.1.14.1.10 Encryption.GetFileSHA1 Method

Gets the file SH a1.

**C#**

```
public static byte[] GetFileSHA1(string fileName);
```

**Parameters**

| Parameters      | Description       |
|-----------------|-------------------|
| string fileName | Name of the file. |

### 1.1.14.1.11 GetMD5 Method

#### 1.1.14.1.11.1 Encryption.GetMD5 Method (byte[])

Gets the M d5.

**C#**

```
public static byte[] GetMD5(byte[] message);
```

**Parameters**

| Parameters     | Description  |
|----------------|--------------|
| byte[] message | The message. |

#### 1.1.14.1.11.2 Encryption.GetMD5 Method (string)

Gets the M d5.

**C#**

```
public static byte[] GetMD5(string message);
```

**Parameters**

| Parameters     | Description  |
|----------------|--------------|
| string message | The message. |

#### 1.1.14.1.12 GetSHA1 Method

##### 1.1.14.1.12.1 Encryption.GetSHA1 Method (byte[])

Gets the SH a1.

**C#**

```
public static byte[] GetSHA1(byte[] message);
```

**Parameters**

| Parameters     | Description  |
|----------------|--------------|
| byte[] message | The message. |

##### 1.1.14.1.12.2 Encryption.GetSHA1 Method (string)

Gets the SH a1.

**C#**

```
public static byte[] GetSHA1(string message);
```

**Parameters**

| Parameters     | Description  |
|----------------|--------------|
| string message | The message. |

#### 1.1.14.1.13 Encryption.VerifySignature Method

Verifies the signature.

**C#**

```
public static bool VerifySignature(byte[] certificate, byte[] dataHash, int hashSize, byte[] signature, int signatureSize);
```

**Parameters**

| Parameters         | Description      |
|--------------------|------------------|
| byte[] certificate | The certificate. |
| byte[] dataHash    | The data hash.   |

|                   |                        |
|-------------------|------------------------|
| int hashSize      | Size of the hash.      |
| byte[] signature  | The signature.         |
| int signatureSize | Size of the signature. |

## 1.1.15 FileOperations Class

Helper class for common file operations

### Inheritance Hierarchy

Swelio.Engine.FileOperations

### C#

























```
public static class FileOperations;
```

### File





FileOperations.cs (see page 115)

### Members





#### FileOperations Methods

|   | Name                                       | Description  |
|---|--|--|
|    | ClearFileAttributes (see page 44)          | This is ClearFileAttributes, a member of class FileOperations.   |
|    | CopyFile (see page 44)                     | This is CopyFile, a member of class FileOperations.  |
|  | CreateUnicodeFile (see page 44)            | This is CreateUnicodeFile, a member of class FileOperations.   |
|  | DeleteFile (see page 44)                   | Deletes the file.  |
|  | DeleteToRecycleBin (see page 44)           | Deletes file to recycle bin.   |
|  | DirectoryExists (see page 45)              | This is DirectoryExists, a member of class FileOperations.   |
|  | ExcludeTrailingPathDelimiter (see page 45) | This is ExcludeTrailingPathDelimiter, a member of class FileOperations.  |
|  | FileExists (see page 45)                   | Checks if file exists  |
|  | FileExtensionIs (see page 45)              | This is FileExtensionIs, a member of class FileOperations.   |
|  | FileIsAnimatedGif (see page 45)            | This is FileIsAnimatedGif, a member of class FileOperations.   |
|  | FileIsExe (see page 45)                    | This is FileIsExe, a member of class FileOperations.   |
|  | FileIsIcon (see page 46)                   | Checks if the file is a Windows icon file  |
|  | FileIsImage (see page 46)                  | The file is an image (jpeg, bmp, gif, png or ico)  |
|  | FileIsLink (see page 46)                   | This is FileIsLink, a member of class FileOperations.  |
|  | FileOrFolderExists (see page 46)           | Check if file or folder with given name exists   |
|  | FullPath (see page 46)                     | If file exists in the current folder then this method simply returns the file name. if not, it will search the file with provided name in every folder, specified in the system search path. |
|  | GetExtension (see page 47)                 | This is GetExtension, a member of class FileOperations.  |
|  | GetFilesCount (see page 47)                | This is GetFilesCount, a member of class FileOperations.   |
|  | GetFileSize (see page 47)                  | This is GetFileSize, a member of class FileOperations.   |
|  | IncludeTrailingPathDelimiter (see page 47) | This is IncludeTrailingPathDelimiter, a member of class FileOperations.  |
|  | IsDirectory (see page 47)                  | This is IsDirectory, a member of class FileOperations.   |
|  | IsUnicodeFile (see page 48)                | This is IsUnicodeFile, a member of class FileOperations.   |
|  | IsValidFileName (see page 48)              | This is IsValidFileName, a member of class FileOperations.   |
|  | IsValidPathName (see page 48)              | This is IsValidPathName, a member of class FileOperations.   |



|   |   |  |
|---|---|--|
|  | RenameFile ( <a href="#">see page 48</a> )    | This is RenameFile, a member of class FileOperations.  |
|  | ShellCopyFile ( <a href="#">see page 48</a> ) | This is ShellCopyFile, a member of class FileOperations.   |
|  | StripFileName ( <a href="#">see page 48</a> ) | Expand environment values and relace it with the full value. This method removes environment varaibles from the file name. To insert environment variable to the file name use UnExpandPath ( <a href="#">see page 49</a> ) method |
|  | UnExpandPath ( <a href="#">see page 49</a> )  | Replace known path by environment variables. This function does the opposite work to StripFileName ( <a href="#">see page 48</a> ) function  |

### FileOperations Methods

|   | Name   | Description  |
|---|--|--|
|    | ClearFileAttributes ( <a href="#">see page 44</a> )          | This is ClearFileAttributes, a member of class FileOperations.   |
|    | CopyFile ( <a href="#">see page 44</a> )                     | This is CopyFile, a member of class FileOperations.  |
|    | CreateUnicodeFile ( <a href="#">see page 44</a> )            | This is CreateUnicodeFile, a member of class FileOperations.   |
|    | DeleteFile ( <a href="#">see page 44</a> )                   | Deletes the file.  |
|    | DeleteToRecycleBin ( <a href="#">see page 44</a> )           | Deletes file to recycle bin.   |
|    | DirectoryExists ( <a href="#">see page 45</a> )              | This is DirectoryExists, a member of class FileOperations.   |
|    | ExcludeTrailingPathDelimiter ( <a href="#">see page 45</a> ) | This is ExcludeTrailingPathDelimiter, a member of class FileOperations.  |
|    | FileExists ( <a href="#">see page 45</a> )                   | Checks if file exists  |
|    | FileExtensionsIs ( <a href="#">see page 45</a> )             | This is FileExtensionsIs, a member of class FileOperations.  |
|    | FilesAnimatedGif ( <a href="#">see page 45</a> )             | This is FilesAnimatedGif, a member of class FileOperations.  |
|    | FilesExe ( <a href="#">see page 45</a> )                     | This is FilesExe, a member of class FileOperations.  |
|  | FilesIcon ( <a href="#">see page 46</a> )                    | Checks if the file is a Windows icon file  |
|  | FilesImage ( <a href="#">see page 46</a> )                   | The file is an image (jpeg, bmp, gif, png or ico)  |
|  | FilesLink ( <a href="#">see page 46</a> )                    | This is FilesLink, a member of class FileOperations.   |
|  | FileOrFolderExists ( <a href="#">see page 46</a> )           | Check if file or folder with given name exists   |
|  | FullPath ( <a href="#">see page 46</a> )                     | If file exists in the current folder then this method simply returns the file name. if not, it will search the file with provided name in every folder, specified in the system search path.                                       |
|  | GetExtension ( <a href="#">see page 47</a> )                 | This is GetExtension, a member of class FileOperations.  |
|  | GetFilesCount ( <a href="#">see page 47</a> )                | This is GetFilesCount, a member of class FileOperations.   |
|  | GetFileSize ( <a href="#">see page 47</a> )                  | This is GetFileSize, a member of class FileOperations.   |
|  | IncludeTrailingPathDelimiter ( <a href="#">see page 47</a> ) | This is IncludeTrailingPathDelimiter, a member of class FileOperations.  |
|  | IsDirectory ( <a href="#">see page 47</a> )                  | This is IsDirectory, a member of class FileOperations.   |
|  | IsUnicodeFile ( <a href="#">see page 48</a> )                | This is IsUnicodeFile, a member of class FileOperations.   |
|  | IsValidFileName ( <a href="#">see page 48</a> )              | This is IsValidFileName, a member of class FileOperations.   |
|  | IsValidPathName ( <a href="#">see page 48</a> )              | This is IsValidPathName, a member of class FileOperations.   |
|  | RenameFile ( <a href="#">see page 48</a> )                   | This is RenameFile, a member of class FileOperations.  |
|  | ShellCopyFile ( <a href="#">see page 48</a> )                | This is ShellCopyFile, a member of class FileOperations.   |
|  | StripFileName ( <a href="#">see page 48</a> )                | Expand environment values and relace it with the full value. This method removes environment varaibles from the file name. To insert environment variable to the file name use UnExpandPath ( <a href="#">see page 49</a> ) method |
|  | UnExpandPath ( <a href="#">see page 49</a> )                 | Replace known path by environment variables. This function does the opposite work to StripFileName ( <a href="#">see page 48</a> ) function  |

## 1.1.15.1 FileOperations Methods

### 1.1.15.1.1 FileOperations.ClearFileAttributes Method

**C#**

```
public static void ClearFileAttributes(string fileName);
```

**Remarks**

This is ClearFileAttributes, a member of class FileOperations.

### 1.1.15.1.2 FileOperations.CopyFile Method

**C#**

```
public static void CopyFile(string sourceFileName, string destinationFileName);
```

**Remarks**

This is CopyFile, a member of class FileOperations.

### 1.1.15.1.3 FileOperations.CreateUnicodeFile Method

**C#**

```
public static void CreateUnicodeFile(string fileName);
```

**Remarks**

This is CreateUnicodeFile, a member of class FileOperations.

### 1.1.15.1.4 FileOperations.DeleteFile Method

Deletes the file.

**C#**

```
public static void DeleteFile(string fileName);
```

**Parameters**

| Parameters      | Description       |
|-----------------|-------------------|
| string fileName | Name of the file. |

### 1.1.15.1.5 FileOperations.DeleteToRecycleBin Method

Deletes file to recycle bin.

**C#**

```
public static void DeleteToRecycleBin(string fileName);
```

**Parameters**

| Parameters      | Description       |
|-----------------|-------------------|
| string fileName | Name of the file. |

### 1.1.15.1.6 FileOperations.DirectoryExists Method

C#

```
public static bool DirectoryExists(string directoryName);
```

Remarks

This is DirectoryExists, a member of class FileOperations.

### 1.1.15.1.7 FileOperations.ExcludeTrailingPathDelimiter Method

C#

```
public static string ExcludeTrailingPathDelimiter(string fullPath);
```

Remarks

This is ExcludeTrailingPathDelimiter, a member of class FileOperations.

### 1.1.15.1.8 FileOperations.FileExists Method

Checks if file exists

C#

```
public static bool FileExists(string fileName);
```

Parameters

| Parameters | Description    |
|------------|----------------|
| name       | The file name. |

Returns

True, if file exists, otherwise false

### 1.1.15.1.9 FileOperations.FileExtensionIs Method

C#

```
public static bool FileExtensionIs(string fileName, string extension);
```

Remarks

This is FileExtensionIs, a member of class FileOperations.

### 1.1.15.1.10 FileOperations.FileIsAnimatedGif Method

C#

```
public static bool FileIsAnimatedGif(string fileName);
```

Remarks

This is FileIsAnimatedGif, a member of class FileOperations.

### 1.1.15.1.11 FileOperations.FileIsExe Method

C#

```
public static bool FileIsExe(string fileName);
```

**Remarks**

This is FileIsExe, a member of class FileOperations.

### 1.1.15.1.12 FileOperations.FileIsIcon Method

Checks if the file is a Windows icon file

**C#**

```
public static bool FileIsIcon(string fileName);
```

**Parameters**

| Parameters      | Description       |
|-----------------|-------------------|
| string fileName | Name of the file. |

**Returns**

Returns true if the file is a Windows icon file; otherwise returns false

### 1.1.15.1.13 FileOperations.FileIsImage Method

The file is an image (jpeg, bmp, gif, png or ico)

**C#**

```
public static bool FileIsImage(string fileName);
```

**Parameters**

| Parameters      | Description       |
|-----------------|-------------------|
| string fileName | Name of the file. |

### 1.1.15.1.14 FileOperations.FileIsLink Method

**C#**

```
public static bool FileIsLink(string fileName);
```

**Remarks**

This is FileIsLink, a member of class FileOperations.

### 1.1.15.1.15 FileOperations.FileOrFolderExists Method

Check if file or folder with given name exists

**C#**

```
public static bool FileOrFolderExists(string name);
```

**Parameters**

| Parameters  | Description |
|-------------|-------------|
| string name | The name.   |

### 1.1.15.1.16 FileOperations.FullPath Method

If file exists in the current folder then this method simply returns the file name. if not, it will search the file with provided name in every folder, specified in the system search path.

**C#**

```
public static string FullPath(string fileName);
```

**Parameters**

| Parameters      | Description       |
|-----------------|-------------------|
| string fileName | Name of the file. |

**Returns**

Returns the full file name including the full path to it

### 1.1.15.1.17 FileOperations.GetExtension Method

**C#**

```
public static string GetExtension(string path, bool includeDot);
```

**Remarks**

This is GetExtension, a member of class FileOperations.

### 1.1.15.1.18 FileOperations.GetFilesCount Method

**C#**

```
public static int GetFilesCount(string folderName);
```

**Remarks**

This is GetFilesCount, a member of class FileOperations.

### 1.1.15.1.19 FileOperations.GetFileSize Method

**C#**

```
public static int GetFileSize(string fileName);
```

**Remarks**

This is GetFileSize, a member of class FileOperations.

### 1.1.15.1.20 FileOperations.IncludeTrailingPathDelimiter Method

**C#**

```
public static string IncludeTrailingPathDelimiter(string fullPath);
```

**Remarks**

This is IncludeTrailingPathDelimiter, a member of class FileOperations.

### 1.1.15.1.21 FileOperations.IsDirectory Method

**C#**

```
public static bool IsDirectory(string directoryName);
```

**Remarks**

This is IsDirectory, a member of class FileOperations.

1.1.15.1.22 FileOperations.IsUnicodeFile Method

C#  
`public static bool IsUnicodeFile(string fileName);`

Remarks  
This is IsUnicodeFile, a member of class FileOperations.

1.1.15.1.23 FileOperations.IsValidFileName Method

C#  
`public static bool IsValidFileName(string path);`

Remarks  
This is IsValidFileName, a member of class FileOperations.

1.1.15.1.24 FileOperations.IsValidPathName Method

C#  
`public static bool IsValidPathName(string path);`

Remarks  
This is IsValidPathName, a member of class FileOperations.

1.1.15.1.25 FileOperations.RenameFile Method

C#  
`public static void RenameFile(string oldFileName, string newFileName);`

Remarks  
This is RenameFile, a member of class FileOperations.

1.1.15.1.26 FileOperations.ShellCopyFile Method

C#  
`public static void ShellCopyFile(string oldName, string newName);`

Remarks  
This is ShellCopyFile, a member of class FileOperations.

1.1.15.1.27 FileOperations.StripFileName Method

Expand environment values and relace it with the full value. This method removes environment varaibles from the file name. To insert environment variable to the file name use UnExpandPath (see page 49) method

C#  
`public static string StripFileName(string name);`

Parameters

| Parameters  | Description           |
|-------------|-----------------------|
| string name | The name of the file. |

**Returns**

A string with each environment variable replaced by its value.

### 1.1.15.1.28 FileOperations.UnExpandPath Method

Replace known path by environment variables. This function does the opposite work to StripFileName (see page 48) function

**C#**

```
public static string UnExpandPath(string path);
```

**Parameters**

| Parameters  | Description |
|-------------|-------------|
| string path | The path.   |

## 1.1.16 Identity Class

Holds identity information that is stored on EID card

**Inheritance Hierarchy**

Swelio.Engine.Identity

**C#**

```
[Browsable(false)]  
public class Identity;
```













**File**


















Identity.cs (see page 116)

**Members****Identity Methods**


|   | Name                | Description                  |
|---|---------------------|------------------------------|
|  | Clear (see page 51) | Clear all stored information |

**Identity Properties**























|   | Name                                     | Description  |
|---|--|--|
|  | BirthDate (see page 51)                  | Birth date in YYYYMMDD format                                    |
|  | BirthLocation (see page 51)              | Birth location   |
|  | BrexitMention1 (see page 51)             | This is BrexitMention1, a member of class Identity.              |
|  | BrexitMention2 (see page 51)             | This is BrexitMention2, a member of class Identity.              |
|  | CardNumber (see page 52)                 | Electronic ID card number  |
|  | ChipNumber (see page 52)                 | Electronic ID card physical chip number                          |
|  | DateAndCountryOfProtection (see page 52) | This is DateAndCountryOfProtection, a member of class Identity.  |
|  | DocumentType (see page 52)               | Document type (Belgian citizen, European Community citizen, ...) |
|  | Duplicate (see page 52)                  | This is Duplicate, a member of class Identity.                   |
|  | ExtendedMinority (see page 52)           | Extended minority  |
|  | FirstName1 (see page 53)                 | First name   |
|  | FirstName2 (see page 53)                 | First name   |

|   |                                   |  |
|---|-----------------------------------|--|
|  | MemberOfFamily (see page 53)      | This is MemberOfFamily, a member of class Identity.      |
|  | Municipality (see page 53)        | Card (see page 4) delivery municipality                  |
|  | Nationality (see page 53)         | Nationality  |
|  | NationalityISO (see page 53)      | Gets the nationality ISO 3166 code.                      |
|  | NationalNumber (see page 54)      | National number  |
|  | NobleCondition (see page 54)      | Noble condition  |
|  | RegionalFileNumber (see page 54)  | This is RegionalFileNumber, a member of class Identity.  |
|  | Sex (see page 54)                 | Sex  |
|  | SpecialOrganization (see page 54) | This is SpecialOrganization, a member of class Identity. |
|  | Surname (see page 54)             | Surname  |
|  | ValidityDateBegin (see page 54)   | Card (see page 4) validity date begin in YYYYMMDD format |
|  | ValidityDateEnd (see page 55)     | Card (see page 4) validity date end in YYYYMMDD format   |
|  | Vat1 (see page 55)                | This is Vat1, a member of class Identity.                |
|  | Vat2 (see page 55)                | This is Vat2, a member of class Identity.                |
|  | WhiteCane (see page 55)           | White cane allowed (blind people)                        |
|  | WorkPermitType (see page 55)      | This is WorkPermitType, a member of class Identity.      |
|  | YellowCane (see page 55)          | Yellow cane allowed (partially sighted people)           |








### Identity Methods

|   | Name                | Description                  |
|---|---------------------|------------------------------|
|  | Clear (see page 51) | Clear all stored information |

### Identity Properties

|   | Name                                     | Description  |
|---|--|--|
|  | BirthDate (see page 51)                  | Birth date in YYYYMMDD format                                    |
|  | BirthLocation (see page 51)              | Birth location   |
|  | BrexitMention1 (see page 51)             | This is BrexitMention1, a member of class Identity.              |
|  | BrexitMention2 (see page 51)             | This is BrexitMention2, a member of class Identity.              |
|  | CardNumber (see page 52)                 | Electronic ID card number  |
|  | ChipNumber (see page 52)                 | Electronic ID card physical chip number                          |
|  | DateAndCountryOfProtection (see page 52) | This is DateAndCountryOfProtection, a member of class Identity.  |
|  | DocumentType (see page 52)               | Document type (Belgian citizen, European Community citizen, ...) |
|  | Duplicate (see page 52)                  | This is Duplicate, a member of class Identity.                   |
|  | ExtendedMinority (see page 52)           | Extended minority  |
|  | FirstName1 (see page 53)                 | First name   |
|  | FirstName2 (see page 53)                 | First name   |
|  | MemberOfFamily (see page 53)             | This is MemberOfFamily, a member of class Identity.              |
|  | Municipality (see page 53)               | Card (see page 4) delivery municipality                          |
|  | Nationality (see page 53)                | Nationality  |
|  | NationalityISO (see page 53)             | Gets the nationality ISO 3166 code.                              |
|  | NationalNumber (see page 54)             | National number  |
|  | NobleCondition (see page 54)             | Noble condition  |
|  | RegionalFileNumber (see page 54)         | This is RegionalFileNumber, a member of class Identity.          |
|  | Sex (see page 54)                        | Sex  |
|  | SpecialOrganization (see page 54)        | This is SpecialOrganization, a member of class Identity.         |
|  | Surname (see page 54)                    | Surname  |



|   |   |  |
|---|---|--|
|  | ValidityDateBegin ( <a href="#">see page 54</a> ) | Card ( <a href="#">see page 4</a> ) validity date begin in YYYYMMDD format |
|  | ValidityDateEnd ( <a href="#">see page 55</a> )   | Card ( <a href="#">see page 4</a> ) validity date end in YYYYMMDD format   |
|  | Vat1 ( <a href="#">see page 55</a> )              | This is Vat1, a member of class Identity.                                  |
|  | Vat2 ( <a href="#">see page 55</a> )              | This is Vat2, a member of class Identity.                                  |
|  | WhiteCane ( <a href="#">see page 55</a> )         | White cane allowed (blind people)  |
|  | WorkPermitType ( <a href="#">see page 55</a> )    | This is WorkPermitType, a member of class Identity.                        |
|  | YellowCane ( <a href="#">see page 55</a> )        | Yellow cane allowed (partially sighted people)                             |

## 1.1.16.1 Identity Methods

### 1.1.16.1.1 Identity.Clear Method

Clear all stored information

**C#**

```
public void Clear();
```

## 1.1.16.2 Identity Properties

### 1.1.16.2.1 Identity.BirthDate Property

Birth date in YYYYMMDD format

**C#**

```
[Description("Birth date")]
[ReadOnly(true)]
public DateTime BirthDate;
```

### 1.1.16.2.2 Identity.BirthLocation Property

Birth location

**C#**

```
[Description("Birth location")]
[ReadOnly(true)]
public string BirthLocation;
```

### 1.1.16.2.3 Identity.BrexitMention1 Property

**C#**

```
public string BrexitMention1;
```

**Remarks**

This is BrexitMention1, a member of class Identity.

### 1.1.16.2.4 Identity.BrexitMention2 Property

**C#**

```
public string BrexitMention2;
```

**Remarks**

This is BrexitMention2, a member of class Identity.

### 1.1.16.2.5 Identity.CardNumber Property

Electronic ID card number

**C#**

```
[Description("Electronic ID card number")]  
[ReadOnly(true)]  
public string CardNumber;
```

### 1.1.16.2.6 Identity.ChipNumber Property

Electronic ID card physical chip number

**C#**

```
[Description("Electronic ID card physical chip number")]  
[ReadOnly(true)]  
public string ChipNumber;
```

### 1.1.16.2.7 Identity.DateAndCountryOfProtection Property

**C#**

```
public string DateAndCountryOfProtection;
```

**Remarks**

This is DateAndCountryOfProtection, a member of class Identity.

### 1.1.16.2.8 Identity.DocumentType Property

Document type (Belgian citizen, European Community citizen, ...)

**C#**

```
[Description("Document type (Belgian citizen, European Community citizen, ...)")]  
[ReadOnly(true)]  
public DocumentType DocumentType;
```

### 1.1.16.2.9 Identity.Duplicate Property

**C#**

```
public string Duplicate;
```

**Remarks**

This is Duplicate, a member of class Identity.

### 1.1.16.2.10 Identity.ExtendedMinority Property

Extended minority

**C#**

```
[Description("Extended minority")]  
[ReadOnly(true)]  
public bool ExtendedMinority;
```

### 1.1.16.2.11 Identity.FirstName1 Property

First name

**C#**

```
[Description("First name of the card owner")]
[ReadOnly(true)]
public string FirstName1;
```

### 1.1.16.2.12 Identity.FirstName2 Property

First name

**C#**

```
[Description("First name of the card owner")]
[ReadOnly(true)]
public string FirstName2;
```

### 1.1.16.2.13 Identity.MemberOfFamily Property

**C#**

```
public bool MemberOfFamily;
```

**Remarks**

This is MemberOfFamily, a member of class Identity.

### 1.1.16.2.14 Identity.Municipality Property

Card (see page 4) delivery municipality

**C#**

```
[Description("Card delivery municipality")]
[ReadOnly(true)]
public string Municipality;
```

### 1.1.16.2.15 Identity.Nationality Property

Nationality

**C#**

```
[Description("Nationality of the card owner")]
[ReadOnly(true)]
public string Nationality;
```

### 1.1.16.2.16 Identity.NationalityISO Property

Gets the nationality ISO 3166 code.

**C#**

```
public string NationalityISO;
```

**Description**

The nationality ISO 3166 code.

### 1.1.16.2.17 Identity.NationalNumber Property

National number

**C#**

```
[Description("Unique national number")]  
[ReadOnly(true)]  
public string NationalNumber;
```

### 1.1.16.2.18 Identity.NobleCondition Property

Noble condition

**C#**

```
[Description("Noble condition")]  
[ReadOnly(true)]  
public string NobleCondition;
```

### 1.1.16.2.19 Identity.RegionalFileNumber Property

**C#**

```
public string RegionalFileNumber;
```

**Remarks**

This is RegionalFileNumber, a member of class Identity.

### 1.1.16.2.20 Identity.Sex Property

Sex

**C#**

```
[Description("Sex of the card owner")]  
[ReadOnly(true)]  
public Gender Sex;
```

### 1.1.16.2.21 Identity.SpecialOrganization Property

**C#**

```
public string SpecialOrganization;
```

**Remarks**

This is SpecialOrganization, a member of class Identity.

### 1.1.16.2.22 Identity.Surname Property

Surname

**C#**

```
[Description("Surname of the card owner")]  
[ReadOnly(true)]  
public string Surname;
```

### 1.1.16.2.23 Identity.ValidityDateBegin Property

Card (see page 4) validity date begin in YYYYMMDD format

**C#**

```
[Description("Card validity date begin")]
[ReadOnly(true)]
public DateTime ValidityDateBegin;
```

### 1.1.16.2.24 Identity.ValidityDateEnd Property

Card (see page 4) validity date end in YYYYMMDD format

**C#**

```
[Description("Card validity date end")]
[ReadOnly(true)]
public DateTime ValidityDateEnd;
```

### 1.1.16.2.25 Identity.Vat1 Property

**C#**

```
public string Vat1;
```

**Remarks**

This is Vat1, a member of class Identity.

### 1.1.16.2.26 Identity.Vat2 Property

**C#**

```
public string Vat2;
```

**Remarks**

This is Vat2, a member of class Identity.

### 1.1.16.2.27 Identity.WhiteCane Property

White cane allowed (blind people)

**C#**

```
[Description("White cane allowed (blind people)")]
[ReadOnly(true)]
public bool WhiteCane;
```

### 1.1.16.2.28 Identity.WorkPermitType Property

**C#**

```
public string WorkPermitType;
```

**Remarks**

This is WorkPermitType, a member of class Identity.

### 1.1.16.2.29 Identity.YellowCane Property

Yellow cane allowed (partially sighted people)

**C#**

```
[Description("Yellow cane allowed (partially sighted people)")]
[ReadOnly(true)]
public bool YellowCane;
```

## 1.1.17 InteropHelper Class

Helper class for accessing native Windows API and resources Not recommended to use it directly without deep understanding of Windows API

### Inheritance Hierarchy

Swelio.Engine.InteropHelper

### C#








```
public static class InteropHelper;
```

### File










InteropHelper.cs (see page 116)

### Members








#### InteropHelper Methods

|   | Name                             | Description  |
|---|----------------------------------|--|
|    | ClearUnusedMemory (see page 57)  | Clears the unused memory.  |
|    | GetStartup (see page 57)         | This is GetStartup, a member of class InteropHelper.                   |
|    | SetStartup (see page 57)         | Add/Remove registry entries for windows startup. Only for current user |
|    | ShowScreenKeyboard (see page 57) | Shows the screen keyboard.   |
|  | ShowWindowsError (see page 58)   | Shows the windows error.   |
|  | TurnMonitorOff (see page 58)     | Turns the monitor off.   |
|  | TurnMonitorOn (see page 58)      | Turns the monitor on.  |










#### InteropHelper Properties

|   | Name                            | Description   |
|---|---------------------------------|---|
|  | IsMediaCenter (see page 58)     | This is IsMediaCenter, a member of class InteropHelper.     |
|  | IsMultiTouchReady (see page 58) | This is IsMultiTouchReady, a member of class InteropHelper. |
|  | IsTabletPC (see page 58)        | This is IsTabletPC, a member of class InteropHelper.        |
|  | MetroActive (see page 59)       | This is MetroActive, a member of class InteropHelper.       |
|  | RunningOnVista (see page 59)    | Gets a value indicating whether [running on vista].         |
|  | RunningOnWin10 (see page 59)    | Determines if the application is running on Windows 10      |
|  | RunningOnWin7 (see page 59)     | Determines if the application is running on Windows 7       |
|  | RunningOnWin8 (see page 59)     | This is RunningOnWin8, a member of class InteropHelper.     |
|  | RunningOnXP (see page 59)       | Gets a value indicating whether [running on XP].            |

#### InteropHelper Methods

|   | Name                             | Description  |
|---|----------------------------------|--|
|  | ClearUnusedMemory (see page 57)  | Clears the unused memory.  |
|  | GetStartup (see page 57)         | This is GetStartup, a member of class InteropHelper.                   |
|  | SetStartup (see page 57)         | Add/Remove registry entries for windows startup. Only for current user |
|  | ShowScreenKeyboard (see page 57) | Shows the screen keyboard.   |
|  | ShowWindowsError (see page 58)   | Shows the windows error.   |
|  | TurnMonitorOff (see page 58)     | Turns the monitor off.   |
|  | TurnMonitorOn (see page 58)      | Turns the monitor on.  |

**InteropHelper Properties**

|   | Name  | Description   |
|---|---|---|
|  | IsMediaCenter ( <a href="#">see page 58</a> )     | This is IsMediaCenter, a member of class InteropHelper.     |
|  | IsMultiTouchReady ( <a href="#">see page 58</a> ) | This is IsMultiTouchReady, a member of class InteropHelper. |
|  | IsTabletPC ( <a href="#">see page 58</a> )        | This is IsTabletPC, a member of class InteropHelper.        |
|  | MetroActive ( <a href="#">see page 59</a> )       | This is MetroActive, a member of class InteropHelper.       |
|  | RunningOnVista ( <a href="#">see page 59</a> )    | Gets a value indicating whether [running on vista].         |
|  | RunningOnWin10 ( <a href="#">see page 59</a> )    | Determines if the application is running on Windows 10      |
|  | RunningOnWin7 ( <a href="#">see page 59</a> )     | Determines if the application is running on Windows 7       |
|  | RunningOnWin8 ( <a href="#">see page 59</a> )     | This is RunningOnWin8, a member of class InteropHelper.     |
|  | RunningOnXP ( <a href="#">see page 59</a> )       | Gets a value indicating whether [running on XP].            |

**1.1.17.1 InteropHelper Methods****1.1.17.1.1 InteropHelper.ClearUnusedMemory Method**

Clears the unused memory.

**C#**

```
public static void ClearUnusedMemory();
```

**1.1.17.1.2 InteropHelper.GetStartup Method**

**C#**

```
public static bool GetStartup(string appName);
```

**Remarks**

This is GetStartup, a member of class InteropHelper.

**1.1.17.1.3 InteropHelper.SetStartup Method**

Add/Remove registry entries for windows startup. Only for current user

**C#**

```
public static void SetStartup(string appName, string appPath, bool enable);
```

**Parameters**

| Parameters     | Description              |
|----------------|--------------------------|
| string appName | Name of the application. |
| string appPath | The application path.    |
| bool enable    | if set to true [enable]. |

**1.1.17.1.4 InteropHelper.ShowScreenKeyboard Method**

Shows the screen keyboard.

**C#**

```
[SecurityPermissionAttribute(SecurityAction.LinkDemand, Flags =  
SecurityPermissionFlag.UnmanagedCode)]  
public static void ShowScreenKeyboard();
```

### 1.1.17.1.5 InteropHelper.ShowWindowsError Method

Shows the windows error.

C#

```
public static void ShowWindowsError(int errorCode);
```

Parameters

| Parameters    | Description     |
|---------------|-----------------|
| int errorCode | The error code. |

### 1.1.17.1.6 InteropHelper.TurnMonitorOff Method

Turns the monitor off.

C#

```
public static void TurnMonitorOff();
```

### 1.1.17.1.7 InteropHelper.TurnMonitorOn Method

Turns the monitor on.

C#

```
public static void TurnMonitorOn();
```

## 1.1.17.2 InteropHelper Properties

### 1.1.17.2.1 InteropHelper.IsMediaCenter Property

C#

```
public static bool IsMediaCenter;
```

Remarks

This is IsMediaCenter, a member of class InteropHelper.

### 1.1.17.2.2 InteropHelper.IsMultiTouchReady Property

C#

```
public static bool IsMultiTouchReady;
```

Remarks

This is IsMultiTouchReady, a member of class InteropHelper.

### 1.1.17.2.3 InteropHelper.IsTabletPC Property

C#

```
public static bool IsTabletPC;
```

Remarks

This is IsTabletPC, a member of class InteropHelper.



#### 1.1.17.2.4 InteropHelper.MetroActive Property

**C#**

```
public static bool MetroActive;
```

**Remarks**

This is MetroActive, a member of class InteropHelper.

#### 1.1.17.2.5 InteropHelper.RunningOnVista Property

Gets a value indicating whether [running on vista].

**C#**

```
public static bool RunningOnVista;
```

**Description**

true if [running on vista]; otherwise, false.

#### 1.1.17.2.6 InteropHelper.RunningOnWin10 Property

Determines if the application is running on Windows 10

**C#**

```
public static bool RunningOnWin10;
```

#### 1.1.17.2.7 InteropHelper.RunningOnWin7 Property

Determines if the application is running on Windows 7

**C#**

```
public static bool RunningOnWin7;
```

#### 1.1.17.2.8 InteropHelper.RunningOnWin8 Property

**C#**

```
public static bool RunningOnWin8;
```

**Remarks**

This is RunningOnWin8, a member of class InteropHelper.

#### 1.1.17.2.9 InteropHelper.RunningOnXP Property

Gets a value indicating whether [running on XP].

**C#**

```
public static bool RunningOnXP;
```

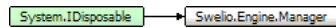
**Description**

true if [running on XP]; otherwise, false.

## 1.1.18 Manager Class

The Swelio Engine Manager class used to activate and deactivate engine and gives an access to the smart card readers, connected to the PC

### Inheritance Hierarchy



### C#

```
public sealed class Manager : IDisposable;
```

### File

Manager.cs ([see page 116](#))

### Members

#### Methods

|  | Name                                    | Description                                      |
|--|---|--|
|  | Manager ( <a href="#">see page 61</a> ) | Initializes a new instance of the Manager class. |

#### Manager Methods

|  | Name  | Description  |
|--|---|--|
|  | Dispose ( <a href="#">see page 61</a> )           | Performs application-defined tasks associated with freeing, releasing, or resetting unmanaged resources. |
|  | GetReader ( <a href="#">see page 61</a> )         | Gets the default card reader.  |
|  | GetReaderName ( <a href="#">see page 62</a> )     | Gets the name of the reader.   |
|  | ListReaders ( <a href="#">see page 62</a> )       | Returns the array with the names of the attached card readers  |
|  | ReloadReadersList ( <a href="#">see page 62</a> ) | Reloads the readers list.  |
|  | SendAPDU ( <a href="#">see page 62</a> )          | This is SendAPDU, a member of class Manager.   |
|  | SetDefaultReader ( <a href="#">see page 62</a> )  | Sets the default card reader.  |

#### Manager Properties

|  | Name  | Description   |
|--|---|---|
|  | Active ( <a href="#">see page 63</a> )              | Gets or sets a value indicating whether this Manager is active.     |
|  | ReaderCount ( <a href="#">see page 63</a> )         | Gets the reader count.  |
|  | TraceEvents ( <a href="#">see page 63</a> )         | Gets or sets a value indicating whether the card events are traced. |
|  | TraceHardwareEvents ( <a href="#">see page 63</a> ) | This is TraceHardwareEvents, a member of class Manager.             |
|  | TraceServiceEvents ( <a href="#">see page 63</a> )  | This is TraceServiceEvents, a member of class Manager.              |




#### Manager Events

|  | Name   | Description  |
|--|--|--|
|  | CardInserted ( <a href="#">see page 64</a> )       | This is CardInserted, a member of class Manager.       |
|  | CardRemoved ( <a href="#">see page 64</a> )        | This is CardRemoved, a member of class Manager.        |
|  | ReadersListChanged ( <a href="#">see page 64</a> ) | This is ReadersListChanged, a member of class Manager. |








#### Methods

|  | Name                                    | Description                                      |
|--|---|--|
|  | Manager ( <a href="#">see page 61</a> ) | Initializes a new instance of the Manager class. |






**Manager Events**

|   | Name   | Description  |
|---|--|--|
|  | CardInserted ( <a href="#">see page 64</a> )       | This is CardInserted, a member of class Manager.       |
|  | CardRemoved ( <a href="#">see page 64</a> )        | This is CardRemoved, a member of class Manager.        |
|  | ReadersListChanged ( <a href="#">see page 64</a> ) | This is ReadersListChanged, a member of class Manager. |

**Manager Methods**

|   | Name  | Description  |
|---|---|--|
|  | Dispose ( <a href="#">see page 61</a> )           | Performs application-defined tasks associated with freeing, releasing, or resetting unmanaged resources. |
|  | GetReader ( <a href="#">see page 61</a> )         | Gets the default card reader.  |
|  | GetReaderName ( <a href="#">see page 62</a> )     | Gets the name of the reader.   |
|  | ListReaders ( <a href="#">see page 62</a> )       | Returns the array with the names of the attached card readers  |
|  | ReloadReadersList ( <a href="#">see page 62</a> ) | Reloads the readers list.  |
|  | SendAPDU ( <a href="#">see page 62</a> )          | This is SendAPDU, a member of class Manager.   |
|  | SetDefaultReader ( <a href="#">see page 62</a> )  | Sets the default card reader.  |

**Manager Properties**

|   | Name  | Description   |
|---|---|---|
|    | Active ( <a href="#">see page 63</a> )              | Gets or sets a value indicating whether this Manager is active.     |
|    | ReaderCount ( <a href="#">see page 63</a> )         | Gets the reader count.  |
|   | TraceEvents ( <a href="#">see page 63</a> )         | Gets or sets a value indicating whether the card events are traced. |
|  | TraceHardwareEvents ( <a href="#">see page 63</a> ) | This is TraceHardwareEvents, a member of class Manager.             |
|  | TraceServiceEvents ( <a href="#">see page 63</a> )  | This is TraceServiceEvents, a member of class Manager.              |

## 1.1.18.1 Manager.Manager Constructor

Initializes a new instance of the Manager ([see page 60](#)) class.

**C#**

```
public Manager();
```

## 1.1.18.2 Manager Methods

### 1.1.18.2.1 Manager.Dispose Method

Performs application-defined tasks associated with freeing, releasing, or resetting unmanaged resources.

**C#**

```
public void Dispose();
```

### 1.1.18.2.2 GetReader Method

#### 1.1.18.2.2.1 Manager.GetReader Method ()

Gets the default card reader.

**C#**

```
public CardReader GetReader(int readerNumber);  
public CardReader GetReader();
```

#### 1.1.18.2.2 Manager.GetReader Method (string)

Gets the reader.

**C#**

```
public CardReader GetReader(string name);
```

**Parameters**

| Parameters  | Description |
|-------------|-------------|
| string name | The name.   |

#### 1.1.18.2.3 Manager.GetReaderName Method

Gets the name of the reader.

**C#**

```
public string GetReaderName(int readerNumber);
```

**Parameters**

| Parameters       | Description        |
|------------------|--------------------|
| int readerNumber | The reader number. |

#### 1.1.18.2.4 Manager.ListReaders Method

Returns the array with the names of the attached card readers

**C#**

```
public string[] ListReaders();
```

#### 1.1.18.2.5 Manager.ReloadReadersList Method

Reloads the readers list.

**C#**

```
public void ReloadReadersList();
```

#### 1.1.18.2.6 Manager.SendAPDU Method

**C#**

```
public bool SendAPDU(int readerNumber, byte[] apdu, int apduLen, byte[] result, ref int len);
```

**Remarks**

This is SendAPDU, a member of class Manager.

#### 1.1.18.2.7 Manager.SetDefaultReader Method

Sets the default card reader.

**C#**

```
public void SetDefaultReader(int readerNumber);
```

Parameters

| Parameters       | Description        |
|------------------|--------------------|
| int readerNumber | The reader number. |

1.1.18.3 Manager Properties

1.1.18.3.1 Manager.Active Property

Gets or sets a value indicating whether this Manager (see page 60) is active.

C#

```
public bool Active;
```

Description

true if active; otherwise, false.

1.1.18.3.2 Manager.ReaderCount Property

Gets the reader count.

C#

```
public int ReaderCount;
```

1.1.18.3.3 Manager.TraceEvents Property

Gets or sets a value indicating whether the card events are traced.

C#

```
public bool TraceEvents;
```

Description

true if trace card events; otherwise, false.

1.1.18.3.4 Manager.TraceHardwareEvents Property

C#

```
public bool TraceHardwareEvents;
```

Remarks

This is TraceHardwareEvents, a member of class Manager.

1.1.18.3.5 Manager.TraceServiceEvents Property

C#

```
public bool TraceServiceEvents;
```

Remarks

This is TraceServiceEvents, a member of class Manager.

1.1.18.4 Manager Events

### 1.1.18.4.1 Manager.CardInserted Event

C#

```
public event EventHandler<CardEventArgs> CardInserted;
```

Remarks

This is CardInserted, a member of class Manager.

### 1.1.18.4.2 Manager.CardRemoved Event

C#

```
public event EventHandler<CardEventArgs> CardRemoved;
```

Remarks

This is CardRemoved, a member of class Manager.

### 1.1.18.4.3 Manager.ReadersListChanged Event

C#

```
public event EventHandler ReadersListChanged;
```

Remarks

This is ReadersListChanged, a member of class Manager.

## 1.1.19 NationalNumber Class

National number formatter

Inheritance Hierarchy



C#

```
public static class NationalNumber;
```

File

NationalNumber.cs (🔗 see page 117)

Members

NationalNumber Methods

|     | Name                     | Description  |
|-----|--------------------------|--|
| 💡💡💡 | ToString (🔗 see page 65) | Converts the natinal number value to its formatted String representation |

NationalNumber Methods

|     | Name                     | Description  |
|-----|--------------------------|--|
| 💡💡💡 | ToString (🔗 see page 65) | Converts the natinal number value to its formatted String representation |

### 1.1.19.1 NationalNumber Methods

### 1.1.19.1.1 NationalNumber.ToString Method

Converts the natinal number value to its formatted String representation

**C#**

```
public static string ToString(string nationalNumber);
```

**Parameters**

| Parameters            | Description                     |
|-----------------------|---------------------------------|
| string nationalNumber | The unformatted national number |

## 1.1.20 NativeMethods Class

**Inheritance Hierarchy**

Swelio.Engine.NativeMethods

**C#**

```
internal static class NativeMethods;
```

**File**

















NativeMethods.cs ([see page 117](#))

































**Remarks**

This is class Swelio.Engine.NativeMethods.















**Members**







**NativeMethods Methods**





















|   | Name   | Description  |
|---|--|--|
|  | ActivateCardEx ( <a href="#">see page 73</a> )     | This is ActivateCardEx, a member of class NativeMethods.     |
|  | AddFileToContainer ( <a href="#">see page 73</a> ) | This is AddFileToContainer, a member of class NativeMethods. |
|  | CardDecryptFile ( <a href="#">see page 73</a> )    | This is CardDecryptFile, a member of class NativeMethods.    |
|  | CardEncryptFile ( <a href="#">see page 74</a> )    | This is CardEncryptFile, a member of class NativeMethods.    |
|  | CardSignCadesT ( <a href="#">see page 74</a> )     | This is CardSignCadesT, a member of class NativeMethods.     |
|  | CardSignCadesTEx ( <a href="#">see page 74</a> )   | This is CardSignCadesTEx, a member of class NativeMethods.   |
|  | CardSignCMS ( <a href="#">see page 74</a> )        | This is CardSignCMS, a member of class NativeMethods.        |
|  | CardSignCMSEx ( <a href="#">see page 74</a> )      | This is CardSignCMSEx, a member of class NativeMethods.      |
|  | CertSignCadesT ( <a href="#">see page 74</a> )     | This is CertSignCadesT, a member of class NativeMethods.     |
|  | CertSignCadesTData ( <a href="#">see page 75</a> ) | This is CertSignCadesTData, a member of class NativeMethods. |
|  | CertSignCadesTEx ( <a href="#">see page 75</a> )   | This is CertSignCadesTEx, a member of class NativeMethods.   |
|  | CertSignCMS ( <a href="#">see page 75</a> )        | This is CertSignCMS, a member of class NativeMethods.        |
|  | CertSignCMSData ( <a href="#">see page 75</a> )    | This is CertSignCMSData, a member of class NativeMethods.    |
|  | CertSignCMSEx ( <a href="#">see page 75</a> )      | This is CertSignCMSEx, a member of class NativeMethods.      |
|  | CheckMD5 ( <a href="#">see page 75</a> )           | This is CheckMD5, a member of class NativeMethods.           |
|  | CheckSHA1 ( <a href="#">see page 76</a> )          | This is CheckSHA1, a member of class NativeMethods.          |

|   |   |   |
|---|---|---|
|    | ClearFileAttributes ( <a href="#">see page 76</a> )               | This is ClearFileAttributes, a member of class NativeMethods.               |
|    | ClearUnusedMemory ( <a href="#">see page 76</a> )                 | This is ClearUnusedMemory, a member of class NativeMethods.                 |
|    | ContainerCertificate ( <a href="#">see page 76</a> )              | This is ContainerCertificate, a member of class NativeMethods.              |
|    | ContainerEidCertificate ( <a href="#">see page 76</a> )           | This is ContainerEidCertificate, a member of class NativeMethods.           |
|    | ContainerPickCertificate ( <a href="#">see page 76</a> )          | This is ContainerPickCertificate, a member of class NativeMethods.          |
|    | CreateCardBuffer ( <a href="#">see page 77</a> )                  | This is CreateCardBuffer, a member of class NativeMethods.                  |
|    | CreateUnicodeFile ( <a href="#">see page 77</a> )                 | This is CreateUnicodeFile, a member of class NativeMethods.                 |
|    | CurrentIPAddress ( <a href="#">see page 77</a> )                  | This is CurrentIPAddress, a member of class NativeMethods.                  |
|    | DeactivateCardEx ( <a href="#">see page 77</a> )                  | This is DeactivateCardEx, a member of class NativeMethods.                  |
|    | DecryptFileAES ( <a href="#">see page 77</a> )                    | This is DecryptFileAES, a member of class NativeMethods.                    |
|    | DeleteCardBuffer ( <a href="#">see page 77</a> )                  | This is DeleteCardBuffer, a member of class NativeMethods.                  |
|    | DeleteObject ( <a href="#">see page 78</a> )                      | This is DeleteObject, a member of class NativeMethods.                      |
|    | DeleteToRecycleBin ( <a href="#">see page 78</a> )                | This is DeleteToRecycleBin, a member of class NativeMethods.                |
|   | DirectoryExists ( <a href="#">see page 78</a> )                   | This is DirectoryExists, a member of class NativeMethods.                   |
|  | DisplayCertificate ( <a href="#">see page 78</a> )                | This is DisplayCertificate, a member of class NativeMethods.                |
|  | EmptyRecycleBin ( <a href="#">see page 78</a> )                   | This is EmptyRecycleBin, a member of class NativeMethods.                   |
|  | EncodeCertificate ( <a href="#">see page 78</a> )                 | This is EncodeCertificate, a member of class NativeMethods.                 |
|  | EncodePhoto ( <a href="#">see page 79</a> )                       | This is EncodePhoto, a member of class NativeMethods.                       |
|  | EncryptFileAES ( <a href="#">see page 79</a> )                    | This is EncryptFileAES, a member of class NativeMethods.                    |
|  | FileCopy ( <a href="#">see page 79</a> )                          | This is FileCopy, a member of class NativeMethods.                          |
|  | FileDelete ( <a href="#">see page 79</a> )                        | This is FileDelete, a member of class NativeMethods.                        |
|  | FileExists ( <a href="#">see page 79</a> )                        | This is FileExists, a member of class NativeMethods.                        |
|  | FileExtensionIs ( <a href="#">see page 79</a> )                   | This is FileExtensionIs, a member of class NativeMethods.                   |
|  | FileGetSize ( <a href="#">see page 80</a> )                       | This is FileGetSize, a member of class NativeMethods.                       |
|  | FileIsExe ( <a href="#">see page 80</a> )                         | This is FileIsExe, a member of class NativeMethods.                         |
|  | FileIsIcon ( <a href="#">see page 80</a> )                        | This is FileIsIcon, a member of class NativeMethods.                        |
|  | FileIsImage ( <a href="#">see page 80</a> )                       | This is FileIsImage, a member of class NativeMethods.                       |
|  | FileIsLink ( <a href="#">see page 80</a> )                        | This is FileIsLink, a member of class NativeMethods.                        |
|  | FileOrFolderExists ( <a href="#">see page 80</a> )                | This is FileOrFolderExists, a member of class NativeMethods.                |
|  | FileRename ( <a href="#">see page 81</a> )                        | This is FileRename, a member of class NativeMethods.                        |
|  | FreeContainer ( <a href="#">see page 81</a> )                     | This is FreeContainer, a member of class NativeMethods.                     |
|  | FullPath ( <a href="#">see page 81</a> )                          | This is FullPath, a member of class NativeMethods.                          |
|  | GenerateAuthenticationSignatureEx ( <a href="#">see page 81</a> ) | This is GenerateAuthenticationSignatureEx, a member of class NativeMethods. |
|  | GenerateBMP ( <a href="#">see page 81</a> )                       | This is GenerateBMP, a member of class NativeMethods.                       |
|  | GenerateNonRepudiationSignatureEx ( <a href="#">see page 81</a> ) | This is GenerateNonRepudiationSignatureEx, a member of class NativeMethods. |
|  | GeneratePNG ( <a href="#">see page 82</a> )                       | This is GeneratePNG, a member of class NativeMethods.                       |
|  | GenerateQRCodeEx ( <a href="#">see page 82</a> )                  | This is GenerateQRCodeEx, a member of class NativeMethods.                  |
|  | GetCardBufferA ( <a href="#">see page 82</a> )                    | This is GetCardBufferA, a member of class NativeMethods.                    |






















|   |   |   |
|---|---|---|
|    | GetCardBufferSize ( <a href="#">see page 82</a> )         | This is GetCardBufferSize, a member of class NativeMethods.         |
|    | GetCardBufferW ( <a href="#">see page 82</a> )            | This is GetCardBufferW, a member of class NativeMethods.            |
|    | GetCardSerialNumber ( <a href="#">see page 82</a> )       | This is GetCardSerialNumber, a member of class NativeMethods.       |
|    | GetCardVersion ( <a href="#">see page 83</a> )            | This is GetCardVersion, a member of class NativeMethods.            |
|    | GetEncodedCertificateSize ( <a href="#">see page 83</a> ) | This is GetEncodedCertificateSize, a member of class NativeMethods. |
|    | GetEncodedPhotoSize ( <a href="#">see page 83</a> )       | This is GetEncodedPhotoSize, a member of class NativeMethods.       |
|    | GetFileMD5 ( <a href="#">see page 83</a> )                | This is GetFileMD5, a member of class NativeMethods.                |
|    | GetFilesCount ( <a href="#">see page 83</a> )             | This is GetFilesCount, a member of class NativeMethods.             |
|    | GetFileSHA1 ( <a href="#">see page 83</a> )               | This is GetFileSHA1, a member of class NativeMethods.               |
|    | GetHBitmap ( <a href="#">see page 84</a> )                | This is GetHBitmap, a member of class NativeMethods.                |
|    | GetISOCODE ( <a href="#">see page 84</a> )                | This is GetISOCODE, a member of class NativeMethods.                |
|    | GetMD5 ( <a href="#">see page 84</a> )                    | This is GetMD5, a member of class NativeMethods.                    |
|    | GetReaderIndex ( <a href="#">see page 84</a> )            | This is GetReaderIndex, a member of class NativeMethods.            |
|    | GetReaderName ( <a href="#">see page 84</a> )             | This is GetReaderName, a member of class NativeMethods.             |
|    | GetReaderNameLen ( <a href="#">see page 84</a> )          | This is GetReaderNameLen, a member of class NativeMethods.          |
|    | GetReadersCount ( <a href="#">see page 85</a> )           | This is GetReadersCount, a member of class NativeMethods.           |
|    | GetSelectedReaderIndex ( <a href="#">see page 85</a> )    | This is GetSelectedReaderIndex, a member of class NativeMethods.    |
|  | GetSHA1 ( <a href="#">see page 85</a> )                   | This is GetSHA1, a member of class NativeMethods.                   |
|  | GetStartup ( <a href="#">see page 85</a> )                | This is GetStartup, a member of class NativeMethods.                |
|  | HibernateWindows ( <a href="#">see page 85</a> )          | This is HibernateWindows, a member of class NativeMethods.          |
|  | IgnoreHardwareEvents ( <a href="#">see page 85</a> )      | This is IgnoreHardwareEvents, a member of class NativeMethods.      |
|  | IgnoreServiceEvents ( <a href="#">see page 86</a> )       | This is IgnoreServiceEvents, a member of class NativeMethods.       |
|  | InitializeContainer ( <a href="#">see page 86</a> )       | This is InitializeContainer, a member of class NativeMethods.       |
|  | IsAnimatedGIF ( <a href="#">see page 86</a> )             | This is IsAnimatedGIF, a member of class NativeMethods.             |
|  | IsCardActivatedEx ( <a href="#">see page 86</a> )         | This is IsCardActivatedEx, a member of class NativeMethods.         |
|  | IsCardPresentEx ( <a href="#">see page 86</a> )           | This is IsCardPresentEx, a member of class NativeMethods.           |
|  | IsCardStillInsertedEx ( <a href="#">see page 86</a> )     | This is IsCardStillInsertedEx, a member of class NativeMethods.     |
|  | IsConnectedToInternet ( <a href="#">see page 87</a> )     | This is IsConnectedToInternet, a member of class NativeMethods.     |
|  | IsDirectory ( <a href="#">see page 87</a> )               | This is IsDirectory, a member of class NativeMethods.               |
|  | IsEIDCardEx ( <a href="#">see page 87</a> )               | This is IsEIDCardEx, a member of class NativeMethods.               |
|  | IsEngineActive ( <a href="#">see page 87</a> )            | This is IsEngineActive, a member of class NativeMethods.            |
|  | IsMale ( <a href="#">see page 87</a> )                    | This is IsMale, a member of class NativeMethods.                    |
|  | IsMediaCenter ( <a href="#">see page 87</a> )             | This is IsMediaCenter, a member of class NativeMethods.             |
|  | IsMetroActive ( <a href="#">see page 88</a> )             | This is IsMetroActive, a member of class NativeMethods.             |
|  | IsMultiTouchReady ( <a href="#">see page 88</a> )         | This is IsMultiTouchReady, a member of class NativeMethods.         |
|  | IsTabletPC ( <a href="#">see page 88</a> )                | This is IsTabletPC, a member of class NativeMethods.                |
|  | IsUnicodeFile ( <a href="#">see page 88</a> )             | This is IsUnicodeFile, a member of class NativeMethods.             |
|  | IsValidFileName ( <a href="#">see page 88</a> )           | This is IsValidFileName, a member of class NativeMethods.           |

























|   |   |   |
|---|---|---|
|    | IsValidPathName ( <a href="#">see page 88</a> )                 | This is IsValidPathName, a member of class NativeMethods.                 |
|    | IsWindows10 ( <a href="#">see page 89</a> )                     | This is IsWindows10, a member of class NativeMethods.                     |
|    | IsWindows7 ( <a href="#">see page 89</a> )                      | This is IsWindows7, a member of class NativeMethods.                      |
|    | IsWindows8 ( <a href="#">see page 89</a> )                      | This is IsWindows8, a member of class NativeMethods.                      |
|    | IsWindowsVista ( <a href="#">see page 89</a> )                  | This is IsWindowsVista, a member of class NativeMethods.                  |
|    | IsWindowsXP ( <a href="#">see page 89</a> )                     | This is IsWindowsXP, a member of class NativeMethods.                     |
|    | IsWOW64 ( <a href="#">see page 89</a> )                         | This is IsWOW64, a member of class NativeMethods.                         |
|    | LoadCertificate ( <a href="#">see page 90</a> )                 | This is LoadCertificate, a member of class NativeMethods.                 |
|    | LoadPhoto ( <a href="#">see page 90</a> )                       | This is LoadPhoto, a member of class NativeMethods.                       |
|    | PathUnExpandEnvStrings ( <a href="#">see page 90</a> )          | This is PathUnExpandEnvStrings, a member of class NativeMethods.          |
|    | PortAvailable ( <a href="#">see page 90</a> )                   | This is PortAvailable, a member of class NativeMethods.                   |
|    | ReadAddressEx ( <a href="#">see page 90</a> )                   | This is ReadAddressEx, a member of class NativeMethods.                   |
|    | ReadAuthenticationCertificate ( <a href="#">see page 90</a> )   | This is ReadAuthenticationCertificate, a member of class NativeMethods.   |
|    | ReadCaCertificate ( <a href="#">see page 91</a> )               | This is ReadCaCertificate, a member of class NativeMethods.               |
|    | ReadIdentityEx ( <a href="#">see page 91</a> )                  | This is ReadIdentityEx, a member of class NativeMethods.                  |
|    | ReadNonRepudiationCertificate ( <a href="#">see page 91</a> )   | This is ReadNonRepudiationCertificate, a member of class NativeMethods.   |
|    | ReadPhotoEx ( <a href="#">see page 91</a> )                     | This is ReadPhotoEx, a member of class NativeMethods.                     |
|    | ReadRootCaCertificate ( <a href="#">see page 91</a> )           | This is ReadRootCaCertificate, a member of class NativeMethods.           |
|    | ReadRrnCertificate ( <a href="#">see page 91</a> )              | This is ReadRrnCertificate, a member of class NativeMethods.              |
|    | RecycleBinEmpty ( <a href="#">see page 92</a> )                 | This is RecycleBinEmpty, a member of class NativeMethods.                 |
|    | ReloadReadersList ( <a href="#">see page 92</a> )               | This is ReloadReadersList, a member of class NativeMethods.               |
|   | RemoveCallback ( <a href="#">see page 92</a> )                  | This is RemoveCallback, a member of class NativeMethods.                  |
|  | RemoveStartup ( <a href="#">see page 92</a> )                   | This is RemoveStartup, a member of class NativeMethods.                   |
|  | SaveAuthenticationCertificateEx ( <a href="#">see page 92</a> ) | This is SaveAuthenticationCertificateEx, a member of class NativeMethods. |
|  | SaveCaCertificateEx ( <a href="#">see page 92</a> )             | This is SaveCaCertificateEx, a member of class NativeMethods.             |
|  | SaveCardToToXMLStreamExA ( <a href="#">see page 93</a> )        | This is SaveCardToToXMLStreamExA, a member of class NativeMethods.        |
|  | SaveCardToToXMLStreamExW ( <a href="#">see page 93</a> )        | This is SaveCardToToXMLStreamExW, a member of class NativeMethods.        |
|  | SaveCardToXmlEx ( <a href="#">see page 93</a> )                 | This is SaveCardToXmlEx, a member of class NativeMethods.                 |
|  | SaveCardToXmlExAnsi ( <a href="#">see page 93</a> )             | This is SaveCardToXmlExAnsi, a member of class NativeMethods.             |
|  | SaveContainer ( <a href="#">see page 93</a> )                   | This is SaveContainer, a member of class NativeMethods.                   |
|  | SaveNonRepudiationCertificateEx ( <a href="#">see page 93</a> ) | This is SaveNonRepudiationCertificateEx, a member of class NativeMethods. |
|  | SavePersonCsvToStreamA ( <a href="#">see page 94</a> )          | This is SavePersonCsvToStreamA, a member of class NativeMethods.          |
|  | SavePersonCsvToStreamW ( <a href="#">see page 94</a> )          | This is SavePersonCsvToStreamW, a member of class NativeMethods.          |
|  | SavePersonToCsvEx ( <a href="#">see page 94</a> )               | This is SavePersonToCsvEx, a member of class NativeMethods.               |
|  | SavePersonToCsvExAnsi ( <a href="#">see page 94</a> )           | This is SavePersonToCsvExAnsi, a member of class NativeMethods.           |

|   |   |   |
|---|---|---|
|    | SavePhotoAsBitmapEx ( <a href="#">see page 94</a> )     | This is SavePhotoAsBitmapEx, a member of class NativeMethods.     |
|    | SavePhotoAsJpegEx ( <a href="#">see page 94</a> )       | This is SavePhotoAsJpegEx, a member of class NativeMethods.       |
|    | SaveRootCaCertificateEx ( <a href="#">see page 95</a> ) | This is SaveRootCaCertificateEx, a member of class NativeMethods. |
|    | SaveRrnCertificateEx ( <a href="#">see page 95</a> )    | This is SaveRrnCertificateEx, a member of class NativeMethods.    |
|    | SelectReader ( <a href="#">see page 95</a> )            | This is SelectReader, a member of class NativeMethods.            |
|    | SelectReaderByName ( <a href="#">see page 95</a> )      | This is SelectReaderByName, a member of class NativeMethods.      |
|    | SendAPDU ( <a href="#">see page 95</a> )                | This is SendAPDU, a member of class NativeMethods.                |
|    | SetCallback ( <a href="#">see page 95</a> )             | This is SetCallback, a member of class NativeMethods.             |
|    | SetStartup ( <a href="#">see page 96</a> )              | This is SetStartup, a member of class NativeMethods.              |
|    | ShellCopyFile ( <a href="#">see page 96</a> )           | This is ShellCopyFile, a member of class NativeMethods.           |
|    | ShowError ( <a href="#">see page 96</a> )               | This is ShowError, a member of class NativeMethods.               |
|    | ShutdownWindows ( <a href="#">see page 96</a> )         | This is ShutdownWindows, a member of class NativeMethods.         |
|    | StartEngine ( <a href="#">see page 96</a> )             | This is StartEngine, a member of class NativeMethods.             |
|    | StopEngine ( <a href="#">see page 96</a> )              | This is StopEngine, a member of class NativeMethods.              |
|    | StripFileName ( <a href="#">see page 97</a> )           | This is StripFileName, a member of class NativeMethods.           |
|    | SuspendWindows ( <a href="#">see page 97</a> )          | This is SuspendWindows, a member of class NativeMethods.          |
|    | TurnMonitorOff ( <a href="#">see page 97</a> )          | This is TurnMonitorOff, a member of class NativeMethods.          |
|    | TurnMonitorOn ( <a href="#">see page 97</a> )           | This is TurnMonitorOn, a member of class NativeMethods.           |
|   | VerifyPinEx ( <a href="#">see page 97</a> )             | This is VerifyPinEx, a member of class NativeMethods.             |
|  | VerifySignature ( <a href="#">see page 97</a> )         | This is VerifySignature, a member of class NativeMethods.         |

### NativeMethods Methods





















|   | Name   | Description  |
|---|--|--|
|  | ActivateCardEx ( <a href="#">see page 73</a> )     | This is ActivateCardEx, a member of class NativeMethods.     |
|  | AddFileToContainer ( <a href="#">see page 73</a> ) | This is AddFileToContainer, a member of class NativeMethods. |
|  | CardDecryptFile ( <a href="#">see page 73</a> )    | This is CardDecryptFile, a member of class NativeMethods.    |
|  | CardEncryptFile ( <a href="#">see page 74</a> )    | This is CardEncryptFile, a member of class NativeMethods.    |
|  | CardSignCadesT ( <a href="#">see page 74</a> )     | This is CardSignCadesT, a member of class NativeMethods.     |
|  | CardSignCadesTEx ( <a href="#">see page 74</a> )   | This is CardSignCadesTEx, a member of class NativeMethods.   |
|  | CardSignCMS ( <a href="#">see page 74</a> )        | This is CardSignCMS, a member of class NativeMethods.        |
|  | CardSignCMSEx ( <a href="#">see page 74</a> )      | This is CardSignCMSEx, a member of class NativeMethods.      |
|  | CertSignCadesT ( <a href="#">see page 74</a> )     | This is CertSignCadesT, a member of class NativeMethods.     |
|  | CertSignCadesTData ( <a href="#">see page 75</a> ) | This is CertSignCadesTData, a member of class NativeMethods. |
|  | CertSignCadesTEx ( <a href="#">see page 75</a> )   | This is CertSignCadesTEx, a member of class NativeMethods.   |
|  | CertSignCMS ( <a href="#">see page 75</a> )        | This is CertSignCMS, a member of class NativeMethods.        |
|  | CertSignCMSData ( <a href="#">see page 75</a> )    | This is CertSignCMSData, a member of class NativeMethods.    |
|  | CertSignCMSEx ( <a href="#">see page 75</a> )      | This is CertSignCMSEx, a member of class NativeMethods.      |
|  | CheckMD5 ( <a href="#">see page 75</a> )           | This is CheckMD5, a member of class NativeMethods.           |
|  | CheckSHA1 ( <a href="#">see page 76</a> )          | This is CheckSHA1, a member of class NativeMethods.          |

|   |   |   |
|---|---|---|
|    | ClearFileAttributes ( <a href="#">see page 76</a> )               | This is ClearFileAttributes, a member of class NativeMethods.               |
|    | ClearUnusedMemory ( <a href="#">see page 76</a> )                 | This is ClearUnusedMemory, a member of class NativeMethods.                 |
|    | ContainerCertificate ( <a href="#">see page 76</a> )              | This is ContainerCertificate, a member of class NativeMethods.              |
|    | ContainerEidCertificate ( <a href="#">see page 76</a> )           | This is ContainerEidCertificate, a member of class NativeMethods.           |
|    | ContainerPickCertificate ( <a href="#">see page 76</a> )          | This is ContainerPickCertificate, a member of class NativeMethods.          |
|    | CreateCardBuffer ( <a href="#">see page 77</a> )                  | This is CreateCardBuffer, a member of class NativeMethods.                  |
|    | CreateUnicodeFile ( <a href="#">see page 77</a> )                 | This is CreateUnicodeFile, a member of class NativeMethods.                 |
|    | CurrentIPAddress ( <a href="#">see page 77</a> )                  | This is CurrentIPAddress, a member of class NativeMethods.                  |
|    | DeactivateCardEx ( <a href="#">see page 77</a> )                  | This is DeactivateCardEx, a member of class NativeMethods.                  |
|    | DecryptFileAES ( <a href="#">see page 77</a> )                    | This is DecryptFileAES, a member of class NativeMethods.                    |
|    | DeleteCardBuffer ( <a href="#">see page 77</a> )                  | This is DeleteCardBuffer, a member of class NativeMethods.                  |
|    | DeleteObject ( <a href="#">see page 78</a> )                      | This is DeleteObject, a member of class NativeMethods.                      |
|    | DeleteToRecycleBin ( <a href="#">see page 78</a> )                | This is DeleteToRecycleBin, a member of class NativeMethods.                |
|  | DirectoryExists ( <a href="#">see page 78</a> )                   | This is DirectoryExists, a member of class NativeMethods.                   |
|  | DisplayCertificate ( <a href="#">see page 78</a> )                | This is DisplayCertificate, a member of class NativeMethods.                |
|  | EmptyRecycleBin ( <a href="#">see page 78</a> )                   | This is EmptyRecycleBin, a member of class NativeMethods.                   |
|  | EncodeCertificate ( <a href="#">see page 78</a> )                 | This is EncodeCertificate, a member of class NativeMethods.                 |
|  | EncodePhoto ( <a href="#">see page 79</a> )                       | This is EncodePhoto, a member of class NativeMethods.                       |
|  | EncryptFileAES ( <a href="#">see page 79</a> )                    | This is EncryptFileAES, a member of class NativeMethods.                    |
|  | FileCopy ( <a href="#">see page 79</a> )                          | This is FileCopy, a member of class NativeMethods.                          |
|  | FileDelete ( <a href="#">see page 79</a> )                        | This is FileDelete, a member of class NativeMethods.                        |
|  | FileExists ( <a href="#">see page 79</a> )                        | This is FileExists, a member of class NativeMethods.                        |
|  | FileExtensionIs ( <a href="#">see page 79</a> )                   | This is FileExtensionIs, a member of class NativeMethods.                   |
|  | FileGetSize ( <a href="#">see page 80</a> )                       | This is FileGetSize, a member of class NativeMethods.                       |
|  | FileIsExe ( <a href="#">see page 80</a> )                         | This is FileIsExe, a member of class NativeMethods.                         |
|  | FileIsIcon ( <a href="#">see page 80</a> )                        | This is FileIsIcon, a member of class NativeMethods.                        |
|  | FileIsImage ( <a href="#">see page 80</a> )                       | This is FileIsImage, a member of class NativeMethods.                       |
|  | FileIsLink ( <a href="#">see page 80</a> )                        | This is FileIsLink, a member of class NativeMethods.                        |
|  | FileOrFolderExists ( <a href="#">see page 80</a> )                | This is FileOrFolderExists, a member of class NativeMethods.                |
|  | FileRename ( <a href="#">see page 81</a> )                        | This is FileRename, a member of class NativeMethods.                        |
|  | FreeContainer ( <a href="#">see page 81</a> )                     | This is FreeContainer, a member of class NativeMethods.                     |
|  | FullPath ( <a href="#">see page 81</a> )                          | This is FullPath, a member of class NativeMethods.                          |
|  | GenerateAuthenticationSignatureEx ( <a href="#">see page 81</a> ) | This is GenerateAuthenticationSignatureEx, a member of class NativeMethods. |
|  | GenerateBMP ( <a href="#">see page 81</a> )                       | This is GenerateBMP, a member of class NativeMethods.                       |
|  | GenerateNonRepudiationSignatureEx ( <a href="#">see page 81</a> ) | This is GenerateNonRepudiationSignatureEx, a member of class NativeMethods. |
|  | GeneratePNG ( <a href="#">see page 82</a> )                       | This is GeneratePNG, a member of class NativeMethods.                       |
|  | GenerateQRCodeEx ( <a href="#">see page 82</a> )                  | This is GenerateQRCodeEx, a member of class NativeMethods.                  |
|  | GetCardBufferA ( <a href="#">see page 82</a> )                    | This is GetCardBufferA, a member of class NativeMethods.                    |

|   |   |   |
|---|---|---|
|    | GetCardBufferSize ( <a href="#">see page 82</a> )         | This is GetCardBufferSize, a member of class NativeMethods.         |
|    | GetCardBufferW ( <a href="#">see page 82</a> )            | This is GetCardBufferW, a member of class NativeMethods.            |
|    | GetCardSerialNumber ( <a href="#">see page 82</a> )       | This is GetCardSerialNumber, a member of class NativeMethods.       |
|    | GetCardVersion ( <a href="#">see page 83</a> )            | This is GetCardVersion, a member of class NativeMethods.            |
|    | GetEncodedCertificateSize ( <a href="#">see page 83</a> ) | This is GetEncodedCertificateSize, a member of class NativeMethods. |
|    | GetEncodedPhotoSize ( <a href="#">see page 83</a> )       | This is GetEncodedPhotoSize, a member of class NativeMethods.       |
|    | GetFileMD5 ( <a href="#">see page 83</a> )                | This is GetFileMD5, a member of class NativeMethods.                |
|    | GetFilesCount ( <a href="#">see page 83</a> )             | This is GetFilesCount, a member of class NativeMethods.             |
|    | GetFileSHA1 ( <a href="#">see page 83</a> )               | This is GetFileSHA1, a member of class NativeMethods.               |
|    | GetHBitmap ( <a href="#">see page 84</a> )                | This is GetHBitmap, a member of class NativeMethods.                |
|    | GetISOCCode ( <a href="#">see page 84</a> )               | This is GetISOCCode, a member of class NativeMethods.               |
|    | GetMD5 ( <a href="#">see page 84</a> )                    | This is GetMD5, a member of class NativeMethods.                    |
|    | GetReaderIndex ( <a href="#">see page 84</a> )            | This is GetReaderIndex, a member of class NativeMethods.            |
|    | GetReaderName ( <a href="#">see page 84</a> )             | This is GetReaderName, a member of class NativeMethods.             |
|    | GetReaderNameLen ( <a href="#">see page 84</a> )          | This is GetReaderNameLen, a member of class NativeMethods.          |
|    | GetReadersCount ( <a href="#">see page 85</a> )           | This is GetReadersCount, a member of class NativeMethods.           |
|    | GetSelectedReaderIndex ( <a href="#">see page 85</a> )    | This is GetSelectedReaderIndex, a member of class NativeMethods.    |
|  | GetSHA1 ( <a href="#">see page 85</a> )                   | This is GetSHA1, a member of class NativeMethods.                   |
|  | GetStartup ( <a href="#">see page 85</a> )                | This is GetStartup, a member of class NativeMethods.                |
|  | HibernateWindows ( <a href="#">see page 85</a> )          | This is HibernateWindows, a member of class NativeMethods.          |
|  | IgnoreHardwareEvents ( <a href="#">see page 85</a> )      | This is IgnoreHardwareEvents, a member of class NativeMethods.      |
|  | IgnoreServiceEvents ( <a href="#">see page 86</a> )       | This is IgnoreServiceEvents, a member of class NativeMethods.       |
|  | InitializeContainer ( <a href="#">see page 86</a> )       | This is InitializeContainer, a member of class NativeMethods.       |
|  | IsAnimatedGIF ( <a href="#">see page 86</a> )             | This is IsAnimatedGIF, a member of class NativeMethods.             |
|  | IsCardActivatedEx ( <a href="#">see page 86</a> )         | This is IsCardActivatedEx, a member of class NativeMethods.         |
|  | IsCardPresentEx ( <a href="#">see page 86</a> )           | This is IsCardPresentEx, a member of class NativeMethods.           |
|  | IsCardStillInsertedEx ( <a href="#">see page 86</a> )     | This is IsCardStillInsertedEx, a member of class NativeMethods.     |
|  | IsConnectedToInternet ( <a href="#">see page 87</a> )     | This is IsConnectedToInternet, a member of class NativeMethods.     |
|  | IsDirectory ( <a href="#">see page 87</a> )               | This is IsDirectory, a member of class NativeMethods.               |
|  | IsEIDCardEx ( <a href="#">see page 87</a> )               | This is IsEIDCardEx, a member of class NativeMethods.               |
|  | IsEngineActive ( <a href="#">see page 87</a> )            | This is IsEngineActive, a member of class NativeMethods.            |
|  | IsMale ( <a href="#">see page 87</a> )                    | This is IsMale, a member of class NativeMethods.                    |
|  | IsMediaCenter ( <a href="#">see page 87</a> )             | This is IsMediaCenter, a member of class NativeMethods.             |
|  | IsMetroActive ( <a href="#">see page 88</a> )             | This is IsMetroActive, a member of class NativeMethods.             |
|  | IsMultiTouchReady ( <a href="#">see page 88</a> )         | This is IsMultiTouchReady, a member of class NativeMethods.         |
|  | IsTabletPC ( <a href="#">see page 88</a> )                | This is IsTabletPC, a member of class NativeMethods.                |
|  | IsUnicodeFile ( <a href="#">see page 88</a> )             | This is IsUnicodeFile, a member of class NativeMethods.             |
|  | IsValidFileName ( <a href="#">see page 88</a> )           | This is IsValidFileName, a member of class NativeMethods.           |



|   |   |   |
|---|---|---|
|    | IsValidPathName ( <a href="#">see page 88</a> )                 | This is IsValidPathName, a member of class NativeMethods.                 |
|    | IsWindows10 ( <a href="#">see page 89</a> )                     | This is IsWindows10, a member of class NativeMethods.                     |
|    | IsWindows7 ( <a href="#">see page 89</a> )                      | This is IsWindows7, a member of class NativeMethods.                      |
|    | IsWindows8 ( <a href="#">see page 89</a> )                      | This is IsWindows8, a member of class NativeMethods.                      |
|    | IsWindowsVista ( <a href="#">see page 89</a> )                  | This is IsWindowsVista, a member of class NativeMethods.                  |
|    | IsWindowsXP ( <a href="#">see page 89</a> )                     | This is IsWindowsXP, a member of class NativeMethods.                     |
|    | IsWOW64 ( <a href="#">see page 89</a> )                         | This is IsWOW64, a member of class NativeMethods.                         |
|    | LoadCertificate ( <a href="#">see page 90</a> )                 | This is LoadCertificate, a member of class NativeMethods.                 |
|    | LoadPhoto ( <a href="#">see page 90</a> )                       | This is LoadPhoto, a member of class NativeMethods.                       |
|    | PathUnExpandEnvStrings ( <a href="#">see page 90</a> )          | This is PathUnExpandEnvStrings, a member of class NativeMethods.          |
|    | PortAvailable ( <a href="#">see page 90</a> )                   | This is PortAvailable, a member of class NativeMethods.                   |
|    | ReadAddressEx ( <a href="#">see page 90</a> )                   | This is ReadAddressEx, a member of class NativeMethods.                   |
|    | ReadAuthenticationCertificate ( <a href="#">see page 90</a> )   | This is ReadAuthenticationCertificate, a member of class NativeMethods.   |
|    | ReadCaCertificate ( <a href="#">see page 91</a> )               | This is ReadCaCertificate, a member of class NativeMethods.               |
|    | ReadIdentityEx ( <a href="#">see page 91</a> )                  | This is ReadIdentityEx, a member of class NativeMethods.                  |
|    | ReadNonRepudiationCertificate ( <a href="#">see page 91</a> )   | This is ReadNonRepudiationCertificate, a member of class NativeMethods.   |
|    | ReadPhotoEx ( <a href="#">see page 91</a> )                     | This is ReadPhotoEx, a member of class NativeMethods.                     |
|    | ReadRootCaCertificate ( <a href="#">see page 91</a> )           | This is ReadRootCaCertificate, a member of class NativeMethods.           |
|    | ReadRrnCertificate ( <a href="#">see page 91</a> )              | This is ReadRrnCertificate, a member of class NativeMethods.              |
|    | RecycleBinEmpty ( <a href="#">see page 92</a> )                 | This is RecycleBinEmpty, a member of class NativeMethods.                 |
|    | ReloadReadersList ( <a href="#">see page 92</a> )               | This is ReloadReadersList, a member of class NativeMethods.               |
|    | RemoveCallback ( <a href="#">see page 92</a> )                  | This is RemoveCallback, a member of class NativeMethods.                  |
|   | RemoveStartup ( <a href="#">see page 92</a> )                   | This is RemoveStartup, a member of class NativeMethods.                   |
|  | SaveAuthenticationCertificateEx ( <a href="#">see page 92</a> ) | This is SaveAuthenticationCertificateEx, a member of class NativeMethods. |
|  | SaveCaCertificateEx ( <a href="#">see page 92</a> )             | This is SaveCaCertificateEx, a member of class NativeMethods.             |
|  | SaveCardToToXMLStreamExA ( <a href="#">see page 93</a> )        | This is SaveCardToToXMLStreamExA, a member of class NativeMethods.        |
|  | SaveCardToToXMLStreamExW ( <a href="#">see page 93</a> )        | This is SaveCardToToXMLStreamExW, a member of class NativeMethods.        |
|  | SaveCardToXmlEx ( <a href="#">see page 93</a> )                 | This is SaveCardToXmlEx, a member of class NativeMethods.                 |
|  | SaveCardToXmlExAnsi ( <a href="#">see page 93</a> )             | This is SaveCardToXmlExAnsi, a member of class NativeMethods.             |
|  | SaveContainer ( <a href="#">see page 93</a> )                   | This is SaveContainer, a member of class NativeMethods.                   |
|  | SaveNonRepudiationCertificateEx ( <a href="#">see page 93</a> ) | This is SaveNonRepudiationCertificateEx, a member of class NativeMethods. |
|  | SavePersonCsvToStreamA ( <a href="#">see page 94</a> )          | This is SavePersonCsvToStreamA, a member of class NativeMethods.          |
|  | SavePersonCsvToStreamW ( <a href="#">see page 94</a> )          | This is SavePersonCsvToStreamW, a member of class NativeMethods.          |
|  | SavePersonToCsvEx ( <a href="#">see page 94</a> )               | This is SavePersonToCsvEx, a member of class NativeMethods.               |
|  | SavePersonToCsvExAnsi ( <a href="#">see page 94</a> )           | This is SavePersonToCsvExAnsi, a member of class NativeMethods.           |

|   |   |   |
|---|---|---|
|    | SavePhotoAsBitmapEx ( <a href="#">see page 94</a> )     | This is SavePhotoAsBitmapEx, a member of class NativeMethods.     |
|    | SavePhotoAsJpegEx ( <a href="#">see page 94</a> )       | This is SavePhotoAsJpegEx, a member of class NativeMethods.       |
|    | SaveRootCaCertificateEx ( <a href="#">see page 95</a> ) | This is SaveRootCaCertificateEx, a member of class NativeMethods. |
|    | SaveRrnCertificateEx ( <a href="#">see page 95</a> )    | This is SaveRrnCertificateEx, a member of class NativeMethods.    |
|    | SelectReader ( <a href="#">see page 95</a> )            | This is SelectReader, a member of class NativeMethods.            |
|    | SelectReaderByName ( <a href="#">see page 95</a> )      | This is SelectReaderByName, a member of class NativeMethods.      |
|    | SendAPDU ( <a href="#">see page 95</a> )                | This is SendAPDU, a member of class NativeMethods.                |
|    | SetCallback ( <a href="#">see page 95</a> )             | This is SetCallback, a member of class NativeMethods.             |
|    | SetStartup ( <a href="#">see page 96</a> )              | This is SetStartup, a member of class NativeMethods.              |
|    | ShellCopyFile ( <a href="#">see page 96</a> )           | This is ShellCopyFile, a member of class NativeMethods.           |
|    | ShowError ( <a href="#">see page 96</a> )               | This is ShowError, a member of class NativeMethods.               |
|    | ShutdownWindows ( <a href="#">see page 96</a> )         | This is ShutdownWindows, a member of class NativeMethods.         |
|    | StartEngine ( <a href="#">see page 96</a> )             | This is StartEngine, a member of class NativeMethods.             |
|    | StopEngine ( <a href="#">see page 96</a> )              | This is StopEngine, a member of class NativeMethods.              |
|    | StripFileName ( <a href="#">see page 97</a> )           | This is StripFileName, a member of class NativeMethods.           |
|    | SuspendWindows ( <a href="#">see page 97</a> )          | This is SuspendWindows, a member of class NativeMethods.          |
|    | TurnMonitorOff ( <a href="#">see page 97</a> )          | This is TurnMonitorOff, a member of class NativeMethods.          |
|    | TurnMonitorOn ( <a href="#">see page 97</a> )           | This is TurnMonitorOn, a member of class NativeMethods.           |
|   | VerifyPinEx ( <a href="#">see page 97</a> )             | This is VerifyPinEx, a member of class NativeMethods.             |
|  | VerifySignature ( <a href="#">see page 97</a> )         | This is VerifySignature, a member of class NativeMethods.         |

## 1.1.20.1 NativeMethods Methods

### 1.1.20.1.1 NativeMethods.ActivateCardEx Method

C#

```
public static bool ActivateCardEx(int readerNumber);
```

Remarks

This is ActivateCardEx, a member of class NativeMethods.

### 1.1.20.1.2 NativeMethods.AddFileToContainer Method

C#

```
public static bool AddFileToContainer(IntPtr container, string fileName);
```

Remarks

This is AddFileToContainer, a member of class NativeMethods.

### 1.1.20.1.3 NativeMethods.CardDecryptFile Method

C#

```
public static bool CardDecryptFile(string source, string destination);
```

**Remarks**

This is CardDecryptFile, a member of class NativeMethods.

**1.1.20.1.4 NativeMethods.CardEncryptFile Method****C#**

```
public static bool CardEncryptFile(string source, string destination);
```

**Remarks**

This is CardEncryptFile, a member of class NativeMethods.

**1.1.20.1.5 NativeMethods.CardSignCadesT Method****C#**

```
public static bool CardSignCadesT(int readerNumber, byte[] data, int dataLen, byte[] signature, ref int signatureLen);
```

**Remarks**

This is CardSignCadesT, a member of class NativeMethods.

**1.1.20.1.6 NativeMethods.CardSignCadesTEx Method****C#**

```
public static bool CardSignCadesTEx(int readerNumber, byte[] data, int dataLen, byte[] signature, ref int signatureLen, [In, Out] EIDError error);
```

**Remarks**

This is CardSignCadesTEx, a member of class NativeMethods.

**1.1.20.1.7 NativeMethods.CardSignCMS Method****C#**

```
public static bool CardSignCMS(int readerNumber, byte[] data, int dataLen, byte[] signature, ref int signatureLen);
```

**Remarks**

This is CardSignCMS, a member of class NativeMethods.

**1.1.20.1.8 NativeMethods.CardSignCMSEx Method****C#**

```
public static bool CardSignCMSEx(int readerNumber, byte[] data, int dataLen, byte[] signature, ref int signatureLen, [In, Out] EIDError error);
```

**Remarks**

This is CardSignCMSEx, a member of class NativeMethods.

**1.1.20.1.9 NativeMethods.CertSignCadesT Method****C#**

```
public static bool CertSignCadesT(string certificate, string password, byte[] data, int dataLen, byte[] signature, ref int signatureLen);
```



**Remarks**

This is CertSignCadesT, a member of class NativeMethods.

**1.1.20.1.10 NativeMethods.CertSignCadesTData Method****C#**

```
public static bool CertSignCadesTData(byte[] certificate, int certLen, string password,
byte[] data, int dataLen, byte[] signature, ref int signatureLen, [In, Out] EIDError error);
```

**Remarks**

This is CertSignCadesTData, a member of class NativeMethods.

**1.1.20.1.11 NativeMethods.CertSignCadesTEx Method****C#**

```
public static bool CertSignCadesTEx(string certificate, string password, byte[] data, int
dataLen, byte[] signature, ref int signatureLen, [In, Out] EIDError error);
```

**Remarks**

This is CertSignCadesTEx, a member of class NativeMethods.

**1.1.20.1.12 NativeMethods.CertSignCMS Method****C#**

```
public static bool CertSignCMS(string certificate, string password, byte[] data, int
dataLen, byte[] signature, ref int signatureLen);
```

**Remarks**

This is CertSignCMS, a member of class NativeMethods.

**1.1.20.1.13 NativeMethods.CertSignCMSData Method****C#**

```
public static bool CertSignCMSData(byte[] certificate, int certLen, string password, byte[]
data, int dataLen, byte[] signature, ref int signatureLen, [In, Out] EIDError error);
```

**Remarks**

This is CertSignCMSData, a member of class NativeMethods.

**1.1.20.1.14 NativeMethods.CertSignCMSEx Method****C#**

```
public static bool CertSignCMSEx(string certificate, string password, byte[] data, int
dataLen, byte[] signature, ref int signatureLen, [In, Out] EIDError error);
```

**Remarks**

This is CertSignCMSEx, a member of class NativeMethods.

**1.1.20.1.15 NativeMethods.CheckMD5 Method****C#**

```
public static bool CheckMD5(byte[] source, int sourceSize, byte[] buffer, int bufferSize);
```

**Remarks**

This is CheckMD5, a member of class NativeMethods.

**1.1.20.1.16 NativeMethods.CheckSHA1 Method****C#**

```
public static bool CheckSHA1(byte[] source, int sourceSize, byte[] buffer, int bufferSize);
```

**Remarks**

This is CheckSHA1, a member of class NativeMethods.

**1.1.20.1.17 NativeMethods.ClearFileAttributes Method****C#**

```
public static void ClearFileAttributes(string fileName);
```

**Remarks**

This is ClearFileAttributes, a member of class NativeMethods.

**1.1.20.1.18 NativeMethods.ClearUnusedMemory Method****C#**

```
public static void ClearUnusedMemory();
```

**Remarks**

This is ClearUnusedMemory, a member of class NativeMethods.

**1.1.20.1.19 NativeMethods.ContainerCertificate Method****C#**

```
public static bool ContainerCertificate(IntPtr container, string fileName, string password);
```

**Remarks**

This is ContainerCertificate, a member of class NativeMethods.

**1.1.20.1.20 NativeMethods.ContainerEidCertificate Method****C#**

```
public static bool ContainerEidCertificate(IntPtr container, int readerNumber);
```

**Remarks**

This is ContainerEidCertificate, a member of class NativeMethods.

**1.1.20.1.21 NativeMethods.ContainerPickCertificate Method****C#**

```
public static bool ContainerPickCertificate(IntPtr container);
```

**Remarks**

This is ContainerPickCertificate, a member of class NativeMethods.

### 1.1.20.1.22 NativeMethods.CreateCardBuffer Method

C#

```
public static IntPtr CreateCardBuffer();
```

#### Remarks

This is CreateCardBuffer, a member of class NativeMethods.

### 1.1.20.1.23 NativeMethods.CreateUnicodeFile Method

C#

```
public static void CreateUnicodeFile(string fileName);
```

#### Remarks

This is CreateUnicodeFile, a member of class NativeMethods.

### 1.1.20.1.24 NativeMethods.CurrentIPAddress Method

C#

```
public static void CurrentIPAddress(StringBuilder address, uint bufferSize);
```

#### Remarks

This is CurrentIPAddress, a member of class NativeMethods.

### 1.1.20.1.25 NativeMethods.DeactivateCardEx Method

C#

```
public static void DeactivateCardEx(int readerNumber);
```

#### Remarks

This is DeactivateCardEx, a member of class NativeMethods.

### 1.1.20.1.26 NativeMethods.DecryptFileAES Method

C#

```
public static bool DecryptFileAES(string source, string destination, string password);
```

#### Remarks

This is DecryptFileAES, a member of class NativeMethods.

### 1.1.20.1.27 NativeMethods.DeleteCardBuffer Method

C#

```
public static void DeleteCardBuffer(IntPtr buffer);
```

#### Remarks

This is DeleteCardBuffer, a member of class NativeMethods.

### 1.1.20.1.28 NativeMethods.DeleteObject Method

#### C#

```
[DllImport("gdi32.dll", CharSet = CharSet.Auto, CallingConvention =  
CallingConvention.StdCall, SetLastError = true)]  
[return: MarshalAs(UnmanagedType.Bool)]  
public static extern bool DeleteObject(IntPtr hObject);
```

#### Remarks

This is DeleteObject, a member of class NativeMethods.

### 1.1.20.1.29 NativeMethods.DeleteToRecycleBin Method

#### C#

```
public static void DeleteToRecycleBin(string fileName, bool silent);
```

#### Remarks

This is DeleteToRecycleBin, a member of class NativeMethods.

### 1.1.20.1.30 NativeMethods.DirectoryExists Method

#### C#

```
public static bool DirectoryExists(string fileName);
```

#### Remarks

This is DirectoryExists, a member of class NativeMethods.

### 1.1.20.1.31 NativeMethods.DisplayCertificate Method

#### C#

```
public static void DisplayCertificate([In, Out] EIDCertificate certificate);
```

#### Remarks

This is DisplayCertificate, a member of class NativeMethods.

### 1.1.20.1.32 NativeMethods.EmptyRecycleBin Method

#### C#

```
public static void EmptyRecycleBin();
```

#### Remarks

This is EmptyRecycleBin, a member of class NativeMethods.

### 1.1.20.1.33 NativeMethods.EncodeCertificate Method

#### C#

```
public static int EncodeCertificate([In, Out] EIDCertificate certificate, byte[] buffer,  
int bufferSize);
```

#### Remarks

This is EncodeCertificate, a member of class NativeMethods.

### 1.1.20.1.34 NativeMethods.EncodePhoto Method

C#

```
public static int EncodePhoto([In, Out] EIDPicture photo, byte[] buffer, int bufferSize);
```

#### Remarks

This is EncodePhoto, a member of class NativeMethods.

### 1.1.20.1.35 NativeMethods.EncryptFileAES Method

C#

```
public static bool EncryptFileAES(string source, string destination, string password);
```

#### Remarks

This is EncryptFileAES, a member of class NativeMethods.

### 1.1.20.1.36 NativeMethods.FileCopy Method

C#

```
public static bool FileCopy(string oldName, string newName);
```

#### Remarks

This is FileCopy, a member of class NativeMethods.

### 1.1.20.1.37 NativeMethods.FileDelete Method

C#

```
public static void FileDelete(string fileName);
```

#### Remarks

This is FileDelete, a member of class NativeMethods.

### 1.1.20.1.38 NativeMethods.FileExists Method

C#

```
public static bool FileExists(string fileName);
```

#### Remarks

This is FileExists, a member of class NativeMethods.

### 1.1.20.1.39 NativeMethods.FileExtensionIs Method

C#

```
public static bool FileExtensionIs(string fileName, string extension);
```

#### Remarks

This is FileExtensionIs, a member of class NativeMethods.

### 1.1.20.1.40 NativeMethods.FileGetSize Method

C#

```
public static int FileGetSize(string fileName);
```

Remarks

This is FileGetSize, a member of class NativeMethods.

### 1.1.20.1.41 NativeMethods.FileIsExe Method

C#

```
public static bool FileIsExe(string fileName);
```

Remarks

This is FileIsExe, a member of class NativeMethods.

### 1.1.20.1.42 NativeMethods.FileIsIcon Method

C#

```
public static bool FileIsIcon(string fileName);
```

Remarks

This is FileIsIcon, a member of class NativeMethods.

### 1.1.20.1.43 NativeMethods.FileIsImage Method

C#

```
public static bool FileIsImage(string fileName);
```

Remarks

This is FileIsImage, a member of class NativeMethods.

### 1.1.20.1.44 NativeMethods.FileIsLink Method

C#

```
public static bool FileIsLink(string fileName);
```

Remarks

This is FileIsLink, a member of class NativeMethods.

### 1.1.20.1.45 NativeMethods.FileOrFolderExists Method

C#

```
public static bool FileOrFolderExists(string fileName);
```

Remarks

This is FileOrFolderExists, a member of class NativeMethods.

### 1.1.20.1.46 NativeMethods.FileRename Method

C#

```
public static bool FileRename(string oldName, string newName);
```

#### Remarks

This is FileRename, a member of class NativeMethods.

### 1.1.20.1.47 NativeMethods.FreeContainer Method

C#

```
public static void FreeContainer(IntPtr container);
```

#### Remarks

This is FreeContainer, a member of class NativeMethods.

### 1.1.20.1.48 NativeMethods.FullPath Method

C#

```
public static bool FullPath(string fileName, StringBuilder sb);
```

#### Remarks

This is FullPath, a member of class NativeMethods.

### 1.1.20.1.49 NativeMethods.GenerateAuthenticationSignatureEx Method

C#

```
public static bool GenerateAuthenticationSignatureEx(int readerNumber, string pinCode, byte[] dataHash, int hashSize, byte[] signature, ref int signatureSize);
```

#### Remarks

This is GenerateAuthenticationSignatureEx, a member of class NativeMethods.

### 1.1.20.1.50 NativeMethods.GenerateBMP Method

C#

```
public static void GenerateBMP(string fileName, string Text, int Margin, int Size, int Level);
```

#### Remarks

This is GenerateBMP, a member of class NativeMethods.

### 1.1.20.1.51 NativeMethods.GenerateNonRepudiationSignatureEx Method

C#

```
public static bool GenerateNonRepudiationSignatureEx(int readerNumber, string pinCode, byte[] dataHash, int hashSize, byte[] signature, ref int signatureSize);
```

#### Remarks

This is GenerateNonRepudiationSignatureEx, a member of class NativeMethods.

### 1.1.20.1.52 NativeMethods.GeneratePNG Method

C#

```
public static void GeneratePNG(string fileName, string Text, int Margin, int Size, int Level);
```

Remarks

This is GeneratePNG, a member of class NativeMethods.

### 1.1.20.1.53 NativeMethods.GenerateQRCodeEx Method

C#

```
public static bool GenerateQRCodeEx(int readerNumber, string fileName);
```

Remarks

This is GenerateQRCodeEx, a member of class NativeMethods.

### 1.1.20.1.54 NativeMethods.GetCardBufferA Method

C#

```
public static void GetCardBufferA(IntPtr buffer, StringBuilder strDest, int count);
```

Remarks

This is GetCardBufferA, a member of class NativeMethods.

### 1.1.20.1.55 NativeMethods.GetCardBufferSize Method

C#

```
public static int GetCardBufferSize(IntPtr buffer);
```

Remarks

This is GetCardBufferSize, a member of class NativeMethods.

### 1.1.20.1.56 NativeMethods.GetCardBufferW Method

C#

```
public static void GetCardBufferW(IntPtr buffer, StringBuilder strDest, int count);
```

Remarks

This is GetCardBufferW, a member of class NativeMethods.

### 1.1.20.1.57 NativeMethods.GetCardSerialNumber Method

C#

```
public static bool GetCardSerialNumber(int readerNumber, byte[] serialNumber, ref int serialNumberSize);
```

Remarks

This is GetCardSerialNumber, a member of class NativeMethods.



### 1.1.20.1.58 NativeMethods.GetCardVersion Method

C#

```
public static int GetCardVersion(int readerNumber);
```

#### Remarks

This is GetCardVersion, a member of class NativeMethods.

### 1.1.20.1.59 NativeMethods.GetEncodedCertificateSize Method

C#

```
public static int GetEncodedCertificateSize([In, Out] EIDCertificate Certificate);
```

#### Remarks

This is GetEncodedCertificateSize, a member of class NativeMethods.

### 1.1.20.1.60 NativeMethods.GetEncodedPhotoSize Method

C#

```
public static int GetEncodedPhotoSize([In, Out] EIDPicture Photo);
```

#### Remarks

This is GetEncodedPhotoSize, a member of class NativeMethods.

### 1.1.20.1.61 NativeMethods.GetFileMD5 Method

C#

```
public static bool GetFileMD5(string fileName, byte[] buffer, int bufferSize);
```

#### Remarks

This is GetFileMD5, a member of class NativeMethods.

### 1.1.20.1.62 NativeMethods.GetFilesCount Method

C#

```
public static int GetFilesCount(string FolderName);
```

#### Remarks

This is GetFilesCount, a member of class NativeMethods.

### 1.1.20.1.63 NativeMethods.GetFileSHA1 Method

C#

```
public static bool GetFileSHA1(string fileName, byte[] buffer, int bufferSize);
```

#### Remarks

This is GetFileSHA1, a member of class NativeMethods.

### 1.1.20.1.64 NativeMethods.GetHBitmap Method

C#

```
public static IntPtr GetHBitmap(string Text, int Margin, int Size, int Level);
```

#### Remarks

This is GetHBitmap, a member of class NativeMethods.

### 1.1.20.1.65 NativeMethods.GetISOCode Method

C#

```
public static bool GetISOCode(string Nationality, StringBuilder IsoCode, int BufferSize);
```

#### Remarks

This is GetISOCode, a member of class NativeMethods.

### 1.1.20.1.66 NativeMethods.GetMD5 Method

C#

```
public static bool GetMD5(byte[] source, int sourceSize, byte[] buffer, int bufferSize);
```

#### Remarks

This is GetMD5, a member of class NativeMethods.

### 1.1.20.1.67 NativeMethods.GetReaderIndex Method

C#

```
public static int GetReaderIndex(string ReaderName);
```

#### Remarks

This is GetReaderIndex, a member of class NativeMethods.

### 1.1.20.1.68 NativeMethods.GetReaderName Method

C#

```
public static int GetReaderName(int readerNumber, StringBuilder StrDest, int Count);
```

#### Remarks

This is GetReaderName, a member of class NativeMethods.

### 1.1.20.1.69 NativeMethods.GetReaderNameLen Method

C#

```
public static int GetReaderNameLen(int readerNumber);
```

#### Remarks

This is GetReaderNameLen, a member of class NativeMethods.

### 1.1.20.1.70 NativeMethods.GetReadersCount Method

C#

```
public static int GetReadersCount();
```

**Remarks**

This is GetReadersCount, a member of class NativeMethods.

### 1.1.20.1.71 NativeMethods.GetSelectedReaderIndex Method

C#

```
public static int GetSelectedReaderIndex();
```

**Remarks**

This is GetSelectedReaderIndex, a member of class NativeMethods.

### 1.1.20.1.72 NativeMethods.GetSHA1 Method

C#

```
public static bool GetSHA1(byte[] source, int sourceSize, byte[] buffer, int bufferSize);
```

**Remarks**

This is GetSHA1, a member of class NativeMethods.

### 1.1.20.1.73 NativeMethods.GetStartup Method

C#

```
public static bool GetStartup(string AppName);
```

**Remarks**

This is GetStartup, a member of class NativeMethods.

### 1.1.20.1.74 NativeMethods.HibernateWindows Method

C#

```
public static bool HibernateWindows();
```

**Remarks**

This is HibernateWindows, a member of class NativeMethods.

### 1.1.20.1.75 NativeMethods.IgnoreHardwareEvents Method

C#

```
public static void IgnoreHardwareEvents(bool value);
```

**Remarks**

This is IgnoreHardwareEvents, a member of class NativeMethods.

### 1.1.20.1.76 NativeMethods.IgnoreServiceEvents Method

C#

```
public static void IgnoreServiceEvents(bool value);
```

Remarks

This is IgnoreServiceEvents, a member of class NativeMethods.

### 1.1.20.1.77 NativeMethods.InitializeContainer Method

C#

```
public static IntPtr InitializeContainer();
```

Remarks

This is InitializeContainer, a member of class NativeMethods.

### 1.1.20.1.78 NativeMethods.IsAnimatedGIF Method

C#

```
public static bool IsAnimatedGIF(string fileName);
```

Remarks

This is IsAnimatedGIF, a member of class NativeMethods.

### 1.1.20.1.79 NativeMethods.IsCardActivatedEx Method

C#

```
public static bool IsCardActivatedEx(int readerNumber);
```

Remarks

This is IsCardActivatedEx, a member of class NativeMethods.

### 1.1.20.1.80 NativeMethods.IsCardPresentEx Method

C#

```
public static bool IsCardPresentEx(int readerNumber);
```

Remarks

This is IsCardPresentEx, a member of class NativeMethods.

### 1.1.20.1.81 NativeMethods.IsCardStillInsertedEx Method

C#

```
public static bool IsCardStillInsertedEx(int readerNumber);
```

Remarks

This is IsCardStillInsertedEx, a member of class NativeMethods.

### 1.1.20.1.82 NativeMethods.IsConnectedToInternet Method

C#

```
public static bool IsConnectedToInternet();
```

Remarks

This is IsConnectedToInternet, a member of class NativeMethods.

### 1.1.20.1.83 NativeMethods.IsDirectory Method

C#

```
public static bool IsDirectory(string FolderName);
```

Remarks

This is IsDirectory, a member of class NativeMethods.

### 1.1.20.1.84 NativeMethods.IsEIDCardEx Method

C#

```
public static bool IsEIDCardEx(int readerNumber);
```

Remarks

This is IsEIDCardEx, a member of class NativeMethods.

### 1.1.20.1.85 NativeMethods.IsEngineActive Method

C#

```
public static bool IsEngineActive();
```

Remarks

This is IsEngineActive, a member of class NativeMethods.

### 1.1.20.1.86 NativeMethods.IsMale Method

C#

```
public static bool IsMale([In, Out] EIDIdentity Identity);
```

Remarks

This is IsMale, a member of class NativeMethods.

### 1.1.20.1.87 NativeMethods.IsMediaCenter Method

C#

```
public static bool IsMediaCenter();
```

Remarks

This is IsMediaCenter, a member of class NativeMethods.

### 1.1.20.1.88 NativeMethods.IsMetroActive Method

**C#**

```
public static bool IsMetroActive();
```

**Remarks**

This is IsMetroActive, a member of class NativeMethods.

### 1.1.20.1.89 NativeMethods.IsMultiTouchReady Method

**C#**

```
public static bool IsMultiTouchReady();
```

**Remarks**

This is IsMultiTouchReady, a member of class NativeMethods.

### 1.1.20.1.90 NativeMethods.IsTabletPC Method

**C#**

```
public static bool IsTabletPC();
```

**Remarks**

This is IsTabletPC, a member of class NativeMethods.

### 1.1.20.1.91 NativeMethods.IsUnicodeFile Method

**C#**

```
public static bool IsUnicodeFile(string fileName);
```

**Remarks**

This is IsUnicodeFile, a member of class NativeMethods.

### 1.1.20.1.92 NativeMethods.IsValidFileName Method

**C#**

```
public static bool IsValidFileName(string fileName);
```

**Remarks**

This is IsValidFileName, a member of class NativeMethods.

### 1.1.20.1.93 NativeMethods.IsValidPathName Method

**C#**

```
public static bool IsValidPathName(string fileName);
```

**Remarks**

This is IsValidPathName, a member of class NativeMethods.

### 1.1.20.1.94 NativeMethods.IsWindows10 Method

**C#**

```
public static bool IsWindows10();
```

**Remarks**

This is IsWindows10, a member of class NativeMethods.

### 1.1.20.1.95 NativeMethods.IsWindows7 Method

**C#**

```
public static bool IsWindows7();
```

**Remarks**

This is IsWindows7, a member of class NativeMethods.

### 1.1.20.1.96 NativeMethods.IsWindows8 Method

**C#**

```
public static bool IsWindows8();
```

**Remarks**

This is IsWindows8, a member of class NativeMethods.

### 1.1.20.1.97 NativeMethods.IsWindowsVista Method

**C#**

```
public static bool IsWindowsVista();
```

**Remarks**

This is IsWindowsVista, a member of class NativeMethods.

### 1.1.20.1.98 NativeMethods.IsWindowsXP Method

**C#**

```
public static bool IsWindowsXP();
```

**Remarks**

This is IsWindowsXP, a member of class NativeMethods.

### 1.1.20.1.99 NativeMethods.IsWOW64 Method

**C#**

```
public static bool IsWOW64();
```

**Remarks**

This is IsWOW64, a member of class NativeMethods.

### 1.1.20.1.100 NativeMethods.LoadCertificate Method

**C#**

```
public static void LoadCertificate(string fileName, [In, Out] EIDCertificate certificate);
```

**Remarks**

This is LoadCertificate, a member of class NativeMethods.

### 1.1.20.1.101 NativeMethods.LoadPhoto Method

**C#**

```
public static void LoadPhoto([In, Out] EIDPicture photo, string fileName);
```

**Remarks**

This is LoadPhoto, a member of class NativeMethods.

### 1.1.20.1.102 NativeMethods.PathUnExpandEnvStrings Method

**C#**

```
[DllImport("shlwapi.dll", CharSet = CharSet.Unicode)]  
[return: MarshalAs(UnmanagedType.Bool)]  
public static extern bool PathUnExpandEnvStrings([MarshalAs(UnmanagedType.LPWStr)] string  
pszPath, [Out] StringBuilder pszBuf, int cchBuf);
```

**Remarks**

This is PathUnExpandEnvStrings, a member of class NativeMethods.

### 1.1.20.1.103 NativeMethods.PortAvailable Method

**C#**

```
public static bool PortAvailable(int portNumber);
```

**Remarks**

This is PortAvailable, a member of class NativeMethods.

### 1.1.20.1.104 NativeMethods.ReadAddressEx Method

**C#**

```
public static bool ReadAddressEx(int readerNumber, [In, Out] EIDAddress address);
```

**Remarks**

This is ReadAddressEx, a member of class NativeMethods.

### 1.1.20.1.105 NativeMethods.ReadAuthenticationCertificate Method

**C#**

```
public static bool ReadAuthenticationCertificate([In, Out] EIDCertificate certificate);
```

**Remarks**

This is ReadAuthenticationCertificate, a member of class NativeMethods.



### 1.1.20.1.106 NativeMethods.ReadCaCertificate Method

**C#**

```
public static bool ReadCaCertificate([In, Out] EIDCertificate certificate);
```

**Remarks**

This is ReadCaCertificate, a member of class NativeMethods.

### 1.1.20.1.107 NativeMethods.ReadIdentityEx Method

**C#**

```
public static bool ReadIdentityEx(int readerNumber, [In, Out] EIDIdentity identity);
```

**Remarks**

This is ReadIdentityEx, a member of class NativeMethods.

### 1.1.20.1.108 NativeMethods.ReadNonRepudiationCertificate Method

**C#**

```
public static bool ReadNonRepudiationCertificate([In, Out] EIDCertificate certificate);
```

**Remarks**

This is ReadNonRepudiationCertificate, a member of class NativeMethods.

### 1.1.20.1.109 NativeMethods.ReadPhotoEx Method

**C#**

```
public static bool ReadPhotoEx(int readerNumber, [In, Out] EIDPicture Photo);
```

**Remarks**

This is ReadPhotoEx, a member of class NativeMethods.

### 1.1.20.1.110 NativeMethods.ReadRootCaCertificate Method

**C#**

```
public static bool ReadRootCaCertificate([In, Out] EIDCertificate certificate);
```

**Remarks**

This is ReadRootCaCertificate, a member of class NativeMethods.

### 1.1.20.1.111 NativeMethods.ReadRrnCertificate Method

**C#**

```
public static bool ReadRrnCertificate([In, Out] EIDCertificate certificate);
```

**Remarks**

This is ReadRrnCertificate, a member of class NativeMethods.

### 1.1.20.1.112 NativeMethods.RecycleBinEmpty Method

C#

```
public static bool RecycleBinEmpty();
```

#### Remarks

This is RecycleBinEmpty, a member of class NativeMethods.

### 1.1.20.1.113 NativeMethods.ReloadReadersList Method

C#

```
public static void ReloadReadersList();
```

#### Remarks

This is ReloadReadersList, a member of class NativeMethods.

### 1.1.20.1.114 NativeMethods.RemoveCallback Method

C#

```
public static void RemoveCallback();
```

#### Remarks

This is RemoveCallback, a member of class NativeMethods.

### 1.1.20.1.115 NativeMethods.RemoveStartup Method

C#

```
public static void RemoveStartup(string AppName);
```

#### Remarks

This is RemoveStartup, a member of class NativeMethods.

### 1.1.20.1.116 NativeMethods.SaveAuthenticationCertificateEx Method

C#

```
public static void SaveAuthenticationCertificateEx(string fileName, int readerNumber);
```

#### Remarks

This is SaveAuthenticationCertificateEx, a member of class NativeMethods.

### 1.1.20.1.117 NativeMethods.SaveCaCertificateEx Method

C#

```
public static void SaveCaCertificateEx(string fileName, int readerNumber);
```

#### Remarks

This is SaveCaCertificateEx, a member of class NativeMethods.

### 1.1.20.1.118 NativeMethods.SaveCardToToXMLStreamExA Method

**C#**

```
public static bool SaveCardToToXMLStreamExA(int readerNumber, IntPtr buffer);
```

**Remarks**

This is SaveCardToToXMLStreamExA, a member of class NativeMethods.

### 1.1.20.1.119 NativeMethods.SaveCardToToXMLStreamExW Method

**C#**

```
public static bool SaveCardToToXMLStreamExW(int readerNumber, IntPtr buffer);
```

**Remarks**

This is SaveCardToToXMLStreamExW, a member of class NativeMethods.

### 1.1.20.1.120 NativeMethods.SaveCardToXmlEx Method

**C#**

```
public static bool SaveCardToXmlEx(int readerNumber, string fileName);
```

**Remarks**

This is SaveCardToXmlEx, a member of class NativeMethods.

### 1.1.20.1.121 NativeMethods.SaveCardToXmlExAnsi Method

**C#**

```
public static bool SaveCardToXmlExAnsi(int readerNumber, string fileName);
```

**Remarks**

This is SaveCardToXmlExAnsi, a member of class NativeMethods.

### 1.1.20.1.122 NativeMethods.SaveContainer Method

**C#**

```
public static bool SaveContainer(IntPtr container, string fileName);
```

**Remarks**

This is SaveContainer, a member of class NativeMethods.

### 1.1.20.1.123 NativeMethods.SaveNonRepudiationCertificateEx Method

**C#**

```
public static void SaveNonRepudiationCertificateEx(string fileName, int readerNumber);
```

**Remarks**

This is SaveNonRepudiationCertificateEx, a member of class NativeMethods.

### 1.1.20.1.124 NativeMethods.SavePersonCsvToStreamA Method

C#

```
public static bool SavePersonCsvToStreamA(int readerNumber, IntPtr buffer);
```

Remarks

This is SavePersonCsvToStreamA, a member of class NativeMethods.

### 1.1.20.1.125 NativeMethods.SavePersonCsvToStreamW Method

C#

```
public static bool SavePersonCsvToStreamW(int readerNumber, IntPtr buffer);
```

Remarks

This is SavePersonCsvToStreamW, a member of class NativeMethods.

### 1.1.20.1.126 NativeMethods.SavePersonToCsvEx Method

C#

```
public static bool SavePersonToCsvEx(int readerNumber, string fileName);
```

Remarks

This is SavePersonToCsvEx, a member of class NativeMethods.

### 1.1.20.1.127 NativeMethods.SavePersonToCsvExAnsi Method

C#

```
public static bool SavePersonToCsvExAnsi(int readerNumber, string fileName);
```

Remarks

This is SavePersonToCsvExAnsi, a member of class NativeMethods.

### 1.1.20.1.128 NativeMethods.SavePhotoAsBitmapEx Method

C#

```
public static bool SavePhotoAsBitmapEx(int readerNumber, string fileName);
```

Remarks

This is SavePhotoAsBitmapEx, a member of class NativeMethods.

### 1.1.20.1.129 NativeMethods.SavePhotoAsJpegEx Method

C#

```
public static bool SavePhotoAsJpegEx(int readerNumber, string fileName);
```

Remarks

This is SavePhotoAsJpegEx, a member of class NativeMethods.

### 1.1.20.1.130 NativeMethods.SaveRootCaCertificateEx Method

**C#**

```
public static void SaveRootCaCertificateEx(string fileName, int readerNumber);
```

**Remarks**

This is SaveRootCaCertificateEx, a member of class NativeMethods.

### 1.1.20.1.131 NativeMethods.SaveRrnCertificateEx Method

**C#**

```
public static void SaveRrnCertificateEx(string fileName, int readerNumber);
```

**Remarks**

This is SaveRrnCertificateEx, a member of class NativeMethods.

### 1.1.20.1.132 NativeMethods.SelectReader Method

**C#**

```
public static bool SelectReader(int readerNumber);
```

**Remarks**

This is SelectReader, a member of class NativeMethods.

### 1.1.20.1.133 NativeMethods.SelectReaderByName Method

**C#**

```
public static bool SelectReaderByName(string ReaderName);
```

**Remarks**

This is SelectReaderByName, a member of class NativeMethods.

### 1.1.20.1.134 NativeMethods.SendAPDU Method

**C#**

```
public static bool SendAPDU(int readerNumber, byte[] apdu, int apduLen, byte[] result, ref int len);
```

**Remarks**

This is SendAPDU, a member of class NativeMethods.

### 1.1.20.1.135 NativeMethods.SetCallback Method

**C#**

```
public static void SetCallback(ReaderCallbackDelegate callback, IntPtr userContext);
```

**Remarks**

This is SetCallback, a member of class NativeMethods.

### 1.1.20.1.136 NativeMethods.SetStartup Method

**C#**

```
public static void SetStartup(string AppName, string AppPath);
```

**Remarks**

This is SetStartup, a member of class NativeMethods.

### 1.1.20.1.137 NativeMethods.ShellCopyFile Method

**C#**

```
public static void ShellCopyFile(string oldName, string NewName);
```

**Remarks**

This is ShellCopyFile, a member of class NativeMethods.

### 1.1.20.1.138 NativeMethods.ShowError Method

**C#**

```
public static void ShowError(int errorCode);
```

**Remarks**

This is ShowError, a member of class NativeMethods.

### 1.1.20.1.139 NativeMethods.ShutdownWindows Method

**C#**

```
public static bool ShutdownWindows(int Flags);
```

**Remarks**

This is ShutdownWindows, a member of class NativeMethods.

### 1.1.20.1.140 NativeMethods.StartEngine Method

**C#**

```
public static bool StartEngine();
```

**Remarks**

This is StartEngine, a member of class NativeMethods.

### 1.1.20.1.141 NativeMethods.StopEngine Method

**C#**

```
public static void StopEngine();
```

**Remarks**

This is StopEngine, a member of class NativeMethods.

### 1.1.20.1.142 NativeMethods.StripFileName Method

C#

```
public static void StripFileName(string fileName, StringBuilder sb);
```

#### Remarks

This is StripFileName, a member of class NativeMethods.

### 1.1.20.1.143 NativeMethods.SuspendWindows Method

C#

```
public static bool SuspendWindows();
```

#### Remarks

This is SuspendWindows, a member of class NativeMethods.

### 1.1.20.1.144 NativeMethods.TurnMonitorOff Method

C#

```
public static void TurnMonitorOff();
```

#### Remarks

This is TurnMonitorOff, a member of class NativeMethods.

### 1.1.20.1.145 NativeMethods.TurnMonitorOn Method

C#

```
public static void TurnMonitorOn();
```

#### Remarks

This is TurnMonitorOn, a member of class NativeMethods.

### 1.1.20.1.146 NativeMethods.VerifyPinEx Method

C#

```
public static bool VerifyPinEx(int readerNumber, string Value);
```

#### Remarks

This is VerifyPinEx, a member of class NativeMethods.

### 1.1.20.1.147 NativeMethods.VerifySignature Method

C#

```
public static bool VerifySignature([In, Out] EIDCertificate Certificate, byte[] dataHash, int hashSize, byte[] signature, int signatureSize);
```

#### Remarks

This is VerifySignature, a member of class NativeMethods.

# 1.1.21 Network Class

## Inheritance Hierarchy

Swelio.Engine.Network

## C#

```
public static class Network;
```

## File


Network.cs (see page 117)

## Remarks



This is class Swelio.Engine.Network.

## Members


### Network Methods

|   | Name                        | Description          |
|---|-----------------------------|----------------------|
|  | PortAvailable (see page 98) | Ports the available. |



### Network Properties

|  | Name                                | Description  |
|--|-------------------------------------|--|
|  RS  | CurrentIPAddress (see page 99)      | Gets the current IP address.                                 |
|  RS | IsConnectedToInternet (see page 99) | Gets a value indicating whether PC is connected to internet. |

### Network Methods

|   | Name                        | Description          |
|---|-----------------------------|----------------------|
|  | PortAvailable (see page 98) | Ports the available. |

### Network Properties

|  | Name                                | Description  |
|--|-------------------------------------|--|
|  RS | CurrentIPAddress (see page 99)      | Gets the current IP address.                                 |
|  RS | IsConnectedToInternet (see page 99) | Gets a value indicating whether PC is connected to internet. |

## 1.1.21.1 Network Methods

### 1.1.21.1.1 Network.PortAvailable Method

Ports the available.

## C#

```
public static bool PortAvailable(int portNumber);
```

## Parameters

| Parameters     | Description      |
|----------------|------------------|
| int portNumber | The port number. |

## 1.1.21.2 Network Properties



### 1.1.21.2.1 Network.CurrentIPAddress Property

Gets the current IP address.

C#

```
public static string CurrentIPAddress;
```

### 1.1.21.2.2 Network.IsConnectedToInternet Property

Gets a value indicating whether PC is connected to internet.

C#

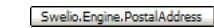
```
public static bool IsConnectedToInternet;
```

Description

true if this PC is connected to internet; otherwise, false.

## 1.1.22 PostalAddress Class

Inheritance Hierarchy



C#

```
public class PostalAddress;
```

File

PostalAddress.cs (see page 118)

Remarks

This is class Swelio.Engine.PostalAddress.

Members

Methods

|  | Name                         | Description   |
|--|------------------------------|---|
|  | PostalAddress (see page 100) | This is PostalAddress, a member of class PostalAddress. |

PostalAddress Properties




|  | Name                        | Description  |
|--|-----------------------------|--|
|  | House (see page 100)        | This is House, a member of class PostalAddress.        |
|  | Municipality (see page 100) | This is Municipality, a member of class PostalAddress. |
|  | Street (see page 100)       | This is Street, a member of class PostalAddress.       |
|  | Zip (see page 100)          | This is Zip, a member of class PostalAddress.          |

Methods

|  | Name                         | Description   |
|--|------------------------------|---|
|  | PostalAddress (see page 100) | This is PostalAddress, a member of class PostalAddress. |

PostalAddress Properties

|  | Name                 | Description                                     |
|--|----------------------|---|
|  | House (see page 100) | This is House, a member of class PostalAddress. |

|   |                               |  |
|---|-------------------------------|--|
|  | Municipality (📄 see page 100) | This is Municipality, a member of class PostalAddress. |
|  | Street (📄 see page 100)       | This is Street, a member of class PostalAddress.       |
|  | Zip (📄 see page 100)          | This is Zip, a member of class PostalAddress.          |

## 1.1.22.1 PostalAddress.PostalAddress Constructor

C#

```
public PostalAddress(Address value);
```

Remarks

This is PostalAddress, a member of class PostalAddress.

## 1.1.22.2 PostalAddress Properties

### 1.1.22.2.1 PostalAddress.House Property

C#

```
public string House;
```

Remarks

This is House, a member of class PostalAddress.

### 1.1.22.2.2 PostalAddress.Municipality Property

C#

```
public string Municipality;
```

Remarks

This is Municipality, a member of class PostalAddress.

### 1.1.22.2.3 PostalAddress.Street Property

C#

```
public string Street;
```

Remarks

This is Street, a member of class PostalAddress.

### 1.1.22.2.4 PostalAddress.Zip Property

C#

```
public string Zip;
```

Remarks

This is Zip, a member of class PostalAddress.

# 1.1.23 QRCode Class

QR Code encoder class

## Inheritance Hierarchy

Swelio.Engine.QRCode

## C#

```
public static class QRCode;
```

## File

QRCode.cs (see page 118)

## Members

### QRCode Methods

|    | Name                          | Description           |
|----|-------------------------------|-----------------------|
| 💡💰 | GenerateBitmap (see page 101) | Generates the bitmap. |
| 💡💰 | GeneratePng (see page 102)    | Generates the PNG.    |
| 💡💰 | GetBitmap (see page 102)      | Gets the bitmap.      |

### QRCode Methods

|    | Name                          | Description           |
|----|-------------------------------|-----------------------|
| 💡💰 | GenerateBitmap (see page 101) | Generates the bitmap. |
| 💡💰 | GeneratePng (see page 102)    | Generates the PNG.    |
| 💡💰 | GetBitmap (see page 102)      | Gets the bitmap.      |

## 1.1.23.1 QRCode Methods

### 1.1.23.1.1 GenerateBitmap Method

#### 1.1.23.1.1.1 QRCode.GenerateBitmap Method (string, string, ErrorCorrectionLevel)

Generates the bitmap.

## C#

```
public static void GenerateBitmap(string fileName, string text, ErrorCorrectionLevel level);
```

## Parameters

| Parameters      | Description       |
|-----------------|-------------------|
| string fileName | Name of the file. |
| string text     | The text.         |

#### 1.1.23.1.1.2 QRCode.GenerateBitmap Method (string, string, int, int, ErrorCorrectionLevel)

Generates the bitmap file with encoded string

## C#

```
public static void GenerateBitmap(string fileName, string text, int margin, int pixelSize,
```

```
ErrorCorrectionLevel level);
```

**Parameters**

| Parameters      | Description         |
|-----------------|---------------------|
| string fileName | Name of the file.   |
| string text     | The text to encode. |
| int margin      | The margin.         |
| int pixelSize   | Size of the pixel.  |

## 1.1.23.1.2 GeneratePng Method

### 1.1.23.1.2.1 QRCode.GeneratePng Method (string, string, ErrorCorrectionLevel)

Generates the PNG.

**C#**

```
public static void GeneratePng(string fileName, string text, ErrorCorrectionLevel level);
```

**Parameters**

| Parameters      | Description       |
|-----------------|-------------------|
| string fileName | Name of the file. |
| string text     | The text.         |

### 1.1.23.1.2.2 QRCode.GeneratePng Method (string, string, int, int, ErrorCorrectionLevel)

Generates the PNG.

**C#**

```
public static void GeneratePng(string fileName, string text, int margin, int pixelSize, ErrorCorrectionLevel level);
```

**Parameters**

| Parameters      | Description        |
|-----------------|--------------------|
| string fileName | Name of the file.  |
| string text     | The text.          |
| int margin      | The margin.        |
| int pixelSize   | Size of the pixel. |

## 1.1.23.1.3 GetBitmap Method

### 1.1.23.1.3.1 QRCode.GetBitmap Method (string, ErrorCorrectionLevel)

Gets the bitmap.

**C#**

```
public static Bitmap GetBitmap(string text, ErrorCorrectionLevel level);
```

**Parameters**

| Parameters  | Description |
|-------------|-------------|
| string text | The text.   |

### 1.1.23.1.3.2 QRCode.GetBitmap Method (string, int, int, ErrorCorrectionLevel)

Gets the bitmap.

C#

```
public static Bitmap GetBitmap(string text, int margin, int pixelSize, ErrorCorrectionLevel level);
```

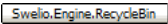
Parameters

| Parameters    | Description        |
|---------------|--------------------|
| string text   | The text.          |
| int margin    | The margin.        |
| int pixelSize | Size of the pixel. |

# 1.1.24 RecycleBin Class

Send (see page 104) files directly to the recycle bin.

Inheritance Hierarchy



C#

```
public static class RecycleBin;
```

File

RecycleBin.cs (see page 118)

Members

RecycleBin Methods

|  | Name                      | Description  |
|--|---------------------------|--|
|  | Clear (see page 104)      | This is Clear, a member of class RecycleBin.   |
|  | Send (see page 104)       | Send file to recycle bin. Display dialog, display warning if files are too big to fit                    |
|  | SendSilent (see page 104) | Send (see page 104) file silently to recycle bin. Surpress dialog, surpress errors, delete if too large. |

RecycleBin Properties

|  | Name                   | Description  |
|--|------------------------|--|
|  | IsEmpty (see page 104) | Gets a value indicating whether thee recycle bin is empty. |

RecycleBin Methods

|  | Name                      | Description  |
|--|---------------------------|--|
|  | Clear (see page 104)      | This is Clear, a member of class RecycleBin.   |
|  | Send (see page 104)       | Send file to recycle bin. Display dialog, display warning if files are too big to fit                    |
|  | SendSilent (see page 104) | Send (see page 104) file silently to recycle bin. Surpress dialog, surpress errors, delete if too large. |

RecycleBin Properties

|  | Name                   | Description  |
|--|------------------------|--|
|  | IsEmpty (see page 104) | Gets a value indicating whether thee recycle bin is empty. |

## 1.1.24.1 RecycleBin Methods

1.1.24.1.1 RecycleBin.Clear Method

C#  
`public static void Clear();`

Remarks  
This is Clear, a member of class RecycleBin.

1.1.24.1.2 RecycleBin.Send Method

Send file to recycle bin. Display dialog, display warning if files are too big to fit

C#  
`public static void Send(string path);`

Parameters

| Parameters  | Description                              |
|-------------|--|
| string path | Location of directory or file to recycle |

1.1.24.1.3 RecycleBin.SendSilent Method

Send (see page 104) file silently to recycle bin. Surpress dialog, surpress errors, delete if too large.

C#  
`public static void SendSilent(string path);`

Parameters

| Parameters  | Description                              |
|-------------|--|
| string path | Location of directory or file to recycle |

1.1.24.2 RecycleBin Properties

1.1.24.2.1 RecycleBin.IsEmpty Property

Gets a value indicating whether thee recycle bin is empty.

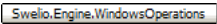
C#  
`public static bool IsEmpty;`

Description  
true if recycle bin is empty; otherwise, false.

1.1.25 WindowsOperations Class

Windows power management class

Inheritance Hierarchy



C#




```
public static class WindowsOperations;
```

File




WindowsOperations.cs (see page 118)

Members

WindowsOperations Methods

|   | Name                     | Description        |
|---|--------------------------|--------------------|
|  | Hibernate (see page 105) | Hibernate computer |
|  | Shutdown (see page 105)  | Shutdown Computer  |
|  | Suspend (see page 105)   | Suspends computer  |

WindowsOperations Methods

|   | Name                     | Description        |
|---|--------------------------|--------------------|
|  | Hibernate (see page 105) | Hibernate computer |
|  | Shutdown (see page 105)  | Shutdown Computer  |
|  | Suspend (see page 105)   | Suspends computer  |

1.1.25.1 WindowsOperations Methods

1.1.25.1.1 WindowsOperations.Hibernate Method

Hibernate computer

C#

```
public static void Hibernate();
```

1.1.25.1.2 WindowsOperations.Shutdown Method

Shutdown Computer

C#

```
public static void Shutdown(ShutdownOption option);
```

Parameters

| Parameters            | Description |
|-----------------------|-------------|
| ShutdownOption option | The option. |

1.1.25.1.3 WindowsOperations.Suspend Method

Suspends computer

C#

```
public static void Suspend();
```

1.1.26 Swelio.Engine.CardEvent Enumeration

The code of the card event

**C#**

```
internal enum CardEvent : int {  
    CardInsert = 1,  
    CardRemove = 2,  
    ReadersChange = 3,  
    UnknownEvent = 0  
}
```

**File**

CardEvent.cs (see page 113)

---

## 1.1.27 Swelio.Engine.CertificateType Enumeration

The type of the certificate

**C#**

```
public enum CertificateType {  
    CaCertificate,  
    RootCaCertificate,  
    RrnCertificate,  
    AuthenticationCertificate,  
    NonRepudiationCertificate  
}
```

**File**

CertificateType.cs (see page 114)

---

## 1.1.28 Swelio.Engine.ChangeWindowMessageFilterFlags Enumeration

**C#**

```
internal enum ChangeWindowMessageFilterFlags : int {  
    Add = 1,  
    Remove = 2  
}
```

**File**

NativeTypes.cs (see page 117)

**Remarks**

This is record Swelio.Engine.ChangeWindowMessageFilterFlags.

---

## 1.1.29 Swelio.Engine.DocumentType Enumeration

**C#**

```
public enum DocumentType {  
    Unknown,  
    BelgianCitizen,  
    EuropeanCommunity,  
    NonEuropeanCommunity,  
}
```



```
KidsCard,  
BootstrapCard,  
HabilitationCard,  
ForeignerCard  
}
```

**File**

DocumentType.cs ([see page 114](#))

**Remarks**

This is record Swelio.Engine.DocumentType.

---

## 1.1.30 Swelio.Engine.ErrorCorrectionLevel Enumeration

**C#**

```
public enum ErrorCorrectionLevel : int {  
    LowQuality,  
    MediumQuality,  
    StandardQuality,  
    HighQuality  
}
```

**File**

QRCode.cs ([see page 118](#))

**Remarks**

This is record Swelio.Engine.ErrorCorrectionLevel.

---

## 1.1.31 Swelio.Engine.ExportFormat Enumeration

**C#**

```
public enum ExportFormat {  
    Csv,  
    Xml  
}
```

**File**

ExportFormat.cs ([see page 115](#))

**Remarks**

This is record Swelio.Engine.ExportFormat.

---

## 1.1.32 Swelio.Engine.FileEncoding Enumeration

**C#**

```
public enum FileEncoding {  
    Ansi,  
    Utf16,  
    Utf8  
}
```

**File**

FileEncoding.cs ([see page 115](#))

**Remarks**

This is record Swelio.Engine.FileEncoding.

---

## 1.1.33 Swelio.Engine.Gender Enumeration

**C#**

```
public enum Gender {  
    Male,  
    Female  
}
```

**File**

Gender.cs ([see page 116](#))

**Remarks**

This is record Swelio.Engine.Gender.

---

## 1.1.34 Swelio.Engine.PhotoFormat Enumeration

**C#**

```
public enum PhotoFormat {  
    Bmp,  
    Jpeg  
}
```

**File**

PhotoFormat.cs ([see page 118](#))

**Remarks**

This is record Swelio.Engine.PhotoFormat.

---

## 1.1.35 Swelio.Engine.ShutdownOption Enumeration

Windows shutdown options

**C#**

```
public enum ShutdownOption {  
    LogOff = 0,  
    PowerOff = 8,  
    Reboot = 2,  
    Shutdown = 1,  
    Suspend = -1,  
    Hibernate = -2  
}
```

**File**

WindowsOperations.cs ([see page 118](#))

**Members**

| Members        | Description   |
|----------------|---|
| LogOff = 0     | Shuts down all processes running in the security context of the process that called the ExitWindowsEx function. Then it logs the user off.  |
| PowerOff = 8   | Shuts down the system and turns off the power. The system must support the power-off feature.   |
| Reboot = 2     | Shuts down the system and then restarts the system.   |
| Shutdown = 1   | Shuts down the system to a point at which it is safe to turn off the power. All file buffers have been flushed to disk, and all running processes have stopped. If the system supports the power-off feature, the power is also turned off. |
| Suspend = -1   | Suspends the system.  |
| Hibernate = -2 | Hibernates the system.  |

## 1.1.36 Swelio.Engine.ReaderCallbackDelegate Type

**C#**

```
[UnmanagedFunctionPointer(CallingConvention.Winapi, CharSet = CharSet.Unicode)]
public delegate void ReaderCallbackDelegate(ref int readerNumber, ref int eventCode, IntPtr
userContext);
```

**File**

NativeMethods.cs ([see page 117](#))

**Remarks**

This is type Swelio.Engine.ReaderCallbackDelegate.

## 1.2 Files

The following table lists files in this documentation.

**Files**

| Name  | Description   |
|---|---|
| Address.cs ( <a href="#">see page 112</a> ) | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |
| Card.cs ( <a href="#">see page 113</a> )    | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |

|                                     |   |
|-------------------------------------|---|
| CardDate.cs (see page 113)          | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |
| CardEvent.cs (see page 113)         | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |
| CardEventArgs.cs (see page 113)     | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |
| CardNumber.cs (see page 114)        | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |
| CardReader.cs (see page 114)        | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |
| CertificateType.cs (see page 114)   | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |
| DocumentContainer.cs (see page 114) | This is file DocumentContainer.cs.  |
| DocumentType.cs (see page 114)      | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |
| Encryption.cs (see page 115)        | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |

|                                  |   |
|----------------------------------|---|
| ExportFormat.cs (see page 115)   | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |
| FileEncoding.cs (see page 115)   | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |
| FileOperations.cs (see page 115) | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |
| Gender.cs (see page 116)         | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |
| Identity.cs (see page 116)       | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |
| InteropHelper.cs (see page 116)  | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |
| Manager.cs (see page 116)        | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |
| NationalNumber.cs (see page 117) | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |

|                                     |   |
|-------------------------------------|---|
| NativeMethods.cs (see page 117)     | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |
| NativeTypes.cs (see page 117)       | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |
| Network.cs (see page 117)           | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |
| PhotoFormat.cs (see page 118)       | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |
| PostalAddress.cs (see page 118)     | This is file PostalAddress.cs.  |
| QRCode.cs (see page 118)            | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |
| RecycleBin.cs (see page 118)        | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |
| WindowsOperations.cs (see page 118) | Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |

## 1.2.1 Address.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

**Namespaces**

| Name                       | Description                      |
|----------------------------|----------------------------------|
| Swelio.Engine (see page 1) | This is namespace Swelio.Engine. |

## 1.2.2 Card.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

**Namespaces**

| Name                       | Description                      |
|----------------------------|----------------------------------|
| Swelio.Engine (see page 1) | This is namespace Swelio.Engine. |

## 1.2.3 CardDate.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

**Namespaces**

| Name                       | Description                      |
|----------------------------|----------------------------------|
| Swelio.Engine (see page 1) | This is namespace Swelio.Engine. |

## 1.2.4 CardEvent.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

**Namespaces**

| Name                       | Description                      |
|----------------------------|----------------------------------|
| Swelio.Engine (see page 1) | This is namespace Swelio.Engine. |

## 1.2.5 CardEventArgs.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

**Namespaces**

| Name                       | Description                      |
|----------------------------|----------------------------------|
| Swelio.Engine (see page 1) | This is namespace Swelio.Engine. |

---

## 1.2.6 CardNumber.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

### Namespaces

| Name   | Description                      |
|--|----------------------------------|
| Swelio.Engine ( <a href="#">see page 1</a> ) | This is namespace Swelio.Engine. |

---

## 1.2.7 CardReader.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

### Namespaces

| Name   | Description                      |
|--|----------------------------------|
| Swelio.Engine ( <a href="#">see page 1</a> ) | This is namespace Swelio.Engine. |

---

## 1.2.8 CertificateType.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

### Namespaces

| Name   | Description                      |
|--|----------------------------------|
| Swelio.Engine ( <a href="#">see page 1</a> ) | This is namespace Swelio.Engine. |

---

## 1.2.9 DocumentContainer.cs

This is file DocumentContainer.cs.

### Namespaces

| Name   | Description                      |
|--|----------------------------------|
| Swelio.Engine ( <a href="#">see page 1</a> ) | This is namespace Swelio.Engine. |

---

## 1.2.10 DocumentType.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT



WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

#### Namespaces

| Name                       | Description                      |
|----------------------------|----------------------------------|
| Swelio.Engine (see page 1) | This is namespace Swelio.Engine. |

---

## 1.2.11 Encryption.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

#### Namespaces

| Name                       | Description                      |
|----------------------------|----------------------------------|
| Swelio.Engine (see page 1) | This is namespace Swelio.Engine. |

---

## 1.2.12 ExportFormat.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

#### Namespaces

| Name                       | Description                      |
|----------------------------|----------------------------------|
| Swelio.Engine (see page 1) | This is namespace Swelio.Engine. |

---

## 1.2.13 FileEncoding.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

#### Namespaces

| Name                       | Description                      |
|----------------------------|----------------------------------|
| Swelio.Engine (see page 1) | This is namespace Swelio.Engine. |

---

## 1.2.14 FileOperations.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

**Namespaces**

| Name                       | Description                      |
|----------------------------|----------------------------------|
| Swelio.Engine (see page 1) | This is namespace Swelio.Engine. |

## 1.2.15 Gender.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

**Namespaces**

| Name                       | Description                      |
|----------------------------|----------------------------------|
| Swelio.Engine (see page 1) | This is namespace Swelio.Engine. |

## 1.2.16 Identity.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

**Namespaces**

| Name                       | Description                      |
|----------------------------|----------------------------------|
| Swelio.Engine (see page 1) | This is namespace Swelio.Engine. |

## 1.2.17 InteropHelper.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

**Namespaces**

| Name                       | Description                      |
|----------------------------|----------------------------------|
| Swelio.Engine (see page 1) | This is namespace Swelio.Engine. |

## 1.2.18 Manager.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

**Namespaces**

| Name                       | Description                      |
|----------------------------|----------------------------------|
| Swelio.Engine (see page 1) | This is namespace Swelio.Engine. |

---

## 1.2.19 NationalNumber.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

### Namespaces

| Name   | Description                      |
|--|----------------------------------|
| Swelio.Engine ( <a href="#">see page 1</a> ) | This is namespace Swelio.Engine. |

---

## 1.2.20 NativeMethods.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

### Namespaces

| Name   | Description                      |
|--|----------------------------------|
| Swelio.Engine ( <a href="#">see page 1</a> ) | This is namespace Swelio.Engine. |

---

## 1.2.21 NativeTypes.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

### Namespaces

| Name   | Description                      |
|--|----------------------------------|
| Swelio.Engine ( <a href="#">see page 1</a> ) | This is namespace Swelio.Engine. |

---

## 1.2.22 Network.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

### Namespaces

| Name   | Description                      |
|--|----------------------------------|
| Swelio.Engine ( <a href="#">see page 1</a> ) | This is namespace Swelio.Engine. |

---

## 1.2.23 PhotoFormat.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

### Namespaces

| Name                       | Description                      |
|----------------------------|----------------------------------|
| Swelio.Engine (see page 1) | This is namespace Swelio.Engine. |

---

## 1.2.24 PostalAddress.cs

This is file PostalAddress.cs.

### Namespaces

| Name                       | Description                      |
|----------------------------|----------------------------------|
| Swelio.Engine (see page 1) | This is namespace Swelio.Engine. |

---

## 1.2.25 QRCode.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

### Namespaces

| Name                       | Description                      |
|----------------------------|----------------------------------|
| Swelio.Engine (see page 1) | This is namespace Swelio.Engine. |

---

## 1.2.26 RecycleBin.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

### Namespaces

| Name                       | Description                      |
|----------------------------|----------------------------------|
| Swelio.Engine (see page 1) | This is namespace Swelio.Engine. |

---

## 1.2.27 WindowsOperations.cs

Copyright (c) Serhiy Perevoznyk. All rights reserved. THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT

WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Namespaces

| Name                         | Description                      |
|------------------------------|----------------------------------|
| Swelio.Engine (🔗 see page 1) | This is namespace Swelio.Engine. |

# Index

## A

Add enumeration member 106  
Address class 2  
    about Address class 2  
    Address 3  
    Municipality 3  
    Parse 3  
    Street 4  
    Zip 4  
Address.cs 112  
Ansi enumeration member 107  
AuthenticationCertificate enumeration member 106

## B

BelgianCitizen enumeration member 106  
Bmp enumeration member 108  
BootstrapCard enumeration member 106

## C

CaCertificate enumeration member 106  
Card class 4  
    about Card class 4  
    AppletVersion 9  
    Card 5  
    DisplayCertificate 6  
    Dispose 6  
    EidCard 10  
    EncodeCertificate 6  
    EncodePhoto 7  
    Inserted 10  
    ReadAddress 7  
    ReadCertificate 7  
    ReadIdentity 7  
    ReadPhoto 8  
    Save 8  
    SaveCertificate 8  
    SavePhoto 9  
    SaveQRCode 9

    SerialNumber 10  
    Tag 10  
    VerifyPinCode 9  
Card.cs 113  
CardDate class 10  
    about CardDate class 10  
    ToDate 11  
    ToLongDateString 11  
    ToShortDateString 12  
CardDate.cs 113  
CardEvent.cs 113  
CardEventArgs class 12  
    about CardEventArgs class 12  
    CardEventArgs 12  
    ReaderNumber 13  
CardEventArgs.cs 113  
CardInsert enumeration member 105  
CardNumber class 13  
    about CardNumber class 13  
    ToString 13  
CardNumber.cs 114  
CardReader class 14  
    about CardReader class 14  
    ActivateCard 16  
    card 15  
    CardActivated 17  
    CardPresent 17  
    CardReader 15  
    DeactivateCard 16  
    Dispose 16  
    GetCard 16  
    Index 17  
    Name 17  
    Selected 17  
    Tag 17  
CardReader.cs 114  
CardRemove enumeration member 105  
CertificateType.cs 114  
Csv enumeration member 107

## D

### DocumentContainer class 18

- about DocumentContainer class 18
- AddFile 19
- Close 19
- DocumentContainer 18
- Save 19
- SelectCertificate 19, 20

DocumentContainer.cs 114

DocumentType.cs 114

## E

### EIDAddress class 20

- about EIDAddress class 20
- municipality 21
- street 21
- zip 21

### EIDCertificate class 21

- about EIDCertificate class 21
- certificate 22
- certificateLength 22

### EIDDataLength class 22

- about EIDDataLength class 22
- EidMaxBirthDateLen 24
- EidMaxBirthplaceLen 24
- EidMaxBrexitMention1Len 24
- EidMaxBrexitMention2Len 24
- EidMaxCardNumberLen 24
- EidMaxCertLen 24
- EidMaxChipNumberLen 25
- EidMaxDateAndCountryOfProtectionLen 25
- EidMaxDateBeginLen 25
- EidMaxDateEndLen 25
- EidMaxDeliveryMunicipalityLen 25
- EidMaxDocumentTypeLen 25
- EidMaxDuplicateLen 25
- EidMaxFirstNameLen 25
- EidMaxMemberOfFamilyLen 26
- EidMaxMiddleNameLen 26

EidMaxMunicipalityName 26

EidMaxNameLen 26

EidMaxNationalityLen 26

EidMaxNationalNumberLen 26

EidMaxNobleConditionLen 26

EidMaxPictureLen 27

EidMaxRegionalFileNumberLen 27

EidMaxSexLen 27

EidMaxSpecialOrganizationLen 27

EidMaxSpecialStatusLen 27

EidMaxStreetNameLen 27

EidMaxVAT1Len 27

EidMaxVAT2Len 28

EidMaxWorkPermitTypeLen 28

EidMaxZipLen 28

### EIDError class 28

- about EIDError class 28
- Code 29
- Description 29

### EIDIdentity class 29

- about EIDIdentity class 29
- birthDate 31
- birthLocation 31
- brexitMention1 31
- brexitMention2 31
- cardNumber 31
- chipNumber 31
- dateAndCountryOfProtection 32
- documentType 32
- duplicate 32
- extendedMinority 32
- firstName1 32
- firstName2 32
- memberOfFamily 33
- municipality 33
- name 33
- nationality 33
- nationalNumber 33
- nobleCondition 33
- regionalFileNumber 33
- sex 34

- specialOrganization 34
- validityDateBegin 34
- validityDateEnd 34
- vat1 34
- vat2 34
- whiteCane 35
- workPermitType 35
- yellowCane 35
- EIDPicture class 35
  - about EIDPicture class 35
  - picture 36
  - pictureLength 36
- Encryption class 36
  - about Encryption class 36
  - CheckFileMD5 37
  - CheckFileSHA1 37
  - CheckMD5 37, 38
  - CheckSHA1 38
  - DecryptFile 38, 39
  - EncryptFile 39
  - GenerateAuthenticationSignature 39
  - GenerateNonRepudiationSignature 40
  - GetFileMD5 40
  - GetFileSHA1 40
  - GetMD5 40, 41
  - GetSHA1 41
  - VerifySignature 41
- Encryption.cs 115
- EuropeanCommunity enumeration member 106
- ExportFormat.cs 115

## F

- Female enumeration member 108
- FileEncoding.cs 115
- FileOperations class 42
  - about FileOperations class 42
  - ClearFileAttributes 44
  - CopyFile 44
  - CreateUnicodeFile 44
  - DeleteFile 44
  - DeleteToRecycleBin 44

- DirectoryExists 45
- ExcludeTrailingPathDelimiter 45
- FileExists 45
- FileExtensionIs 45
- FilesAnimatedGif 45
- FilesExe 45
- FilesIcon 46
- FilesImage 46
- FilesLink 46
- FileOrFolderExists 46
- FullPath 46
- GetExtension 47
- GetFilesCount 47
- GetFileSize 47
- IncludeTrailingPathDelimiter 47
- IsDirectory 47
- IsUnicodeFile 48
- IsValidFileName 48
- IsValidPathName 48
- RenameFile 48
- ShellCopyFile 48
- StripFileName 48
- UnExpandPath 49
- FileOperations.cs 115
- Files 109
- ForeignerCard enumeration member 106

## G

- Gender.cs 116

## H

- HabilitationCard enumeration member 106
- Hibernate enumeration member 108
- HighQuality enumeration member 107

## I

- Identity class 49
  - about Identity class 49
  - BirthDate 51
  - BirthLocation 51



BrexitMention1 51  
 BrexitMention2 51  
 CardNumber 52  
 ChipNumber 52  
 Clear 51  
 DateAndCountryOfProtection 52  
 DocumentType 52  
 Duplicate 52  
 ExtendedMinority 52  
 FirstName1 53  
 FirstName2 53  
 MemberOfFamily 53  
 Municipality 53  
 Nationality 53  
 NationalityISO 53  
 NationalNumber 54  
 NobleCondition 54  
 RegionalFileNumber 54  
 Sex 54  
 SpecialOrganization 54  
 Surname 54  
 ValidityDateBegin 54  
 ValidityDateEnd 55  
 Vat1 55  
 Vat2 55  
 WhiteCane 55  
 WorkPermitType 55  
 YellowCane 55  
 Identity.cs 116  
 InteropHelper class 56  
   about InteropHelper class 56  
   ClearUnusedMemory 57  
   GetStartup 57  
   IsMediaCenter 58  
   IsMultiTouchReady 58  
   IsTabletPC 58  
   MetroActive 59  
   RunningOnVista 59  
   RunningOnWin10 59  
   RunningOnWin7 59  
   RunningOnWin8 59

RunningOnXP 59  
 SetStartup 57  
 ShowScreenKeyboard 57  
 ShowWindowsError 58  
 TurnMonitorOff 58  
 TurnMonitorOn 58  
 InteropHelper.cs 116

## J

Jpeg enumeration member 108

## K

KidsCard enumeration member 106

## L

LogOff enumeration member 108  
 LowQuality enumeration member 107

## M

Male enumeration member 108  
 Manager class 60  
   about Manager class 60  
   Active 63  
   CardInserted 64  
   CardRemoved 64  
   Dispose 61  
   GetReader 61, 62  
   GetReaderName 62  
   ListReaders 62  
   Manager 61  
   ReaderCount 63  
   ReadersListChanged 64  
   ReloadReadersList 62  
   SendAPDU 62  
   SetDefaultReader 62  
   TraceEvents 63  
   TraceHardwareEvents 63  
   TraceServiceEvents 63  
 Manager.cs 116  
 MediumQuality enumeration member 107

## N

NationalNumber class 64

about NationalNumber class 64

ToString 65

NationalNumber.cs 117

NativeMethods class 65

about NativeMethods class 65

ActivateCardEx 73

AddFileToContainer 73

CardDecryptFile 73

CardEncryptFile 74

CardSignCadesT 74

CardSignCadesTEx 74

CardSignCMS 74

CardSignCMSEx 74

CertSignCadesT 74

CertSignCadesTData 75

CertSignCadesTEx 75

CertSignCMS 75

CertSignCMSData 75

CertSignCMSEx 75

CheckMD5 75

CheckSHA1 76

ClearFileAttributes 76

ClearUnusedMemory 76

ContainerCertificate 76

ContainerEidCertificate 76

ContainerPickCertificate 76

CreateCardBuffer 77

CreateUnicodeFile 77

CurrentIPAddress 77

DeactivateCardEx 77

DecryptFileAES 77

DeleteCardBuffer 77

DeleteObject 78

DeleteToRecycleBin 78

DirectoryExists 78

DisplayCertificate 78

EmptyRecycleBin 78

EncodeCertificate 78

EncodePhoto 79

EncryptFileAES 79

FileCopy 79

FileDelete 79

FileExists 79

FileExtensionIs 79

FileGetSize 80

FileIsExe 80

FileIsIcon 80

FileIsImage 80

FileIsLink 80

FileOrFolderExists 80

FileRename 81

FreeContainer 81

FullPath 81

GenerateAuthenticationSignatureEx 81

GenerateBMP 81

GenerateNonRepudiationSignatureEx 81

GeneratePNG 82

GenerateQRCodeEx 82

GetCardBufferA 82

GetCardBufferSize 82

GetCardBufferW 82

GetCardSerialNumber 82

GetCardVersion 83

GetEncodedCertificateSize 83

GetEncodedPhotoSize 83

GetFileMD5 83

GetFilesCount 83

GetFileSHA1 83

GetHBitmap 84

GetISOCODE 84

GetMD5 84

GetReaderIndex 84

GetReaderName 84

GetReaderNameLen 84

GetReadersCount 85

GetSelectedReaderIndex 85

GetSHA1 85

GetStartup 85

HibernateWindows 85

|                                  |   |
|----------------------------------|---|
| IgnoreHardwareEvents 85          | SaveAuthenticationCertificateEx 92          |
| IgnoreServiceEvents 86           | SaveCaCertificateEx 92                      |
| InitializeContainer 86           | SaveCardToToXMLStreamExA 93                 |
| IsAnimatedGIF 86                 | SaveCardToToXMLStreamExW 93                 |
| IsCardActivatedEx 86             | SaveCardToXmlEx 93                          |
| IsCardPresentEx 86               | SaveCardToXmlExAnsi 93                      |
| IsCardStillInsertedEx 86         | SaveContainer 93                            |
| IsConnectedToInternet 87         | SaveNonRepudiationCertificateEx 93          |
| IsDirectory 87                   | SavePersonCsvToStreamA 94                   |
| IsEIDCardEx 87                   | SavePersonCsvToStreamW 94                   |
| IsEngineActive 87                | SavePersonToCsvEx 94                        |
| IsMale 87                        | SavePersonToCsvExAnsi 94                    |
| IsMediaCenter 87                 | SavePhotoAsBitmapEx 94                      |
| IsMetroActive 88                 | SavePhotoAsJpegEx 94                        |
| IsMultiTouchReady 88             | SaveRootCaCertificateEx 95                  |
| IsTabletPC 88                    | SaveRrnCertificateEx 95                     |
| IsUnicodeFile 88                 | SelectReader 95                             |
| IsValidFileName 88               | SelectReaderByName 95                       |
| IsValidPathName 88               | SendAPDU 95                                 |
| IsWindows10 89                   | SetCallback 95                              |
| IsWindows7 89                    | SetStartup 96                               |
| IsWindows8 89                    | ShellCopyFile 96                            |
| IsWindowsVista 89                | ShowError 96                                |
| IsWindowsXP 89                   | ShutdownWindows 96                          |
| IsWOW64 89                       | StartEngine 96                              |
| LoadCertificate 90               | StopEngine 96                               |
| LoadPhoto 90                     | StripFileName 97                            |
| PathUnExpandEnvStrings 90        | SuspendWindows 97                           |
| PortAvailable 90                 | TurnMonitorOff 97                           |
| ReadAddressEx 90                 | TurnMonitorOn 97                            |
| ReadAuthenticationCertificate 90 | VerifyPinEx 97                              |
| ReadCaCertificate 91             | VerifySignature 97                          |
| ReadIdentityEx 91                | NativeMethods.cs 117                        |
| ReadNonRepudiationCertificate 91 | NativeTypes.cs 117                          |
| ReadPhotoEx 91                   | Network class 98                            |
| ReadRootCaCertificate 91         | about Network class 98                      |
| ReadRrnCertificate 91            | CurrentIPAddress 99                         |
| RecycleBinEmpty 92               | IsConnectedToInternet 99                    |
| ReloadReadersList 92             | PortAvailable 98                            |
| RemoveCallback 92                | Network.cs 117                              |
| RemoveStartup 92                 | NonEuropeanCommunity enumeration member 106 |

NonRepudiationCertificate enumeration member 106

## P

PhotoFormat.cs 118

PostalAddress class 99

about PostalAddress class 99

House 100

Municipality 100

PostalAddress 100

Street 100

Zip 100

PostalAddress.cs 118

PowerOff enumeration member 108

## Q

QRCode class 101

about QRCode class 101

GenerateBitmap 101

GeneratePng 102

GetBitmap 102

QRCode.cs 118

## R

ReadersChange enumeration member 105

Reboot enumeration member 108

RecycleBin class 103

about RecycleBin class 103

Clear 104

IsEmpty 104

Send 104

SendSilent 104

RecycleBin.cs 118

Remove enumeration member 106

RootCaCertificate enumeration member 106

RrnCertificate enumeration member 106

## S

Shutdown enumeration member 108

StandardQuality enumeration member 107

Suspend enumeration member 108

Swelio.Engine 1

Swelio.Engine namespace 1

Swelio.Engine.Address 2

Swelio.Engine.Address.Address 3

Swelio.Engine.Address.Municipality 3

Swelio.Engine.Address.Parse 3

Swelio.Engine.Address.Street 4

Swelio.Engine.Address.Zip 4

Swelio.Engine.Card 4

Swelio.Engine.Card.AppletVersion 9

Swelio.Engine.Card.Card 5

Swelio.Engine.Card.DisplayCertificate 6

Swelio.Engine.Card.Dispose 6

Swelio.Engine.Card.EidCard 10

Swelio.Engine.Card.EncodeCertificate 6

Swelio.Engine.Card.EncodePhoto 7

Swelio.Engine.Card.Inserted 10

Swelio.Engine.Card.ReadAddress 7

Swelio.Engine.Card.ReadCertificate 7

Swelio.Engine.Card.ReadIdentity 7

Swelio.Engine.Card.ReadPhoto 8

Swelio.Engine.Card.Save 8

Swelio.Engine.Card.SaveCertificate 8

Swelio.Engine.Card.SavePhoto 9

Swelio.Engine.Card.SaveQRCode 9

Swelio.Engine.Card.SerialNumber 10

Swelio.Engine.Card.Tag 10

Swelio.Engine.Card.VerifyPinCode 9

Swelio.Engine.CardDate 10

Swelio.Engine.CardDate.ToDate 11

Swelio.Engine.CardDate.ToLongDateString 11

Swelio.Engine.CardDate.ToShortDateString 12

Swelio.Engine.CardEvent 105

Swelio.Engine.CardEvent enumeration 105

Swelio.Engine.CardEventArgs 12

Swelio.Engine.CardEventArgs.CardEventArgs 12

Swelio.Engine.CardEventArgs.ReaderNumber 13

Swelio.Engine.CardNumber 13

Swelio.Engine.CardNumber.ToString 13

Swelio.Engine.CardReader 14

Swelio.Engine.CardReader.ActivateCard 16

|  |  |
|--|--|
| Swelio.Engine.CardReader.card 15                                   | Swelio.Engine.EIDDataLength.EidMaxDateBeginLen 25            |
| Swelio.Engine.CardReader.CardActivated 17                          | Swelio.Engine.EIDDataLength.EidMaxDateEndLen 25              |
| Swelio.Engine.CardReader.CardPresent 17                            | Swelio.Engine.EIDDataLength.EidMaxDeliveryMunicipalityLen 25 |
| Swelio.Engine.CardReader.CardReader 15                             | Swelio.Engine.EIDDataLength.EidMaxDocumentTypeLen 25         |
| Swelio.Engine.CardReader.DeactivateCard 16                         | Swelio.Engine.EIDDataLength.EidMaxDuplicateLen 25            |
| Swelio.Engine.CardReader.Dispose 16                                | Swelio.Engine.EIDDataLength.EidMaxFirstNameLen 25            |
| Swelio.Engine.CardReader.GetCard 16                                | Swelio.Engine.EIDDataLength.EidMaxMemberOfFamilyLen 26       |
| Swelio.Engine.CardReader.Index 17                                  | Swelio.Engine.EIDDataLength.EidMaxMiddleNameLen 26           |
| Swelio.Engine.CardReader.Name 17                                   | Swelio.Engine.EIDDataLength.EidMaxMunicipalityName 26        |
| Swelio.Engine.CardReader.Selected 17                               | Swelio.Engine.EIDDataLength.EidMaxNameLen 26                 |
| Swelio.Engine.CardReader.Tag 17                                    | Swelio.Engine.EIDDataLength.EidMaxNationalityLen 26          |
| Swelio.Engine.CertificateType 106                                  | Swelio.Engine.EIDDataLength.EidMaxNationalNumberLen 26       |
| Swelio.Engine.CertificateType enumeration 106                      | Swelio.Engine.EIDDataLength.EidMaxNobleConditionLen 26       |
| Swelio.Engine.ChangeWindowMessageFilterFlags 106                   | Swelio.Engine.EIDDataLength.EidMaxPictureLen 27              |
| Swelio.Engine.ChangeWindowMessageFilterFlags enumeration 106       | Swelio.Engine.EIDDataLength.EidMaxRegionalFileNumberLen 27   |
| Swelio.Engine.DocumentContainer 18                                 | Swelio.Engine.EIDDataLength.EidMaxSexLen 27                  |
| Swelio.Engine.DocumentContainer.AddFile 19                         | Swelio.Engine.EIDDataLength.EidMaxSpecialOrganizationLen 27  |
| Swelio.Engine.DocumentContainer.Close 19                           | Swelio.Engine.EIDDataLength.EidMaxSpecialStatusLen 27        |
| Swelio.Engine.DocumentContainer.DocumentContainer 18               | Swelio.Engine.EIDDataLength.EidMaxStreetNameLen 27           |
| Swelio.Engine.DocumentContainer.Save 19                            | Swelio.Engine.EIDDataLength.EidMaxVAT1Len 27                 |
| Swelio.Engine.DocumentContainer.SelectCertificate 19, 20           | Swelio.Engine.EIDDataLength.EidMaxVAT2Len 28                 |
| Swelio.Engine.DocumentType 106                                     | Swelio.Engine.EIDDataLength.EidMaxWorkPermitTypeLen 28       |
| Swelio.Engine.DocumentType enumeration 106                         | Swelio.Engine.EIDDataLength.EidMaxZipLen 28                  |
| Swelio.Engine.EIDAddress 20  | Swelio.Engine.EIDError 28                                    |
| Swelio.Engine.EIDAddress.municipality 21                           | Swelio.Engine.EIDError.Code 29                               |
| Swelio.Engine.EIDAddress.street 21                                 | Swelio.Engine.EIDError.Description 29                        |
| Swelio.Engine.EIDAddress.zip 21                                    | Swelio.Engine.EIDIdentity 29                                 |
| Swelio.Engine.EIDCertificate 21                                    | Swelio.Engine.EIDIdentity.birthDate 31                       |
| Swelio.Engine.EIDCertificate.certificate 22                        | Swelio.Engine.EIDIdentity.birthLocation 31                   |
| Swelio.Engine.EIDCertificate.certificateLength 22                  | Swelio.Engine.EIDIdentity.brexitMention1 31                  |
| Swelio.Engine.EIDDataLength 22                                     | Swelio.Engine.EIDIdentity.brexitMention2 31                  |
| Swelio.Engine.EIDDataLength.EidMaxBirthDateLen 24                  | Swelio.Engine.EIDIdentity.cardNumber 31                      |
| Swelio.Engine.EIDDataLength.EidMaxBirthplaceLen 24                 | Swelio.Engine.EIDIdentity.chipNumber 31                      |
| Swelio.Engine.EIDDataLength.EidMaxBrexitMention1Len 24             | Swelio.Engine.EIDIdentity.dateAndCountryOfProtection 32      |
| Swelio.Engine.EIDDataLength.EidMaxBrexitMention2Len 24             | Swelio.Engine.EIDIdentity.documentType 32                    |
| Swelio.Engine.EIDDataLength.EidMaxCardNumberLen 24                 | Swelio.Engine.EIDIdentity.duplicate 32                       |
| Swelio.Engine.EIDDataLength.EidMaxCertLen 24                       | Swelio.Engine.EIDIdentity.extendedMinority 32                |
| Swelio.Engine.EIDDataLength.EidMaxChipNumberLen 25                 |  |
| Swelio.Engine.EIDDataLength.EidMaxDateAndCountryOfProtectionLen 25 |  |

|   |  |
|---|--|
| Swelio.Engine.EIDIdentity.firstName1 32                     | Swelio.Engine.FileEncoding enumeration 107                   |
| Swelio.Engine.EIDIdentity.firstName2 32                     | Swelio.Engine.FileOperations 42                              |
| Swelio.Engine.EIDIdentity.memberOfFamily 33                 | Swelio.Engine.FileOperations.ClearFileAttributes 44          |
| Swelio.Engine.EIDIdentity.municipality 33                   | Swelio.Engine.FileOperations.CopyFile 44                     |
| Swelio.Engine.EIDIdentity.name 33                           | Swelio.Engine.FileOperations.CreateUnicodeFile 44            |
| Swelio.Engine.EIDIdentity.nationality 33                    | Swelio.Engine.FileOperations.DeleteFile 44                   |
| Swelio.Engine.EIDIdentity.nationalNumber 33                 | Swelio.Engine.FileOperations.DeleteToRecycleBin 44           |
| Swelio.Engine.EIDIdentity.nobleCondition 33                 | Swelio.Engine.FileOperations.DirectoryExists 45              |
| Swelio.Engine.EIDIdentity.regionalFileNumber 33             | Swelio.Engine.FileOperations.ExcludeTrailingPathDelimiter 45 |
| Swelio.Engine.EIDIdentity.sex 34                            | Swelio.Engine.FileOperations.FileExists 45                   |
| Swelio.Engine.EIDIdentity.specialOrganization 34            | Swelio.Engine.FileOperations.FileExtensionIs 45              |
| Swelio.Engine.EIDIdentity.validityDateBegin 34              | Swelio.Engine.FileOperations.FileIsAnimatedGif 45            |
| Swelio.Engine.EIDIdentity.validityDateEnd 34                | Swelio.Engine.FileOperations.FileIsExe 45                    |
| Swelio.Engine.EIDIdentity.vat1 34                           | Swelio.Engine.FileOperations.FileIsIcon 46                   |
| Swelio.Engine.EIDIdentity.vat2 34                           | Swelio.Engine.FileOperations.FileIsImage 46                  |
| Swelio.Engine.EIDIdentity.whiteCane 35                      | Swelio.Engine.FileOperations.FileIsLink 46                   |
| Swelio.Engine.EIDIdentity.workPermitType 35                 | Swelio.Engine.FileOperations.FileOrFolderExists 46           |
| Swelio.Engine.EIDIdentity.yellowCane 35                     | Swelio.Engine.FileOperations.FullPath 46                     |
| Swelio.Engine.EIDPicture 35                                 | Swelio.Engine.FileOperations.GetExtension 47                 |
| Swelio.Engine.EIDPicture.picture 36                         | Swelio.Engine.FileOperations.GetFilesCount 47                |
| Swelio.Engine.EIDPicture.pictureLength 36                   | Swelio.Engine.FileOperations.GetFileSize 47                  |
| Swelio.Engine.Encryption 36                                 | Swelio.Engine.FileOperations.IncludeTrailingPathDelimiter 47 |
| Swelio.Engine.Encryption.CheckFileMD5 37                    | Swelio.Engine.FileOperations.IsDirectory 47                  |
| Swelio.Engine.Encryption.CheckFileSHA1 37                   | Swelio.Engine.FileOperations.IsUnicodeFile 48                |
| Swelio.Engine.Encryption.CheckMD5 37, 38                    | Swelio.Engine.FileOperations.IsValidFileName 48              |
| Swelio.Engine.Encryption.CheckSHA1 38                       | Swelio.Engine.FileOperations.IsValidPathName 48              |
| Swelio.Engine.Encryption.DecryptFile 38, 39                 | Swelio.Engine.FileOperations.RenameFile 48                   |
| Swelio.Engine.Encryption.EncryptFile 39                     | Swelio.Engine.FileOperations.ShellCopyFile 48                |
| Swelio.Engine.Encryption.GenerateAuthenticationSignature 39 | Swelio.Engine.FileOperations.StripFileName 48                |
| Swelio.Engine.Encryption.GenerateNonRepudiationSignature 40 | Swelio.Engine.FileOperations.UnExpandPath 49                 |
| Swelio.Engine.Encryption.GetFileMD5 40                      | Swelio.Engine.Gender 108                                     |
| Swelio.Engine.Encryption.GetFileSHA1 40                     | Swelio.Engine.Gender enumeration 108                         |
| Swelio.Engine.Encryption.GetMD5 40, 41                      | Swelio.Engine.Identity 49                                    |
| Swelio.Engine.Encryption.GetSHA1 41                         | Swelio.Engine.Identity.BirthDate 51                          |
| Swelio.Engine.Encryption.VerifySignature 41                 | Swelio.Engine.Identity.BirthLocation 51                      |
| Swelio.Engine.ErrorCorrectionLevel 107                      | Swelio.Engine.Identity.BrexitMention1 51                     |
| Swelio.Engine.ErrorCorrectionLevel enumeration 107          | Swelio.Engine.Identity.BrexitMention2 51                     |
| Swelio.Engine.ExportFormat 107                              | Swelio.Engine.Identity.CardNumber 52                         |
| Swelio.Engine.ExportFormat enumeration 107                  | Swelio.Engine.Identity.ChipNumber 52                         |
| Swelio.Engine.FileEncoding 107                              | Swelio.Engine.Identity.Clear 51                              |
|   | Swelio.Engine.Identity.DateAndCountryOfProtection 52         |

|   |   |
|---|---|
| Swelio.Engine.Identity.DocumentType 52            | Swelio.Engine.Manager.CardInserted 64                   |
| Swelio.Engine.Identity.Duplicate 52               | Swelio.Engine.Manager.CardRemoved 64                    |
| Swelio.Engine.Identity.ExtendedMinority 52        | Swelio.Engine.Manager.Dispose 61                        |
| Swelio.Engine.Identity.FirstName1 53              | Swelio.Engine.Manager.GetReader 61, 62                  |
| Swelio.Engine.Identity.FirstName2 53              | Swelio.Engine.Manager.GetReaderName 62                  |
| Swelio.Engine.Identity.MemberOfFamily 53          | Swelio.Engine.Manager.ListReaders 62                    |
| Swelio.Engine.Identity.Municipality 53            | Swelio.Engine.Manager.Manager 61                        |
| Swelio.Engine.Identity.Nationality 53             | Swelio.Engine.Manager.ReaderCount 63                    |
| Swelio.Engine.Identity.NationalityISO 53          | Swelio.Engine.Manager.ReadersListChanged 64             |
| Swelio.Engine.Identity.NationalNumber 54          | Swelio.Engine.Manager.ReloadReadersList 62              |
| Swelio.Engine.Identity.NobleCondition 54          | Swelio.Engine.Manager.SendAPDU 62                       |
| Swelio.Engine.Identity.RegionalFileNumber 54      | Swelio.Engine.Manager.SetDefaultReader 62               |
| Swelio.Engine.Identity.Sex 54                     | Swelio.Engine.Manager.TraceEvents 63                    |
| Swelio.Engine.Identity.SpecialOrganization 54     | Swelio.Engine.Manager.TraceHardwareEvents 63            |
| Swelio.Engine.Identity.Surname 54                 | Swelio.Engine.Manager.TraceServiceEvents 63             |
| Swelio.Engine.Identity.ValidityDateBegin 54       | Swelio.Engine.NationalNumber 64                         |
| Swelio.Engine.Identity.ValidityDateEnd 55         | Swelio.Engine.NationalNumber.ToString 65                |
| Swelio.Engine.Identity.Vat1 55                    | Swelio.Engine.NativeMethods 65                          |
| Swelio.Engine.Identity.Vat2 55                    | Swelio.Engine.NativeMethods.ActivateCardEx 73           |
| Swelio.Engine.Identity.WhiteCane 55               | Swelio.Engine.NativeMethods.AddFileToContainer 73       |
| Swelio.Engine.Identity.WorkPermitType 55          | Swelio.Engine.NativeMethods.CardDecryptFile 73          |
| Swelio.Engine.Identity.YellowCane 55              | Swelio.Engine.NativeMethods.CardEncryptFile 74          |
| Swelio.Engine.InteropHelper 56                    | Swelio.Engine.NativeMethods.CardSignCadesT 74           |
| Swelio.Engine.InteropHelper.ClearUnusedMemory 57  | Swelio.Engine.NativeMethods.CardSignCadesTEx 74         |
| Swelio.Engine.InteropHelper.GetStartup 57         | Swelio.Engine.NativeMethods.CardSignCMS 74              |
| Swelio.Engine.InteropHelper.IsMediaCenter 58      | Swelio.Engine.NativeMethods.CardSignCMSEx 74            |
| Swelio.Engine.InteropHelper.IsMultiTouchReady 58  | Swelio.Engine.NativeMethods.CertSignCadesT 74           |
| Swelio.Engine.InteropHelper.IsTabletPC 58         | Swelio.Engine.NativeMethods.CertSignCadesTData 75       |
| Swelio.Engine.InteropHelper.MetroActive 59        | Swelio.Engine.NativeMethods.CertSignCadesTEx 75         |
| Swelio.Engine.InteropHelper.RunningOnVista 59     | Swelio.Engine.NativeMethods.CertSignCMS 75              |
| Swelio.Engine.InteropHelper.RunningOnWin10 59     | Swelio.Engine.NativeMethods.CertSignCMSData 75          |
| Swelio.Engine.InteropHelper.RunningOnWin7 59      | Swelio.Engine.NativeMethods.CertSignCMSEx 75            |
| Swelio.Engine.InteropHelper.RunningOnWin8 59      | Swelio.Engine.NativeMethods.CheckMD5 75                 |
| Swelio.Engine.InteropHelper.RunningOnXP 59        | Swelio.Engine.NativeMethods.CheckSHA1 76                |
| Swelio.Engine.InteropHelper.SetStartup 57         | Swelio.Engine.NativeMethods.ClearFileAttributes 76      |
| Swelio.Engine.InteropHelper.ShowScreenKeyboard 57 | Swelio.Engine.NativeMethods.ClearUnusedMemory 76        |
| Swelio.Engine.InteropHelper.ShowWindowsError 58   | Swelio.Engine.NativeMethods.ContainerCertificate 76     |
| Swelio.Engine.InteropHelper.TurnMonitorOff 58     | Swelio.Engine.NativeMethods.ContainerEidCertificate 76  |
| Swelio.Engine.InteropHelper.TurnMonitorOn 58      | Swelio.Engine.NativeMethods.ContainerPickCertificate 76 |
| Swelio.Engine.Manager 60                          | Swelio.Engine.NativeMethods.CreateCardBuffer 77         |
| Swelio.Engine.Manager.Active 63                   | Swelio.Engine.NativeMethods.CreateUnicodeFile 77        |



|  |   |
|--|---|
| Swelio.Engine.NativeMethods.CurrentIPAddress 77                  | Swelio.Engine.NativeMethods.GetFileSHA1 83            |
| Swelio.Engine.NativeMethods.DeactivateCardEx 77                  | Swelio.Engine.NativeMethods.GetHBitmap 84             |
| Swelio.Engine.NativeMethods.DecryptFileAES 77                    | Swelio.Engine.NativeMethods.GetISOCODE 84             |
| Swelio.Engine.NativeMethods.DeleteCardBuffer 77                  | Swelio.Engine.NativeMethods.GetMD5 84                 |
| Swelio.Engine.NativeMethods.DeleteObject 78                      | Swelio.Engine.NativeMethods.GetReaderIndex 84         |
| Swelio.Engine.NativeMethods.DeleteToRecycleBin 78                | Swelio.Engine.NativeMethods.GetReaderName 84          |
| Swelio.Engine.NativeMethods.DirectoryExists 78                   | Swelio.Engine.NativeMethods.GetReaderNameLen 84       |
| Swelio.Engine.NativeMethods.DisplayCertificate 78                | Swelio.Engine.NativeMethods.GetReadersCount 85        |
| Swelio.Engine.NativeMethods.EmptyRecycleBin 78                   | Swelio.Engine.NativeMethods.GetSelectedReaderIndex 85 |
| Swelio.Engine.NativeMethods.EncodeCertificate 78                 | Swelio.Engine.NativeMethods.GetSHA1 85                |
| Swelio.Engine.NativeMethods.EncodePhoto 79                       | Swelio.Engine.NativeMethods.GetStartup 85             |
| Swelio.Engine.NativeMethods.EncryptFileAES 79                    | Swelio.Engine.NativeMethods.HibernateWindows 85       |
| Swelio.Engine.NativeMethods.FileCopy 79                          | Swelio.Engine.NativeMethods.IgnoreHardwareEvents 85   |
| Swelio.Engine.NativeMethods.FileDelete 79                        | Swelio.Engine.NativeMethods.IgnoreServiceEvents 86    |
| Swelio.Engine.NativeMethods.FileExists 79                        | Swelio.Engine.NativeMethods.InitializeContainer 86    |
| Swelio.Engine.NativeMethods.FileExtensionIs 79                   | Swelio.Engine.NativeMethods.IsAnimatedGIF 86          |
| Swelio.Engine.NativeMethods.FileGetSize 80                       | Swelio.Engine.NativeMethods.IsCardActivatedEx 86      |
| Swelio.Engine.NativeMethods.FileIsExe 80                         | Swelio.Engine.NativeMethods.IsCardPresentEx 86        |
| Swelio.Engine.NativeMethods.FileIsIcon 80                        | Swelio.Engine.NativeMethods.IsCardStillInsertedEx 86  |
| Swelio.Engine.NativeMethods.FileIsImage 80                       | Swelio.Engine.NativeMethods.IsConnectedToInternet 87  |
| Swelio.Engine.NativeMethods.FileIsLink 80                        | Swelio.Engine.NativeMethods.IsDirectory 87            |
| Swelio.Engine.NativeMethods.FileOrFolderExists 80                | Swelio.Engine.NativeMethods.IsEIDCardEx 87            |
| Swelio.Engine.NativeMethods.FileRename 81                        | Swelio.Engine.NativeMethods.IsEngineActive 87         |
| Swelio.Engine.NativeMethods.FreeContainer 81                     | Swelio.Engine.NativeMethods.IsMale 87                 |
| Swelio.Engine.NativeMethods.FullPath 81                          | Swelio.Engine.NativeMethods.IsMediaCenter 87          |
| Swelio.Engine.NativeMethods.GenerateAuthenticationSignatureEx 81 | Swelio.Engine.NativeMethods.IsMetroActive 88          |
| Swelio.Engine.NativeMethods.GenerateBMP 81                       | Swelio.Engine.NativeMethods.IsMultiTouchReady 88      |
| Swelio.Engine.NativeMethods.GenerateNonRepudiationSignatureEx 81 | Swelio.Engine.NativeMethods.IsTabletPC 88             |
| Swelio.Engine.NativeMethods.GeneratePNG 82                       | Swelio.Engine.NativeMethods.IsUnicodeFile 88          |
| Swelio.Engine.NativeMethods.GenerateQRCodeEx 82                  | Swelio.Engine.NativeMethods.IsValidFileName 88        |
| Swelio.Engine.NativeMethods.GetCardBufferA 82                    | Swelio.Engine.NativeMethods.IsValidPathName 88        |
| Swelio.Engine.NativeMethods.GetCardBufferSize 82                 | Swelio.Engine.NativeMethods.IsWindows10 89            |
| Swelio.Engine.NativeMethods.GetCardBufferW 82                    | Swelio.Engine.NativeMethods.IsWindows7 89             |
| Swelio.Engine.NativeMethods.GetCardSerialNumber 82               | Swelio.Engine.NativeMethods.IsWindows8 89             |
| Swelio.Engine.NativeMethods.GetCardVersion 83                    | Swelio.Engine.NativeMethods.IsWindowsVista 89         |
| Swelio.Engine.NativeMethods.GetEncodedCertificateSize 83         | Swelio.Engine.NativeMethods.IsWindowsXP 89            |
| Swelio.Engine.NativeMethods.GetEncodedPhotoSize 83               | Swelio.Engine.NativeMethods.IsWOW64 89                |
| Swelio.Engine.NativeMethods.GetFileMD5 83                        | Swelio.Engine.NativeMethods.LoadCertificate 90        |
| Swelio.Engine.NativeMethods.GetFilesCount 83                     | Swelio.Engine.NativeMethods.LoadPhoto 90              |
|  | Swelio.Engine.NativeMethods.PathUnExpandEnvStrings 90 |
|  | Swelio.Engine.NativeMethods.PortAvailable 90          |



|  |  |
|--|--|
| Swelio.Engine.NativeMethods.ReadAddressEx 90                   | Swelio.Engine.NativeMethods.ShowError 96       |
| Swelio.Engine.NativeMethods.ReadAuthenticationCertificate 90   | Swelio.Engine.NativeMethods.ShutdownWindows 96 |
| Swelio.Engine.NativeMethods.ReadCaCertificate 91               | Swelio.Engine.NativeMethods.StartEngine 96     |
| Swelio.Engine.NativeMethods.ReadIdentityEx 91                  | Swelio.Engine.NativeMethods.StopEngine 96      |
| Swelio.Engine.NativeMethods.ReadNonRepudiationCertificate 91   | Swelio.Engine.NativeMethods.StripFileName 97   |
| Swelio.Engine.NativeMethods.ReadPhotoEx 91                     | Swelio.Engine.NativeMethods.SuspendWindows 97  |
| Swelio.Engine.NativeMethods.ReadRootCaCertificate 91           | Swelio.Engine.NativeMethods.TurnMonitorOff 97  |
| Swelio.Engine.NativeMethods.ReadRrnCertificate 91              | Swelio.Engine.NativeMethods.TurnMonitorOn 97   |
| Swelio.Engine.NativeMethods.RecycleBinEmpty 92                 | Swelio.Engine.NativeMethods.VerifyPinEx 97     |
| Swelio.Engine.NativeMethods.ReloadReadersList 92               | Swelio.Engine.NativeMethods.VerifySignature 97 |
| Swelio.Engine.NativeMethods.RemoveCallback 92                  | Swelio.Engine.Network 98                       |
| Swelio.Engine.NativeMethods.RemoveStartup 92                   | Swelio.Engine.Network.CurrentIPAddress 99      |
| Swelio.Engine.NativeMethods.SaveAuthenticationCertificateEx 92 | Swelio.Engine.Network.IsConnectedToInternet 99 |
| Swelio.Engine.NativeMethods.SaveCaCertificateEx 92             | Swelio.Engine.Network.PortAvailable 98         |
| Swelio.Engine.NativeMethods.SaveCardToToXMLStreamExA 93        | Swelio.Engine.PhotoFormat 108                  |
| Swelio.Engine.NativeMethods.SaveCardToToXMLStreamExW 93        | Swelio.Engine.PhotoFormat enumeration 108      |
| Swelio.Engine.NativeMethods.SaveCardToXmlEx 93                 | Swelio.Engine.PostalAddress 99                 |
| Swelio.Engine.NativeMethods.SaveCardToXmlExAnsi 93             | Swelio.Engine.PostalAddress.House 100          |
| Swelio.Engine.NativeMethods.SaveContainer 93                   | Swelio.Engine.PostalAddress.Municipality 100   |
| Swelio.Engine.NativeMethods.SaveNonRepudiationCertificateEx 93 | Swelio.Engine.PostalAddress.PostalAddress 100  |
| Swelio.Engine.NativeMethods.SavePersonCsvToStreamA 94          | Swelio.Engine.PostalAddress.Street 100         |
| Swelio.Engine.NativeMethods.SavePersonCsvToStreamW 94          | Swelio.Engine.PostalAddress.Zip 100            |
| Swelio.Engine.NativeMethods.SavePersonToCsvEx 94               | Swelio.Engine.QRCode 101                       |
| Swelio.Engine.NativeMethods.SavePersonToCsvExAnsi 94           | Swelio.Engine.QRCode.GenerateBitmap 101        |
| Swelio.Engine.NativeMethods.SavePhotoAsBitmapEx 94             | Swelio.Engine.QRCode.GeneratePng 102           |
| Swelio.Engine.NativeMethods.SavePhotoAsJpegEx 94               | Swelio.Engine.QRCode.GetBitmap 102             |
| Swelio.Engine.NativeMethods.SaveRootCaCertificateEx 95         | Swelio.Engine.ReaderCallbackDelegate 109       |
| Swelio.Engine.NativeMethods.SaveRrnCertificateEx 95            | Swelio.Engine.ReaderCallbackDelegate type 109  |
| Swelio.Engine.NativeMethods.SelectReader 95                    | Swelio.Engine.RecycleBin 103                   |
| Swelio.Engine.NativeMethods.SelectReaderByName 95              | Swelio.Engine.RecycleBin.Clear 104             |
| Swelio.Engine.NativeMethods.SendAPDU 95                        | Swelio.Engine.RecycleBin.IsEmpty 104           |
| Swelio.Engine.NativeMethods.SetCallback 95                     | Swelio.Engine.RecycleBin.Send 104              |
| Swelio.Engine.NativeMethods.SetStartup 96                      | Swelio.Engine.RecycleBin.SendSilent 104        |
| Swelio.Engine.NativeMethods.ShellCopyFile 96                   | Swelio.Engine.ShutdownOption 108               |
|  | Swelio.Engine.ShutdownOption enumeration 108   |
|  | Swelio.Engine.WindowsOperations 104            |
|  | Swelio.Engine.WindowsOperations.Hibernate 105  |
|  | Swelio.Engine.WindowsOperations.Shutdown 105   |
|  | Swelio.Engine.WindowsOperations.Suspend 105    |

## U

Unknown enumeration member 106

UnknownEvent enumeration member 105

Utf16 enumeration member 107

Utf8 enumeration member 107

## W

WindowsOperations class 104

- about WindowsOperations class 104

- Hibernate 105

- Shutdown 105

- Suspend 105

WindowsOperations.cs 118

## X

Xml enumeration member 107