

Swelio

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a

1 Symbol Reference





1.1 Swelio.Engine Namespace







This is namespace Swelio.Engine.

Classes

	Name	Description
	Address (see page 2)	Represents a postal address of the person
	Card (see page 3)	This class represents a Belgian EID card
	CardDate (see page 10)	Handles dates conversion between internal EID format and YYYYMMDD format
	CardEventArgs (see page 11)	This is class Swelio.Engine.CardEventArgs.
	CardNumber (see page 12)	EID card number formatter. This class takes EID card number in raw form as input and return formatted EID card number
	CardReader (see page 13)	The physical smart card (see page 15) reader
	EIDAddress (see page 17)	EID address information, stored on the card
	EIDCertificate (see page 18)	Certificate, stored on EID card
	EIDDataLength (see page 19)	Maximum length of EID fields
	EIDIdentity (see page 23)	Identity (see page 40) information stored on EID card
	EIDPicture (see page 27)	Raw picture (see page 27) data from EID card
	Encryption (see page 28)	
	FileOperations (see page 33)	Helper class for common file oprations
	Identity (see page 40)	Holds identity information that is stored on EID card
	InteropHelper (see page 45)	Helper class for accessing native Windows API and resources Not recommended to use it directly without deep understanding of Windows API
	Manager (see page 49)	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 (see page 53)	National number formatter
	NativeMethods (see page 54)	This is class Swelio.Engine.NativeMethods.
	Network (see page 82)	This is class Swelio.Engine.Network.
	QRCode (see page 83)	QR Code encoder class
	RecycleBin (see page 86)	Send (see page 87) files directly to the recycle bin.
	WindowsOperations (see page 87)	Windows power management class

Enumerations

	Name	Description
	CardEvent (see page 88)	The code of the card event
	CertificateType (see page 89)	This is record Swelio.Engine.CertificateType.
	ChangeWindowMessageFilterFlags (see page 89)	This is record Swelio.Engine.ChangeWindowMessageFilterFlags.
	DocumentType (see page 89)	This is record Swelio.Engine.DocumentType.

	ErrorCorrectionLevel (see page 90)	This is record Swelio.Engine.ErrorCorrectionLevel.
	ExportFormat (see page 90)	This is record Swelio.Engine.ExportFormat.
	FileEncoding (see page 90)	This is record Swelio.Engine.FileEncoding.
	Gender (see page 91)	This is record Swelio.Engine.Gender.
	PhotoFormat (see page 91)	This is record Swelio.Engine.PhotoFormat.
	ShutdownOption (see page 91)	Windows shutdown options

Types

Name	Description
ReaderCallbackDelegate (see page 92)	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 95](#))

Members


Methods

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

Address Properties

	Name	Description
	Municipality (see page 3)	Municipality
	Street (see page 3)	Street name
	Zip (see page 3)	ZIP code

Methods

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

Address Properties

	Name	Description
	Municipality (see page 3)	Municipality
	Street (see page 3)	Street name
	Zip (see page 3)	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 Properties

1.1.1.2.1 Address.Municipality Property

Municipality

C#

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

1.1.1.2.2 Address.Street Property

Street name

C#

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

1.1.1.2.3 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 96)





Members**Methods**

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


Card Methods

	Name	Description
	DisplayCertificate (see page 5)	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 6)	Encodes the photo.
	ReadAddress (see page 6)	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 7)	Reads the photo.
	Save (see page 7)	Saves information from the card to the string.
	SaveCertificate (see page 8)	Saves the certificate.
	SavePhoto (see page 8)	Saves the photo.
	SaveQRCode (see page 8)	Saves the QR code.
	VerifyPinCode (see page 9)	Verifies the pin code.













Card Properties

	Name	Description
	EidCard (see page 9)	Gets a value indicating whether the card is eid card.
	Inserted (see page 9)	Gets a value indicating whether the Card is inserted in the card reader.
	SerialNumber (see page 9)	This is SerialNumber, a member of class Card.
	Tag (see page 9)	This is Tag, a member of class Card.

Methods





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

Card Methods

	Name	Description
	DisplayCertificate (see page 5)	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 6)	Encodes the photo.
	ReadAddress (see page 6)	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 7)	Reads the photo.
	Save (see page 7)	Saves information from the card to the string.
	SaveCertificate (see page 8)	Saves the certificate.
	SavePhoto (see page 8)	Saves the photo.
	SaveQRCode (see page 8)	Saves the QR code.

	VerifyPinCode (see page 9)	Verifies the pin code.
---	--	------------------------

Card Properties

	Name	Description
	EidCard (see page 9)	Gets a value indicating whether the card is eid card.
	Inserted (see page 9)	Gets a value indicating whether the Card is inserted in the card reader.
	SerialNumber (see page 9)	This is SerialNumber, a member of class Card.
	Tag (see page 9)	This is Tag, a member of class Card.

1.1.2.1 Card.Card Constructor

Initializes a new instance of the Card ([see page 3](#)) 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; 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.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.

1.1.2.3.2 Card.Inserted Property

Gets a value indicating whether the Card ( see page 3) is inserted in the card reader.

C#

```
public bool Inserted;
```

Description

true if inserted; otherwise, false.

1.1.2.3.3 Card.SerialNumber Property

C#

```
public string SerialNumber;
```

Remarks

This is SerialNumber, a member of class Card.

1.1.2.3.4 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 96)

Members

CardDate Methods

	Name	Description
💎💰💵	ToDate (see page 10)	Converts from the internal EID representation to System.DateTime
💎💰💵	ToLongDateString (see page 11)	Converts the value from YYYYMMDD format to its equivalent long date string representation
💎💰💵	ToShortDateString (see page 11)	Converts the value from YYYYMMDD format to its equivalent short date string representation

CardDate Methods

	Name	Description
💎💰💵	ToDate (see page 10)	Converts from the internal EID representation to System.DateTime
💎💰💵	ToLongDateString (see page 11)	Converts the value from YYYYMMDD format to its equivalent long date string representation
💎💰💵	ToShortDateString (see page 11)	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.ToDate 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

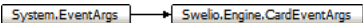
Parameters	Description
string date	The date.

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 96)

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
	ReaderNumber (see page 12)	Gets the reader number.

Methods

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

CardEventArgs Properties

	Name	Description
	ReaderNumber (see page 12)	Gets the reader number.

1.1.4.1 CardEventArgs.CardEventArgs Constructor

Initializes a new instance of the CardEventArgs (see page 11) 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;
```

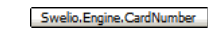
Description

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 97)

Members

CardNumber Methods

	Name	Description
	<code>ToString</code> (see page 13)	Converts the value of the card number to its String representation

CardNumber Methods

	Name	Description
	<code>ToString</code> (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 97](#))

Members





Methods

	Name	Description
	<code>CardReader</code> (see page 14)	Initializes a new instance of the CardReader class.







CardReader Fields

	Name	Description
	<code>card</code> (see page 15)	This is card, a member of class CardReader.

CardReader Methods

	Name	Description
	ActivateCard (see page 15)	Activates the card (see page 15).
	DeactivateCard (see page 15)	Deactivates the card (see page 15).
	Dispose (see page 15)	Performs application-defined tasks associated with freeing, releasing, or resetting unmanaged resources.
	GetCard (see page 16)	Gets the card (see page 15).


CardReader Properties

	Name	Description
	CardActivated (see page 16)	Gets a value indicating whether [card (see page 15) activated].
	CardPresent (see page 16)	Gets a value indicating whether [card (see page 15) present].
	Index (see page 16)	Gets the index of the smart card (see page 15) reader.
	Name (see page 16)	Gets the name of the smart card (see page 15) reader.
	Selected (see page 17)	Gets a value indicating whether this CardReader is selected.
	Tag (see page 17)	Gets or sets the tag.





Methods

	Name	Description
	CardReader (see page 14)	Initializes a new instance of the CardReader class.







CardReader Fields

	Name	Description
	card (see page 15)	This is card, a member of class CardReader.

CardReader Methods

	Name	Description
	ActivateCard (see page 15)	Activates the card (see page 15).
	DeactivateCard (see page 15)	Deactivates the card (see page 15).
	Dispose (see page 15)	Performs application-defined tasks associated with freeing, releasing, or resetting unmanaged resources.
	GetCard (see page 16)	Gets the card (see page 15).

CardReader Properties

	Name	Description
	CardActivated (see page 16)	Gets a value indicating whether [card (see page 15) activated].
	CardPresent (see page 16)	Gets a value indicating whether [card (see page 15) present].
	Index (see page 16)	Gets the index of the smart card (see page 15) reader.
	Name (see page 16)	Gets the name of the smart card (see page 15) reader.
	Selected (see page 17)	Gets a value indicating whether this CardReader is selected.
	Tag (see page 17)	Gets or sets the tag.

1.1.6.1 CardReader.CardReader Constructor

Initializes a new instance of the CardReader ([see page 13](#)) 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; 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 13](#)) 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.

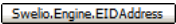
```
C#
public int Tag;
```

Description
The tag.

1.1.7 EIDAddress Class

EID address information, stored on the card

Inheritance Hierarchy



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

File
NativeTypes.cs ([see page 100](#))

Members

EIDAddress Fields

	Name	Description
	municipality (see page 18)	Municipality
	street (see page 18)	Street name
	zip (see page 18)	ZIP code

EIDAddress Fields

	Name	Description
	municipality (see page 18)	Municipality
	street (see page 18)	Street name
	zip (see page 18)	ZIP code

1.1.7.1 EIDAddress Fields

1.1.7.1.1 EIDAddress.municipality Field

Municipality

C#

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

1.1.7.1.2 EIDAddress.street Field

Street name

C#

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

1.1.7.1.3 EIDAddress.zip Field

ZIP code

C#

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

1.1.8 EIDCertificate Class

Certificate, stored on EID card

Inheritance Hierarchy

Swelio.Engine.EIDCertificate

C#



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

File



NativeTypes.cs (see page 100)

Members

EIDCertificate Fields

	Name	Description
	certificate (see page 19)	Certificate raw data buffer
	certificateLength (see page 19)	Certificate data length

EIDCertificate Fields

	Name	Description
	certificate (see page 19)	Certificate raw data buffer
	certificateLength (see page 19)	Certificate data length

1.1.8.1 EIDCertificate Fields

1.1.8.1.1 EIDCertificate.certificate Field

Certificate raw data buffer

C#

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

1.1.8.1.2 EIDCertificate.certificateLength Field

Certificate data length

C#

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

1.1.9 EIDDataLength Class

Maximum length of EID fields

Inheritance Hierarchy

Swelio.Engine.EIDDataLength

C#



















```
internal static class EIDDataLength;
```




File

NativeTypes.cs ([see page 100](#))






















Members

EIDDataLength Fields

	Name	Description
	EidMaxBirthDateLen (see page 20)	Max length of the birthdate
	EidMaxBirthplaceLen (see page 20)	Max length of the birthplace
	EidMaxCardNumberLen (see page 20)	Max length of the card number field
	EidMaxCertLen (see page 21)	Max length of the certificate data
	EidMaxChipNumberLen (see page 21)	Max length of the chip number field
	EidMaxDateBeginLen (see page 21)	Max length of the begin date field
	EidMaxDateEndLen (see page 21)	Max length of the end date field
	EidMaxDeliveryMunicipalityLen (see page 21)	Max length of the name of the delivery municipality
	EidMaxDocumentTypeLen (see page 21)	Max length of the document type field
	EidMaxFirstNameLen (see page 21)	Max length of the first name
	EidMaxMiddleNameLen (see page 21)	Max length of the first name
	EidMaxMunicipalityName (see page 22)	Max length of the municipality name field
	EidMaxNameLen (see page 22)	Max length of the surname
	EidMaxNationalityLen (see page 22)	Max length of the nationality
	EidMaxNationalNumberLen (see page 22)	Max length of the national number
	EidMaxNobleConditionLen (see page 22)	Max length of the noble condition field
	EidMaxPictureLen (see page 22)	Max length of the picture data
	EidMaxSexLen (see page 22)	Max length of the sex field

	EidMaxSpecialStatusLen (see page 22)	Max length of the special status field
	EidMaxStreetNameLen (see page 23)	Max length of the street name field
	EidMaxZipLen (see page 23)	Max length of the ZIP code field

EIDDataLength Fields

	Name	Description
	EidMaxBirthDateLen (see page 20)	Max length of the birthdate
	EidMaxBirthplaceLen (see page 20)	Max length of the birthplace
	EidMaxCardNumberLen (see page 20)	Max length of the card number field
	EidMaxCertLen (see page 21)	Max length of the certificate data
	EidMaxChipNumberLen (see page 21)	Max length of the chip number field
	EidMaxDateBeginLen (see page 21)	Max length of the begin date field
	EidMaxDateEndLen (see page 21)	Max length of the end date field
	EidMaxDeliveryMunicipalityLen (see page 21)	Max length of the name of the delivery municipality
	EidMaxDocumentTypeLen (see page 21)	Max length of the document type field
	EidMaxFirstNameLen (see page 21)	Max length of the first name
	EidMaxMiddleNameLen (see page 21)	Max length of the first name
	EidMaxMunicipalityName (see page 22)	Max length of the municipality name field
	EidMaxNameLen (see page 22)	Max length of the surname
	EidMaxNationalityLen (see page 22)	Max length of the nationality
	EidMaxNationalNumberLen (see page 22)	Max length of the national number
	EidMaxNobleConditionLen (see page 22)	Max length of the noble condition field
	EidMaxPictureLen (see page 22)	Max length of the picture data
	EidMaxSexLen (see page 22)	Max length of the sex field
	EidMaxSpecialStatusLen (see page 22)	Max length of the special status field
	EidMaxStreetNameLen (see page 23)	Max length of the street name field
	EidMaxZipLen (see page 23)	Max length of the ZIP code field

1.1.9.1 EIDDataLength Fields

1.1.9.1.1 EIDDataLength.EidMaxBirthDateLen Field

Max length of the birthdate

C#

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

1.1.9.1.2 EIDDataLength.EidMaxBirthplaceLen Field

Max length of the birthplace

C#

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

1.1.9.1.3 EIDDataLength.EidMaxCardNumberLen Field

Max length of the card number field

C#

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

1.1.9.1.4 EIDDataLength.EidMaxCertLen Field

Max length of the certificate data

C#

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

1.1.9.1.5 EIDDataLength.EidMaxChipNumberLen Field

Max length of the chip number field

C#

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

1.1.9.1.6 EIDDataLength.EidMaxDateBeginLen Field

Max length of the begin date field

C#

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

1.1.9.1.7 EIDDataLength.EidMaxDateEndLen Field

Max length of the end date field

C#

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

1.1.9.1.8 EIDDataLength.EidMaxDeliveryMunicipalityLen Field

Max length of the name of the delivery municipality

C#

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

1.1.9.1.9 EIDDataLength.EidMaxDocumentTypeLen Field

Max length of the document type field

C#

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

1.1.9.1.10 EIDDataLength.EidMaxFirstNameLen Field

Max length of the first name

C#

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

1.1.9.1.11 EIDDataLength.EidMaxMiddleNameLen Field

Max length of the first name

C#

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

1.1.9.1.12 EIDDDataLength.EidMaxMunicipalityName Field

Max length of the municipality name field

C#

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

1.1.9.1.13 EIDDDataLength.EidMaxNameLen Field

Max length of the surname

C#

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

1.1.9.1.14 EIDDDataLength.EidMaxNationalityLen Field

Max length of the nationality

C#

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

1.1.9.1.15 EIDDDataLength.EidMaxNationalNumberLen Field

Max length of the national number

C#

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

1.1.9.1.16 EIDDDataLength.EidMaxNobleConditionLen Field

Max length of the noble condition field

C#

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

1.1.9.1.17 EIDDDataLength.EidMaxPictureLen Field

Max length of the picture data

C#

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

1.1.9.1.18 EIDDDataLength.EidMaxSexLen Field

Max length of the sex field

C#

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

1.1.9.1.19 EIDDDataLength.EidMaxSpecialStatusLen Field

Max length of the special status field

C#

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

1.1.9.1.20 EIDDataLength.EidMaxStreetNameLen Field

Max length of the street name field

C#

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

1.1.9.1.21 EIDDataLength.EidMaxZipLen Field

Max length of the ZIP code field

C#

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

1.1.10 EIDIdentity Class

Identity ([↗](#) see page 40) 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 100)



















Members

EIDIdentity Fields

	Name	Description
	birthDate (↗ see page 24)	Birth date
	birthLocation (↗ see page 24)	Birth location
	cardNumber (↗ see page 24)	Electronic ID card number
	chipNumber (↗ see page 25)	Electronic ID card physical chip number
	documentType (↗ see page 25)	Document type (Belgian citizen, European Community citizen, ...)
	extendedMinority (↗ see page 25)	Extended minority
	firstName1 (↗ see page 25)	First name (↗ see page 25)
	firstName2 (↗ see page 25)	First name (↗ see page 25)
	municipality (↗ see page 25)	Card (↗ see page 3) delivery municipality
	name (↗ see page 25)	Surname
	nationality (↗ see page 26)	Nationality
	nationalNumber (↗ see page 26)	National number
	nobleCondition (↗ see page 26)	Noble condition
	sex (↗ see page 26)	Sex
	validityDateBegin (↗ see page 26)	Card (↗ see page 3) validity date begin
	validityDateEnd (↗ see page 26)	Card (↗ see page 3) validity date end
	whiteCane (↗ see page 26)	White cane allowed (blind people)

	yellowCane (see page 27)	Yellow cane allowed (partially sighted people)
---	--	--

EIDIdentity Fields

	Name	Description
	birthDate (see page 24)	Birth date
	birthLocation (see page 24)	Birth location
	cardNumber (see page 24)	Electronic ID card number
	chipNumber (see page 25)	Electronic ID card physical chip number
	documentType (see page 25)	Document type (Belgian citizen, European Community citizen, ...)
	extendedMinority (see page 25)	Extended minority
	firstName1 (see page 25)	First name (see page 25)
	firstName2 (see page 25)	First name (see page 25)
	municipality (see page 25)	Card (see page 3) delivery municipality
	name (see page 25)	Surname
	nationality (see page 26)	Nationality
	nationalNumber (see page 26)	National number
	nobleCondition (see page 26)	Noble condition
	sex (see page 26)	Sex
	validityDateBegin (see page 26)	Card (see page 3) validity date begin
	validityDateEnd (see page 26)	Card (see page 3) validity date end
	whiteCane (see page 26)	White cane allowed (blind people)
	yellowCane (see page 27)	Yellow cane allowed (partially sighted people)

1.1.10.1 EIDIdentity Fields**1.1.10.1.1 EIDIdentity.birthDate Field**

Birth date

C#

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

1.1.10.1.2 EIDIdentity.birthLocation Field

Birth location

C#

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

1.1.10.1.3 EIDIdentity.cardNumber Field

Electronic ID card number

C#

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

1.1.10.1.4 EIDIdentity.chipNumber Field

Electronic ID card physical chip number

C#

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

1.1.10.1.5 EIDIdentity.documentType Field

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

C#

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

1.1.10.1.6 EIDIdentity.extendedMinority Field

Extended minority

C#

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

1.1.10.1.7 EIDIdentity.firstName1 Field

First name (see page 25)

C#

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

1.1.10.1.8 EIDIdentity.firstName2 Field

First name (see page 25)

C#

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

1.1.10.1.9 EIDIdentity.municipality Field

Card (see page 3) delivery municipality

C#

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

1.1.10.1.10 EIDIdentity.name Field

Surname

C#

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

1.1.10.1.11 EIDIdentity.nationality Field

Nationality

C#

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

1.1.10.1.12 EIDIdentity.nationalNumber Field

National number

C#

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

1.1.10.1.13 EIDIdentity.nobleCondition Field

Noble condition

C#

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

1.1.10.1.14 EIDIdentity.sex Field

Sex

C#

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

1.1.10.1.15 EIDIdentity.validityDateBegin Field

Card (see page 3) validity date begin

C#

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

1.1.10.1.16 EIDIdentity.validityDateEnd Field

Card (see page 3) validity date end

C#

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

1.1.10.1.17 EIDIdentity.whiteCane Field

White cane allowed (blind people)

C#

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

1.1.10.1.18 EIDIdentity.yellowCane Field

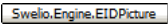
Yellow cane allowed (partially sighted people)

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

1.1.11 EIDPicture Class

Raw picture (see page 27) data from EID card

Inheritance Hierarchy



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

File

NativeTypes.cs (see page 100)

Members

EIDPicture Fields

	Name	Description
	picture (see page 27)	Picture raw data buffer
	pictureLength (see page 27)	Picture raw data buffer length

EIDPicture Fields

	Name	Description
	picture (see page 27)	Picture raw data buffer
	pictureLength (see page 27)	Picture raw data buffer length

1.1.11.1 EIDPicture Fields

1.1.11.1.1 EIDPicture.picture Field

Picture raw data buffer

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

1.1.11.1.2 EIDPicture.pictureLength Field

Picture raw data buffer length

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


1.1.12 Encryption Class

Inheritance Hierarchy

Swelio.Engine.Encryption

C#














```
public static class Encryption;
```

File














Encryption.cs ([see page 98](#))

Members

Encryption Methods

	Name	Description
	CheckFileMD5 (see page 29)	Checks the file M d5.
	CheckFileSHA1 (see page 29)	Checks the file SH a1.
	CheckMD5 (see page 29)	Checks the M d5.
	CheckSHA1 (see page 30)	Checks the SH a1.
	DecryptFile (see page 30)	Decrypts the file.
	EncryptFile (see page 31)	Encrypts the file.
	GenerateAuthenticationSignature (see page 31)	Generates the authentication signature.
	GenerateNonRepudiationSignature (see page 31)	Generates the non repudiation signature.
	GetFileMD5 (see page 32)	Gets the file M d5.
	GetFileSHA1 (see page 32)	Gets the file SH a1.
	GetMD5 (see page 32)	Gets the M d5.
	GetSHA1 (see page 33)	Gets the SH a1.
	VerifySignature (see page 33)	Verifies the signature.

Encryption Methods

	Name	Description
	CheckFileMD5 (see page 29)	Checks the file M d5.
	CheckFileSHA1 (see page 29)	Checks the file SH a1.
	CheckMD5 (see page 29)	Checks the M d5.
	CheckSHA1 (see page 30)	Checks the SH a1.
	DecryptFile (see page 30)	Decrypts the file.
	EncryptFile (see page 31)	Encrypts the file.
	GenerateAuthenticationSignature (see page 31)	Generates the authentication signature.
	GenerateNonRepudiationSignature (see page 31)	Generates the non repudiation signature.
	GetFileMD5 (see page 32)	Gets the file M d5.
	GetFileSHA1 (see page 32)	Gets the file SH a1.
	GetMD5 (see page 32)	Gets the M d5.
	GetSHA1 (see page 33)	Gets the SH a1.
	VerifySignature (see page 33)	Verifies the signature.

1.1.12.1 Encryption Methods

1.1.12.1.1 Encryption.CheckFileMD5 Method

Checks the file MD5.

C#

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

Parameters

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

1.1.12.1.2 Encryption.CheckFileSHA1 Method

Checks the file SHA1.

C#

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

Parameters

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

1.1.12.1.3 CheckMD5 Method

1.1.12.1.3.1 Encryption.CheckMD5 Method (byte[], byte[])

Checks the MD5.

C#

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

Parameters

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

1.1.12.1.3.2 Encryption.CheckMD5 Method (string, byte[])

Checks the MD5.

C#

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

Parameters

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

1.1.12.1.4 CheckSHA1 Method

1.1.12.1.4.1 Encryption.CheckSHA1 Method (byte[], byte[])

Checks the SH a1.

C#

```
public static bool CheckSHA1(byte[] message, byte[] sha1sum);
```

Parameters

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

1.1.12.1.4.2 Encryption.CheckSHA1 Method (string, byte[])

Checks the SH a1.

C#

```
public static bool CheckSHA1(string message, byte[] sha1sum);
```

Parameters

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

1.1.12.1.5 DecryptFile Method

1.1.12.1.5.1 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.

1.1.12.1.5.2 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.
-----------------	---------------

1.1.12.1.6 EncryptFile Method

1.1.12.1.6.1 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.

1.1.12.1.6.2 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.

1.1.12.1.7 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.

1.1.12.1.8 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.

1.1.12.1.9 Encryption.GetFileMD5 Method

Gets the file M d5.

C#

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

Parameters

Parameters	Description
string fileName	Name of the file.

1.1.12.1.10 Encryption.GetFileSHA1 Method

Gets the file SH a1.

C#

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

Parameters

Parameters	Description
string fileName	Name of the file.

1.1.12.1.11 GetMD5 Method**1.1.12.1.11.1 Encryption.GetMD5 Method (byte[])**

Gets the M d5.

C#

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

Parameters

Parameters	Description
byte[] message	The message.

1.1.12.1.11.2 Encryption.GetMD5 Method (string)

Gets the M d5.

C#

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

Parameters

Parameters	Description
string message	The message.

1.1.12.1.12 GetSHA1 Method

1.1.12.1.12.1 Encryption.GetSHA1 Method (byte[])

Gets the SH a1.

C#

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

Parameters

Parameters	Description
byte[] message	The message.

1.1.12.1.12.2 Encryption.GetSHA1 Method (string)

Gets the SH a1.

C#

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

Parameters

Parameters	Description
string message	The message.

1.1.12.1.13 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.

1.1.13 FileOperations Class

Helper class for common file operations

Inheritance Hierarchy

Swelio.Engine.FileOperations

C#

```
public static class FileOperations;
```

File

FileOperations.cs (see page 98)

Members**FileOperations Methods**

	Name	Description
	ClearFileAttributes (see page 35)	This is ClearFileAttributes, a member of class FileOperations.
	CopyFile (see page 35)	This is CopyFile, a member of class FileOperations.
	CreateUnicodeFile (see page 36)	This is CreateUnicodeFile, a member of class FileOperations.
	DeleteFile (see page 36)	Deletes the file.
	DeleteToRecycleBin (see page 36)	Deletes file to recycle bin.
	DirectoryExists (see page 36)	This is DirectoryExists, a member of class FileOperations.
	ExcludeTrailingPathDelimiter (see page 36)	This is ExcludeTrailingPathDelimiter, a member of class FileOperations.
	FileExists (see page 36)	Checks if file exists
	FileExtensionsIs (see page 37)	This is FileExtensionsIs, a member of class FileOperations.
	FileIsAnimatedGif (see page 37)	This is FileIsAnimatedGif, a member of class FileOperations.
	FileIsExe (see page 37)	This is FileIsExe, a member of class FileOperations.
	FileIsIcon (see page 37)	Checks if the file is a Windows icon file
	FileIsImage (see page 37)	The file is an image (jpeg, bmp, gif, png or ico)
	FileIsLink (see page 38)	This is FileIsLink, a member of class FileOperations.
	FileOrFolderExists (see page 38)	Check if file or folder with given name exists
	FullPath (see page 38)	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 38)	This is GetExtension, a member of class FileOperations.
	GetFilesCount (see page 38)	This is GetFilesCount, a member of class FileOperations.
	GetFileSize (see page 39)	This is GetFileSize, a member of class FileOperations.
	IncludeTrailingPathDelimiter (see page 39)	This is IncludeTrailingPathDelimiter, a member of class FileOperations.
	IsDirectory (see page 39)	This is IsDirectory, a member of class FileOperations.
	IsUnicodeFile (see page 39)	This is IsUnicodeFile, a member of class FileOperations.
	IsValidFileName (see page 39)	This is IsValidFileName, a member of class FileOperations.
	IsValidPathName (see page 39)	This is IsValidPathName, a member of class FileOperations.
	RenameFile (see page 40)	This is RenameFile, a member of class FileOperations.
	ShellCopyFile (see page 40)	This is ShellCopyFile, a member of class FileOperations.
	StripFileName (see page 40)	Expand environment values and relace it with the full value. This method removes environment variables from the file name. To insert environment variable to the file name use UnExpandPath (see page 40) method
	UnExpandPath (see page 40)	Replace known path by environment variables. This function does the opposite work to StripFileName (see page 40) function

FileOperations Methods

	Name	Description
	ClearFileAttributes (see page 35)	This is ClearFileAttributes, a member of class FileOperations.
	CopyFile (see page 35)	This is CopyFile, a member of class FileOperations.
	CreateUnicodeFile (see page 36)	This is CreateUnicodeFile, a member of class FileOperations.
	DeleteFile (see page 36)	Deletes the file.
	DeleteToRecycleBin (see page 36)	Deletes file to recycle bin.
	DirectoryExists (see page 36)	This is DirectoryExists, a member of class FileOperations.

	ExcludeTrailingPathDelimiter (see page 36)	This is ExcludeTrailingPathDelimiter, a member of class FileOperations.
	FileExists (see page 36)	Checks if file exists
	FileExtensionsIs (see page 37)	This is FileExtensionsIs, a member of class FileOperations.
	FileIsAnimatedGif (see page 37)	This is FileIsAnimatedGif, a member of class FileOperations.
	FileIsExe (see page 37)	This is FileIsExe, a member of class FileOperations.
	FileIsIcon (see page 37)	Checks if the file is a Windows icon file
	FileIsImage (see page 37)	The file is an image (jpeg, bmp, gif, png or ico)
	FileIsLink (see page 38)	This is FileIsLink, a member of class FileOperations.
	FileOrFolderExists (see page 38)	Check if file or folder with given name exists
	FullPath (see page 38)	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 38)	This is GetExtension, a member of class FileOperations.
	GetFilesCount (see page 38)	This is GetFilesCount, a member of class FileOperations.
	GetFileSize (see page 39)	This is GetFileSize, a member of class FileOperations.
	IncludeTrailingPathDelimiter (see page 39)	This is IncludeTrailingPathDelimiter, a member of class FileOperations.
	IsDirectory (see page 39)	This is IsDirectory, a member of class FileOperations.
	IsUnicodeFile (see page 39)	This is IsUnicodeFile, a member of class FileOperations.
	IsValidFileName (see page 39)	This is IsValidFileName, a member of class FileOperations.
	IsValidPathName (see page 39)	This is IsValidPathName, a member of class FileOperations.
	RenameFile (see page 40)	This is RenameFile, a member of class FileOperations.
	ShellCopyFile (see page 40)	This is ShellCopyFile, a member of class FileOperations.
	StripFileName (see page 40)	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 40) method
	UnExpandPath (see page 40)	Replace known path by environment variables. This function does the opposite work to StripFileName (see page 40) function

1.1.13.1 FileOperations Methods

1.1.13.1.1 FileOperations.ClearFileAttributes Method

C#

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

Remarks

This is ClearFileAttributes, a member of class FileOperations.

1.1.13.1.2 FileOperations.CopyFile Method

C#

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

Remarks

This is CopyFile, a member of class FileOperations.

1.1.13.1.3 FileOperations.CreateUnicodeFile Method

C#

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

Remarks

This is CreateUnicodeFile, a member of class FileOperations.

1.1.13.1.4 FileOperations.DeleteFile Method

Deletes the file.

C#

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

Parameters

Parameters	Description
string fileName	Name of the file.

1.1.13.1.5 FileOperations.DeleteToRecycleBin Method

Deletes file to recycle bin.

C#

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

Parameters

Parameters	Description
string fileName	Name of the file.

1.1.13.1.6 FileOperations.DirectoryExists Method

C#

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

Remarks

This is DirectoryExists, a member of class FileOperations.

1.1.13.1.7 FileOperations.ExcludeTrailingPathDelimiter Method

C#

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

Remarks

This is ExcludeTrailingPathDelimiter, a member of class FileOperations.

1.1.13.1.8 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

1.1.13.1.9 FileOperations.FileExtensionIs Method

C#

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

Remarks

This is FileExtensionIs, a member of class FileOperations.

1.1.13.1.10 FileOperations.FileIsAnimatedGif Method

C#

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

Remarks

This is FileIsAnimatedGif, a member of class FileOperations.

1.1.13.1.11 FileOperations.FileIsExe Method

C#

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

Remarks

This is FileIsExe, a member of class FileOperations.

1.1.13.1.12 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

1.1.13.1.13 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.

1.1.13.1.14 FileOperations.FileIsLink Method**C#**

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

Remarks

This is FileIsLink, a member of class FileOperations.

1.1.13.1.15 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.

1.1.13.1.16 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

1.1.13.1.17 FileOperations.GetExtension Method**C#**

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

Remarks

This is GetExtension, a member of class FileOperations.

1.1.13.1.18 FileOperations.GetFilesCount Method**C#**

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

Remarks

This is GetFilesCount, a member of class FileOperations.

1.1.13.1.19 FileOperations.GetFileSize Method**C#**

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

Remarks

This is GetFileSize, a member of class FileOperations.

1.1.13.1.20 FileOperations.IncludeTrailingPathDelimiter Method**C#**

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

Remarks

This is IncludeTrailingPathDelimiter, a member of class FileOperations.

1.1.13.1.21 FileOperations.IsDirectory Method**C#**

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

Remarks

This is IsDirectory, a member of class FileOperations.

1.1.13.1.22 FileOperations.IsUnicodeFile Method**C#**

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

Remarks

This is IsUnicodeFile, a member of class FileOperations.

1.1.13.1.23 FileOperations.IsValidFileName Method**C#**

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

Remarks

This is IsValidFileName, a member of class FileOperations.

1.1.13.1.24 FileOperations.IsValidPathName Method**C#**

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

Remarks

This is IsValidPathName, a member of class FileOperations.

1.1.13.1.25 FileOperations.RenameFile Method

C#

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

Remarks

This is RenameFile, a member of class FileOperations.

1.1.13.1.26 FileOperations.ShellCopyFile Method

C#

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

Remarks

This is ShellCopyFile, a member of class FileOperations.

1.1.13.1.27 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 40) 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.

1.1.13.1.28 FileOperations.UnExpandPath Method

Replace known path by environment variables. This function does the opposite work to StripFileName (see page 40) function

C#

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

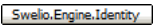
Parameters

Parameters	Description
string path	The path.

1.1.14 Identity Class

Holds identity information that is stored on EID card

Inheritance Hierarchy




C#

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




















File

Identity.cs ([see page 99](#))


Members**Identity Methods**

	Name	Description
	Clear (see page 42)	Clear all stored information








Identity Properties













	Name	Description
	BirthDate (see page 42)	Birth date in YYYYMMDD format
	BirthLocation (see page 42)	Birth location
	CardNumber (see page 42)	Electronic ID card number
	ChipNumber (see page 43)	Electronic ID card physical chip number
	DocumentType (see page 43)	Document type (Belgian citizen, European Community citizen, ...)
	ExtendedMinority (see page 43)	Extended minority
	FirstName1 (see page 43)	First name
	FirstName2 (see page 43)	First name
	Municipality (see page 43)	Card (see page 3) delivery municipality
	Nationality (see page 43)	Nationality
	NationalityISO (see page 44)	Gets the nationality ISO 3166 code.
	NationalNumber (see page 44)	National number
	NobleCondition (see page 44)	Noble condition
	Sex (see page 44)	Sex
	Surname (see page 44)	Surname
	ValidityDateBegin (see page 44)	Card (see page 3) validity date begin in YYYYMMDD format
	ValidityDateEnd (see page 45)	Card (see page 3) validity date end in YYYYMMDD format
	WhiteCane (see page 45)	White cane allowed (blind people)
	YellowCane (see page 45)	Yellow cane allowed (partially sighted people)

Identity Methods

	Name	Description
	Clear (see page 42)	Clear all stored information

Identity Properties

	Name	Description
	BirthDate (see page 42)	Birth date in YYYYMMDD format
	BirthLocation (see page 42)	Birth location
	CardNumber (see page 42)	Electronic ID card number
	ChipNumber (see page 43)	Electronic ID card physical chip number
	DocumentType (see page 43)	Document type (Belgian citizen, European Community citizen, ...)
	ExtendedMinority (see page 43)	Extended minority
	FirstName1 (see page 43)	First name

	FirstName2 (see page 43)	First name
	Municipality (see page 43)	Card (see page 3) delivery municipality
	Nationality (see page 43)	Nationality
	NationalityISO (see page 44)	Gets the nationality ISO 3166 code.
	NationalNumber (see page 44)	National number
	NobleCondition (see page 44)	Noble condition
	Sex (see page 44)	Sex
	Surname (see page 44)	Surname
	ValidityDateBegin (see page 44)	Card (see page 3) validity date begin in YYYYMMDD format
	ValidityDateEnd (see page 45)	Card (see page 3) validity date end in YYYYMMDD format
	WhiteCane (see page 45)	White cane allowed (blind people)
	YellowCane (see page 45)	Yellow cane allowed (partially sighted people)

1.1.14.1 Identity Methods

1.1.14.1.1 Identity.Clear Method

Clear all stored information

C#

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

1.1.14.2 Identity Properties

1.1.14.2.1 Identity.BirthDate Property

Birth date in YYYYMMDD format

C#

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

1.1.14.2.2 Identity.BirthLocation Property

Birth location

C#

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

1.1.14.2.3 Identity.CardNumber Property

Electronic ID card number

C#

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

1.1.14.2.4 Identity.ChipNumber Property

Electronic ID card physical chip number

C#

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

1.1.14.2.5 Identity.DocumentType Property

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

C#

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

1.1.14.2.6 Identity.ExtendedMinority Property

Extended minority

C#

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

1.1.14.2.7 Identity.FirstName1 Property

First name

C#

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

1.1.14.2.8 Identity.FirstName2 Property

First name

C#

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

1.1.14.2.9 Identity.Municipality Property

Card (see page 3) delivery municipality

C#

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

1.1.14.2.10 Identity.Nationality Property

Nationality

C#

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

1.1.14.2.11 Identity.NationalityISO Property

Gets the nationality ISO 3166 code.

C#

```
public string NationalityISO;
```

Description

The nationality ISO 3166 code.

1.1.14.2.12 Identity.NationalNumber Property

National number

C#

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

1.1.14.2.13 Identity.NobleCondition Property

Noble condition

C#

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

1.1.14.2.14 Identity.Sex Property

Sex

C#

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

1.1.14.2.15 Identity.Surname Property

Surname

C#

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

1.1.14.2.16 Identity.ValidityDateBegin Property

Card (see page 3) validity date begin in YYYYMMDD format

C#

```
[Description("Card validity date begin")]
[ReadOnly(true)]
```

```
public DateTime ValidityDateBegin;
```

1.1.14.2.17 Identity.ValidityDateEnd Property

Card (see page 3) validity date end in YYYYMMDD format

C#

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

1.1.14.2.18 Identity.WhiteCane Property

White cane allowed (blind people)

C#

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

1.1.14.2.19 Identity.YellowCane Property

Yellow cane allowed (partially sighted people)

C#

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

1.1.15 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



C#

```
public static class InteropHelper;
```

File










InteropHelper.cs (see page 99)

Members








InteropHelper Methods

	Name	Description
💎💰	ClearUnusedMemory (see page 46)	Clears the unused memory.
💎💰	GetStartup (see page 46)	This is GetStartup, a member of class InteropHelper.
💎💰	SetStartup (see page 47)	Add/Remove registry entries for windows startup. Only for current user
💎💰	ShowScreenKeyboard (see page 47)	Shows the screen keyboard.
💎💰	ShowWindowsError (see page 47)	Shows the windows error.
💎💰	TurnMonitorOff (see page 47)	Turns the monitor off.
💎💰	TurnMonitorOn (see page 47)	Turns the monitor on.










InteropHelper Properties

	Name	Description
	IsMediaCenter (see page 48)	This is IsMediaCenter, a member of class InteropHelper.
	IsMultiTouchReady (see page 48)	This is IsMultiTouchReady, a member of class InteropHelper.
	IsTabletPC (see page 48)	This is IsTabletPC, a member of class InteropHelper.
	MetroActive (see page 48)	This is MetroActive, a member of class InteropHelper.
	RunningOnVista (see page 48)	Gets a value indicating whether [running on vista].
	RunningOnWin10 (see page 48)	Determines if the application is running on Windows 10
	RunningOnWin7 (see page 48)	Determines if the application is running on Windows 7
	RunningOnWin8 (see page 49)	This is RunningOnWin8, a member of class InteropHelper.
	RunningOnXP (see page 49)	Gets a value indicating whether [running on XP].

InteropHelper Methods

	Name	Description
	ClearUnusedMemory (see page 46)	Clears the unused memory.
	GetStartup (see page 46)	This is GetStartup, a member of class InteropHelper.
	SetStartup (see page 47)	Add/Remove registry entries for windows startup. Only for current user
	ShowScreenKeyboard (see page 47)	Shows the screen keyboard.
	ShowWindowsError (see page 47)	Shows the windows error.
	TurnMonitorOff (see page 47)	Turns the monitor off.
	TurnMonitorOn (see page 47)	Turns the monitor on.

InteropHelper Properties

	Name	Description
	IsMediaCenter (see page 48)	This is IsMediaCenter, a member of class InteropHelper.
	IsMultiTouchReady (see page 48)	This is IsMultiTouchReady, a member of class InteropHelper.
	IsTabletPC (see page 48)	This is IsTabletPC, a member of class InteropHelper.
	MetroActive (see page 48)	This is MetroActive, a member of class InteropHelper.
	RunningOnVista (see page 48)	Gets a value indicating whether [running on vista].
	RunningOnWin10 (see page 48)	Determines if the application is running on Windows 10
	RunningOnWin7 (see page 48)	Determines if the application is running on Windows 7
	RunningOnWin8 (see page 49)	This is RunningOnWin8, a member of class InteropHelper.
	RunningOnXP (see page 49)	Gets a value indicating whether [running on XP].

1.1.15.1 InteropHelper Methods

1.1.15.1.1 InteropHelper.ClearUnusedMemory Method

Clears the unused memory.

C#

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

1.1.15.1.2 InteropHelper.GetStartup Method

C#

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

Remarks

This is GetStartup, a member of class InteropHelper.

1.1.15.1.3 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].

1.1.15.1.4 InteropHelper.ShowScreenKeyboard Method

Shows the screen keyboard.

C#

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

1.1.15.1.5 InteropHelper.ShowWindowsError Method

Shows the windows error.

C#

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

Parameters

Parameters	Description
int errorCode	The error code.

1.1.15.1.6 InteropHelper.TurnMonitorOff Method

Turns the monitor off.

C#

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

1.1.15.1.7 InteropHelper.TurnMonitorOn Method

Turns the monitor on.

C#

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

1.1.15.2 InteropHelper Properties

1.1.15.2.1 InteropHelper.IsMediaCenter Property

C#

```
public static bool IsMediaCenter;
```

Remarks

This is IsMediaCenter, a member of class InteropHelper.

1.1.15.2.2 InteropHelper.IsMultiTouchReady Property

C#

```
public static bool IsMultiTouchReady;
```

Remarks

This is IsMultiTouchReady, a member of class InteropHelper.

1.1.15.2.3 InteropHelper.IsTabletPC Property

C#

```
public static bool IsTabletPC;
```

Remarks

This is IsTabletPC, a member of class InteropHelper.

1.1.15.2.4 InteropHelper.MetroActive Property

C#

```
public static bool MetroActive;
```

Remarks

This is MetroActive, a member of class InteropHelper.

1.1.15.2.5 InteropHelper.RunningOnVista Property

Gets a value indicating whether [running on vista].

C#

```
public static bool RunningOnVista;
```

Description

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

1.1.15.2.6 InteropHelper.RunningOnWin10 Property

Determines if the application is running on Windows 10

C#

```
public static bool RunningOnWin10;
```

1.1.15.2.7 InteropHelper.RunningOnWin7 Property

Determines if the application is running on Windows 7

C#

```
public static bool RunningOnWin7;
```

1.1.15.2.8 InteropHelper.RunningOnWin8 Property

C#

```
public static bool RunningOnWin8;
```

Remarks

This is RunningOnWin8, a member of class InteropHelper.

1.1.15.2.9 InteropHelper.RunningOnXP Property

Gets a value indicating whether [running on XP].

C#

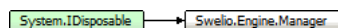
```
public static bool RunningOnXP;
```

Description

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

1.1.16 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 99](#))




Members**Methods**

	Name	Description
	Manager (see page 50)	Initializes a new instance of the Manager class.




Manager Methods

	Name	Description
	Dispose (see page 51)	Performs application-defined tasks associated with freeing, releasing, or resetting unmanaged resources.
	GetReader (see page 51)	Gets the default card reader.
	GetReaderName (see page 51)	Gets the name of the reader.
	ListReaders (see page 51)	Returns the array with the names of the attached card readers
	ReloadReadersList (see page 51)	Reloads the readers list.
	SetDefaultReader (see page 52)	Sets the default card reader.


Manager Properties

	Name	Description
	Active (see page 52)	Gets or sets a value indicating whether this Manager is active.
	ReaderCount (see page 52)	Gets the reader count.
	TraceEvents (see page 52)	Gets or sets a value indicating whether the card events are traced.



Manager Events

	Name	Description
	CardInserted (see page 52)	This is CardInserted, a member of class Manager.
	CardRemoved (see page 53)	This is CardRemoved, a member of class Manager.
	ReadersListChanged (see page 53)	This is ReadersListChanged, a member of class Manager.







Methods

	Name	Description
	Manager (see page 50)	Initializes a new instance of the Manager class.




Manager Events

	Name	Description
	CardInserted (see page 52)	This is CardInserted, a member of class Manager.
	CardRemoved (see page 53)	This is CardRemoved, a member of class Manager.
	ReadersListChanged (see page 53)	This is ReadersListChanged, a member of class Manager.

Manager Methods

	Name	Description
	Dispose (see page 51)	Performs application-defined tasks associated with freeing, releasing, or resetting unmanaged resources.
	GetReader (see page 51)	Gets the default card reader.
	GetReaderName (see page 51)	Gets the name of the reader.
	ListReaders (see page 51)	Returns the array with the names of the attached card readers
	ReloadReadersList (see page 51)	Reloads the readers list.
	SetDefaultReader (see page 52)	Sets the default card reader.

Manager Properties

	Name	Description
	Active (see page 52)	Gets or sets a value indicating whether this Manager is active.
	ReaderCount (see page 52)	Gets the reader count.
	TraceEvents (see page 52)	Gets or sets a value indicating whether the card events are traced.

1.1.16.1 Manager.Manager Constructor

Initializes a new instance of the Manager ([see page 49](#)) class.

C#

```
public Manager();
```

1.1.16.2 Manager Methods

1.1.16.2.1 Manager.Dispose Method

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

C#

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

1.1.16.2.2 GetReader Method

1.1.16.2.2.1 Manager.GetReader Method ()

Gets the default card reader.

C#

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

1.1.16.2.2.2 Manager.GetReader Method (string)

Gets the reader.

C#

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

Parameters

Parameters	Description
string name	The name.

1.1.16.2.3 Manager.GetReaderName Method

Gets the name of the reader.

C#

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

Parameters

Parameters	Description
int readerNumber	The reader number.

1.1.16.2.4 Manager.ListReaders Method

Returns the array with the names of the attached card readers

C#

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

1.1.16.2.5 Manager.ReloadReadersList Method

Reloads the readers list.


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

1.1.16.2.6 Manager.SetDefaultReader Method

Sets the default card reader.


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

Parameters

Parameters	Description
int readerNumber	The reader number.

1.1.16.3 Manager Properties

1.1.16.3.1 Manager.Active Property

Gets or sets a value indicating whether this Manager ( see page 49) is active.

```
C#  
  
public bool Active;
```

Description

true if active; otherwise, false.

1.1.16.3.2 Manager.ReaderCount Property

Gets the reader count.

```
C#  
  
public int ReaderCount;
```

1.1.16.3.3 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.

1.1.16.4 Manager Events

1.1.16.4.1 Manager.CardInserted Event

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

Remarks

This is CardInserted, a member of class Manager.

1.1.16.4.2 Manager.CardRemoved Event

C#

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

Remarks

This is CardRemoved, a member of class Manager.

1.1.16.4.3 Manager.ReadersListChanged Event

C#

```
public event EventHandler ReadersListChanged;
```

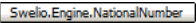
Remarks

This is ReadersListChanged, a member of class Manager.

1.1.17 NationalNumber Class

National number formatter

Inheritance Hierarchy



C#

```
public static class NationalNumber;
```

File

NationalNumber.cs (🔗 see page 100)

Members

NationalNumber Methods

	Name	Description
💡💰	ToString (🔗 see page 53)	Converts the natinal number value to its formatted String representation

NationalNumber Methods

	Name	Description
💡💰	ToString (🔗 see page 53)	Converts the natinal number value to its formatted String representation

1.1.17.1 NationalNumber Methods

1.1.17.1.1 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

1.1.18 NativeMethods Class

Inheritance Hierarchy

```
Swelio.Engine.NativeMethods
```

C#

```
internal static class NativeMethods;
```






















File

NativeMethods.cs ([see page 100](#))

Remarks





















This is class Swelio.Engine.NativeMethods.

Members**NativeMethods Methods**





	Name	Description
	ActivateCardEx (see page 61)	This is ActivateCardEx, a member of class NativeMethods.
	CardDecryptFile (see page 61)	This is CardDecryptFile, a member of class NativeMethods.
	CardEncryptFile (see page 61)	This is CardEncryptFile, a member of class NativeMethods.
	CheckMD5 (see page 61)	This is CheckMD5, a member of class NativeMethods.
	CheckSHA1 (see page 62)	This is CheckSHA1, a member of class NativeMethods.
	ClearFileAttributes (see page 62)	This is ClearFileAttributes, a member of class NativeMethods.
	ClearUnusedMemory (see page 62)	This is ClearUnusedMemory, a member of class NativeMethods.
	CreateCardBuffer (see page 62)	This is CreateCardBuffer, a member of class NativeMethods.
	CreateUnicodeFile (see page 62)	This is CreateUnicodeFile, a member of class NativeMethods.
	CurrentIPAddress (see page 62)	This is CurrentIPAddress, a member of class NativeMethods.
	DeactivateCardEx (see page 63)	This is DeactivateCardEx, a member of class NativeMethods.
	DecryptFileAES (see page 63)	This is DecryptFileAES, a member of class NativeMethods.
	DeleteCardBuffer (see page 63)	This is DeleteCardBuffer, a member of class NativeMethods.
	DeleteObject (see page 63)	This is DeleteObject, a member of class NativeMethods.
	DeleteToRecycleBin (see page 63)	This is DeleteToRecycleBin, a member of class NativeMethods.
	DirectoryExists (see page 63)	This is DirectoryExists, a member of class NativeMethods.
	DisplayCertificate (see page 64)	This is DisplayCertificate, a member of class NativeMethods.
	EmptyRecycleBin (see page 64)	This is EmptyRecycleBin, a member of class NativeMethods.
	EncodeCertificate (see page 64)	This is EncodeCertificate, a member of class NativeMethods.
	EncodePhoto (see page 64)	This is EncodePhoto, a member of class NativeMethods.
	EncryptFileAES (see page 64)	This is EncryptFileAES, a member of class NativeMethods.

	FileCopy (see page 64)	This is FileCopy, a member of class NativeMethods.
	FileDelete (see page 65)	This is FileDelete, a member of class NativeMethods.
	FileExists (see page 65)	This is FileExists, a member of class NativeMethods.
	FileExtensionIs (see page 65)	This is FileExtensionIs, a member of class NativeMethods.
	FileGetSize (see page 65)	This is FileGetSize, a member of class NativeMethods.
	FileIsExe (see page 65)	This is FileIsExe, a member of class NativeMethods.
	FileIsIcon (see page 65)	This is FileIsIcon, a member of class NativeMethods.
	FileIsImage (see page 66)	This is FileIsImage, a member of class NativeMethods.
	FileIsLink (see page 66)	This is FileIsLink, a member of class NativeMethods.
	FileOrFolderExists (see page 66)	This is FileOrFolderExists, a member of class NativeMethods.
	FileRename (see page 66)	This is FileRename, a member of class NativeMethods.
	FullPath (see page 66)	This is FullPath, a member of class NativeMethods.
	GenerateAuthenticationSignatureEx (see page 66)	This is GenerateAuthenticationSignatureEx, a member of class NativeMethods.
	GenerateBMP (see page 67)	This is GenerateBMP, a member of class NativeMethods.
	GenerateNonRepudiationSignatureEx (see page 67)	This is GenerateNonRepudiationSignatureEx, a member of class NativeMethods.
	GeneratePNG (see page 67)	This is GeneratePNG, a member of class NativeMethods.
	GenerateQRCodeEx (see page 67)	This is GenerateQRCodeEx, a member of class NativeMethods.
	GetCardBufferA (see page 67)	This is GetCardBufferA, a member of class NativeMethods.
	GetCardBufferSize (see page 67)	This is GetCardBufferSize, a member of class NativeMethods.
	GetCardBufferW (see page 68)	This is GetCardBufferW, a member of class NativeMethods.
	GetCardSerialNumber (see page 68)	This is GetCardSerialNumber, a member of class NativeMethods.
	GetEncodedCertificateSize (see page 68)	This is GetEncodedCertificateSize, a member of class NativeMethods.
	GetEncodedPhotoSize (see page 68)	This is GetEncodedPhotoSize, a member of class NativeMethods.
	GetFileMD5 (see page 68)	This is GetFileMD5, a member of class NativeMethods.
	GetFilesCount (see page 68)	This is GetFilesCount, a member of class NativeMethods.
	GetFileSHA1 (see page 69)	This is GetFileSHA1, a member of class NativeMethods.
	GetHBitmap (see page 69)	This is GetHBitmap, a member of class NativeMethods.
	GetISOCCode (see page 69)	This is GetISOCCode, a member of class NativeMethods.
	GetMD5 (see page 69)	This is GetMD5, a member of class NativeMethods.
	GetReaderIndex (see page 69)	This is GetReaderIndex, a member of class NativeMethods.
	GetReaderName (see page 69)	This is GetReaderName, a member of class NativeMethods.
	GetReaderNameLen (see page 70)	This is GetReaderNameLen, a member of class NativeMethods.
	GetReadersCount (see page 70)	This is GetReadersCount, a member of class NativeMethods.
	GetSelectedReaderIndex (see page 70)	This is GetSelectedReaderIndex, a member of class NativeMethods.
	GetSHA1 (see page 70)	This is GetSHA1, a member of class NativeMethods.
	GetStartup (see page 70)	This is GetStartup, a member of class NativeMethods.
	HibernateWindows (see page 70)	This is HibernateWindows, a member of class NativeMethods.
	IsAnimatedGIF (see page 71)	This is IsAnimatedGIF, a member of class NativeMethods.

	IsCardActivatedEx (see page 71)	This is IsCardActivatedEx, a member of class NativeMethods.
	IsCardPresentEx (see page 71)	This is IsCardPresentEx, a member of class NativeMethods.
	IsCardStillInsertedEx (see page 71)	This is IsCardStillInsertedEx, a member of class NativeMethods.
	IsConnectedToInternet (see page 71)	This is IsConnectedToInternet, a member of class NativeMethods.
	IsDirectory (see page 71)	This is IsDirectory, a member of class NativeMethods.
	IsEIDCardEx (see page 72)	This is IsEIDCardEx, a member of class NativeMethods.
	IsEngineActive (see page 72)	This is IsEngineActive, a member of class NativeMethods.
	IsMale (see page 72)	This is IsMale, a member of class NativeMethods.
	IsMediaCenter (see page 72)	This is IsMediaCenter, a member of class NativeMethods.
	IsMetroActive (see page 72)	This is IsMetroActive, a member of class NativeMethods.
	IsMultiTouchReady (see page 72)	This is IsMultiTouchReady, a member of class NativeMethods.
	IsTabletPC (see page 73)	This is IsTabletPC, a member of class NativeMethods.
	IsUnicodeFile (see page 73)	This is IsUnicodeFile, a member of class NativeMethods.
	IsValidFileName (see page 73)	This is IsValidFileName, a member of class NativeMethods.
	IsValidPathName (see page 73)	This is IsValidPathName, a member of class NativeMethods.
	IsWindows10 (see page 73)	This is IsWindows10, a member of class NativeMethods.
	IsWindows7 (see page 73)	This is IsWindows7, a member of class NativeMethods.
	IsWindows8 (see page 74)	This is IsWindows8, a member of class NativeMethods.
	IsWindowsVista (see page 74)	This is IsWindowsVista, a member of class NativeMethods.
	IsWindowsXP (see page 74)	This is IsWindowsXP, a member of class NativeMethods.
	IsWOW64 (see page 74)	This is IsWOW64, a member of class NativeMethods.
	LoadCertificate (see page 74)	This is LoadCertificate, a member of class NativeMethods.
	LoadPhoto (see page 74)	This is LoadPhoto, a member of class NativeMethods.
	PathUnExpandEnvStrings (see page 75)	This is PathUnExpandEnvStrings, a member of class NativeMethods.
	PortAvailable (see page 75)	This is PortAvailable, a member of class NativeMethods.
	ReadAddressEx (see page 75)	This is ReadAddressEx, a member of class NativeMethods.
	ReadAuthenticationCertificate (see page 75)	This is ReadAuthenticationCertificate, a member of class NativeMethods.
	ReadCaCertificate (see page 75)	This is ReadCaCertificate, a member of class NativeMethods.
	ReadIdentityEx (see page 75)	This is ReadIdentityEx, a member of class NativeMethods.
	ReadNonRepudiationCertificate (see page 76)	This is ReadNonRepudiationCertificate, a member of class NativeMethods.
	ReadPhotoEx (see page 76)	This is ReadPhotoEx, a member of class NativeMethods.
	ReadRootCaCertificate (see page 76)	This is ReadRootCaCertificate, a member of class NativeMethods.
	ReadRrnCertificate (see page 76)	This is ReadRrnCertificate, a member of class NativeMethods.
	RecycleBinEmpty (see page 76)	This is RecycleBinEmpty, a member of class NativeMethods.
	ReloadReadersList (see page 76)	This is ReloadReadersList, a member of class NativeMethods.
	RemoveCallback (see page 77)	This is RemoveCallback, a member of class NativeMethods.
	RemoveStartup (see page 77)	This is RemoveStartup, a member of class NativeMethods.
	SaveAuthenticationCertificateEx (see page 77)	This is SaveAuthenticationCertificateEx, a member of class NativeMethods.











	SaveCaCertificateEx (see page 77)	This is SaveCaCertificateEx, a member of class NativeMethods.
	SaveCardToToXMLStreamExA (see page 77)	This is SaveCardToToXMLStreamExA, a member of class NativeMethods.
	SaveCardToToXMLStreamExW (see page 77)	This is SaveCardToToXMLStreamExW, a member of class NativeMethods.
	SaveCardToXmlEx (see page 78)	This is SaveCardToXmlEx, a member of class NativeMethods.
	SaveCardToXmlExAnsi (see page 78)	This is SaveCardToXmlExAnsi, a member of class NativeMethods.
	SaveNonRepudiationCertificateEx (see page 78)	This is SaveNonRepudiationCertificateEx, a member of class NativeMethods.
	SavePersonCsvToStreamA (see page 78)	This is SavePersonCsvToStreamA, a member of class NativeMethods.
	SavePersonCsvToStreamW (see page 78)	This is SavePersonCsvToStreamW, a member of class NativeMethods.
	SavePersonToCsvEx (see page 78)	This is SavePersonToCsvEx, a member of class NativeMethods.
	SavePersonToCsvExAnsi (see page 79)	This is SavePersonToCsvExAnsi, a member of class NativeMethods.
	SavePhotoAsBitmapEx (see page 79)	This is SavePhotoAsBitmapEx, a member of class NativeMethods.
	SavePhotoAsJpegEx (see page 79)	This is SavePhotoAsJpegEx, a member of class NativeMethods.
	SaveRootCaCertificateEx (see page 79)	This is SaveRootCaCertificateEx, a member of class NativeMethods.
	SaveRrnCertificateEx (see page 79)	This is SaveRrnCertificateEx, a member of class NativeMethods.
	SelectReader (see page 79)	This is SelectReader, a member of class NativeMethods.
	SelectReaderByName (see page 80)	This is SelectReaderByName, a member of class NativeMethods.
	SetCallback (see page 80)	This is SetCallback, a member of class NativeMethods.
	SetStartup (see page 80)	This is SetStartup, a member of class NativeMethods.
	ShellCopyFile (see page 80)	This is ShellCopyFile, a member of class NativeMethods.
	ShowError (see page 80)	This is ShowError, a member of class NativeMethods.
	ShutdownWindows (see page 80)	This is ShutdownWindows, a member of class NativeMethods.
	StartEngine (see page 81)	This is StartEngine, a member of class NativeMethods.
	StopEngine (see page 81)	This is StopEngine, a member of class NativeMethods.
	StripFileName (see page 81)	This is StripFileName, a member of class NativeMethods.
	SuspendWindows (see page 81)	This is SuspendWindows, a member of class NativeMethods.
	TurnMonitorOff (see page 81)	This is TurnMonitorOff, a member of class NativeMethods.
	TurnMonitorOn (see page 81)	This is TurnMonitorOn, a member of class NativeMethods.
	VerifyPinEx (see page 82)	This is VerifyPinEx, a member of class NativeMethods.
	VerifySignature (see page 82)	This is VerifySignature, a member of class NativeMethods.











NativeMethods Methods

	Name	Description
	ActivateCardEx (see page 61)	This is ActivateCardEx, a member of class NativeMethods.
	CardDecryptFile (see page 61)	This is CardDecryptFile, a member of class NativeMethods.
	CardEncryptFile (see page 61)	This is CardEncryptFile, a member of class NativeMethods.
	CheckMD5 (see page 61)	This is CheckMD5, a member of class NativeMethods.

	CheckSHA1 (see page 62)	This is CheckSHA1, a member of class NativeMethods.
	ClearFileAttributes (see page 62)	This is ClearFileAttributes, a member of class NativeMethods.
	ClearUnusedMemory (see page 62)	This is ClearUnusedMemory, a member of class NativeMethods.
	CreateCardBuffer (see page 62)	This is CreateCardBuffer, a member of class NativeMethods.
	CreateUnicodeFile (see page 62)	This is CreateUnicodeFile, a member of class NativeMethods.
	CurrentIPAddress (see page 62)	This is CurrentIPAddress, a member of class NativeMethods.
	DeactivateCardEx (see page 63)	This is DeactivateCardEx, a member of class NativeMethods.
	DecryptFileAES (see page 63)	This is DecryptFileAES, a member of class NativeMethods.
	DeleteCardBuffer (see page 63)	This is DeleteCardBuffer, a member of class NativeMethods.
	DeleteObject (see page 63)	This is DeleteObject, a member of class NativeMethods.
	DeleteToRecycleBin (see page 63)	This is DeleteToRecycleBin, a member of class NativeMethods.
	DirectoryExists (see page 63)	This is DirectoryExists, a member of class NativeMethods.
	DisplayCertificate (see page 64)	This is DisplayCertificate, a member of class NativeMethods.
	EmptyRecycleBin (see page 64)	This is EmptyRecycleBin, a member of class NativeMethods.
	EncodeCertificate (see page 64)	This is EncodeCertificate, a member of class NativeMethods.
	EncodePhoto (see page 64)	This is EncodePhoto, a member of class NativeMethods.
	EncryptFileAES (see page 64)	This is EncryptFileAES, a member of class NativeMethods.
	FileCopy (see page 64)	This is FileCopy, a member of class NativeMethods.
	FileDelete (see page 65)	This is FileDelete, a member of class NativeMethods.
	FileExists (see page 65)	This is FileExists, a member of class NativeMethods.
	FileExtensionsIs (see page 65)	This is FileExtensionsIs, a member of class NativeMethods.
	FileGetSize (see page 65)	This is FileGetSize, a member of class NativeMethods.
	FileIsExe (see page 65)	This is FileIsExe, a member of class NativeMethods.
	FileIsIcon (see page 65)	This is FileIsIcon, a member of class NativeMethods.
	FileIsImage (see page 66)	This is FileIsImage, a member of class NativeMethods.
	FileIsLink (see page 66)	This is FileIsLink, a member of class NativeMethods.
	FileOrFolderExists (see page 66)	This is FileOrFolderExists, a member of class NativeMethods.
	FileRename (see page 66)	This is FileRename, a member of class NativeMethods.
	FullPath (see page 66)	This is FullPath, a member of class NativeMethods.
	GenerateAuthenticationSignatureEx (see page 66)	This is GenerateAuthenticationSignatureEx, a member of class NativeMethods.
	GenerateBMP (see page 67)	This is GenerateBMP, a member of class NativeMethods.
	GenerateNonRepudiationSignatureEx (see page 67)	This is GenerateNonRepudiationSignatureEx, a member of class NativeMethods.
	GeneratePNG (see page 67)	This is GeneratePNG, a member of class NativeMethods.
	GenerateQRCodeEx (see page 67)	This is GenerateQRCodeEx, a member of class NativeMethods.
	GetCardBufferA (see page 67)	This is GetCardBufferA, a member of class NativeMethods.
	GetCardBufferSize (see page 67)	This is GetCardBufferSize, a member of class NativeMethods.
	GetCardBufferW (see page 68)	This is GetCardBufferW, a member of class NativeMethods.
	GetCardSerialNumber (see page 68)	This is GetCardSerialNumber, a member of class NativeMethods.
	GetEncodedCertificateSize (see page 68)	This is GetEncodedCertificateSize, a member of class NativeMethods.

	GetEncodedPhotoSize (see page 68)	This is GetEncodedPhotoSize, a member of class NativeMethods.
	GetFileMD5 (see page 68)	This is GetFileMD5, a member of class NativeMethods.
	GetFilesCount (see page 68)	This is GetFilesCount, a member of class NativeMethods.
	GetFileSHA1 (see page 69)	This is GetFileSHA1, a member of class NativeMethods.
	GetHBitmap (see page 69)	This is GetHBitmap, a member of class NativeMethods.
	GetISOCODE (see page 69)	This is GetISOCODE, a member of class NativeMethods.
	GetMD5 (see page 69)	This is GetMD5, a member of class NativeMethods.
	GetReaderIndex (see page 69)	This is GetReaderIndex, a member of class NativeMethods.
	GetReaderName (see page 69)	This is GetReaderName, a member of class NativeMethods.
	GetReaderNameLen (see page 70)	This is GetReaderNameLen, a member of class NativeMethods.
	GetReadersCount (see page 70)	This is GetReadersCount, a member of class NativeMethods.
	GetSelectedReaderIndex (see page 70)	This is GetSelectedReaderIndex, a member of class NativeMethods.
	GetSHA1 (see page 70)	This is GetSHA1, a member of class NativeMethods.
	GetStartup (see page 70)	This is GetStartup, a member of class NativeMethods.
	HibernateWindows (see page 70)	This is HibernateWindows, a member of class NativeMethods.
	IsAnimatedGIF (see page 71)	This is IsAnimatedGIF, a member of class NativeMethods.
	IsCardActivatedEx (see page 71)	This is IsCardActivatedEx, a member of class NativeMethods.
	IsCardPresentEx (see page 71)	This is IsCardPresentEx, a member of class NativeMethods.
	IsCardStillInsertedEx (see page 71)	This is IsCardStillInsertedEx, a member of class NativeMethods.
	IsConnectedToInternet (see page 71)	This is IsConnectedToInternet, a member of class NativeMethods.
	IsDirectory (see page 71)	This is IsDirectory, a member of class NativeMethods.
	IsEIDCardEx (see page 72)	This is IsEIDCardEx, a member of class NativeMethods.
	IsEngineActive (see page 72)	This is IsEngineActive, a member of class NativeMethods.
	IsMale (see page 72)	This is IsMale, a member of class NativeMethods.
	IsMediaCenter (see page 72)	This is IsMediaCenter, a member of class NativeMethods.
	IsMetroActive (see page 72)	This is IsMetroActive, a member of class NativeMethods.
	IsMultiTouchReady (see page 72)	This is IsMultiTouchReady, a member of class NativeMethods.
	IsTabletPC (see page 73)	This is IsTabletPC, a member of class NativeMethods.
	IsUnicodeFile (see page 73)	This is IsUnicodeFile, a member of class NativeMethods.
	IsValidFileName (see page 73)	This is IsValidFileName, a member of class NativeMethods.
	IsValidPathName (see page 73)	This is IsValidPathName, a member of class NativeMethods.
	IsWindows10 (see page 73)	This is IsWindows10, a member of class NativeMethods.
	IsWindows7 (see page 73)	This is IsWindows7, a member of class NativeMethods.
	IsWindows8 (see page 74)	This is IsWindows8, a member of class NativeMethods.
	IsWindowsVista (see page 74)	This is IsWindowsVista, a member of class NativeMethods.
	IsWindowsXP (see page 74)	This is IsWindowsXP, a member of class NativeMethods.
	IsWOW64 (see page 74)	This is IsWOW64, a member of class NativeMethods.
	LoadCertificate (see page 74)	This is LoadCertificate, a member of class NativeMethods.
	LoadPhoto (see page 74)	This is LoadPhoto, a member of class NativeMethods.
	PathUnExpandEnvStrings (see page 75)	This is PathUnExpandEnvStrings, a member of class NativeMethods.
	PortAvailable (see page 75)	This is PortAvailable, a member of class NativeMethods.

	ReadAddressEx (see page 75)	This is ReadAddressEx, a member of class NativeMethods.
	ReadAuthenticationCertificate (see page 75)	This is ReadAuthenticationCertificate, a member of class NativeMethods.
	ReadCaCertificate (see page 75)	This is ReadCaCertificate, a member of class NativeMethods.
	ReadIdentityEx (see page 75)	This is ReadIdentityEx, a member of class NativeMethods.
	ReadNonRepudiationCertificate (see page 76)	This is ReadNonRepudiationCertificate, a member of class NativeMethods.
	ReadPhotoEx (see page 76)	This is ReadPhotoEx, a member of class NativeMethods.
	ReadRootCaCertificate (see page 76)	This is ReadRootCaCertificate, a member of class NativeMethods.
	ReadRrnCertificate (see page 76)	This is ReadRrnCertificate, a member of class NativeMethods.
	RecycleBinEmpty (see page 76)	This is RecycleBinEmpty, a member of class NativeMethods.
	ReloadReadersList (see page 76)	This is ReloadReadersList, a member of class NativeMethods.
	RemoveCallback (see page 77)	This is RemoveCallback, a member of class NativeMethods.
	RemoveStartup (see page 77)	This is RemoveStartup, a member of class NativeMethods.
	SaveAuthenticationCertificateEx (see page 77)	This is SaveAuthenticationCertificateEx, a member of class NativeMethods.
	SaveCaCertificateEx (see page 77)	This is SaveCaCertificateEx, a member of class NativeMethods.
	SaveCardToToXMLStreamExA (see page 77)	This is SaveCardToToXMLStreamExA, a member of class NativeMethods.
	SaveCardToToXMLStreamExW (see page 77)	This is SaveCardToToXMLStreamExW, a member of class NativeMethods.
	SaveCardToXmlEx (see page 78)	This is SaveCardToXmlEx, a member of class NativeMethods.
	SaveCardToXmlExAnsi (see page 78)	This is SaveCardToXmlExAnsi, a member of class NativeMethods.
	SaveNonRepudiationCertificateEx (see page 78)	This is SaveNonRepudiationCertificateEx, a member of class NativeMethods.
	SavePersonCsvToStreamA (see page 78)	This is SavePersonCsvToStreamA, a member of class NativeMethods.
	SavePersonCsvToStreamW (see page 78)	This is SavePersonCsvToStreamW, a member of class NativeMethods.
	SavePersonToCsvEx (see page 78)	This is SavePersonToCsvEx, a member of class NativeMethods.
	SavePersonToCsvExAnsi (see page 79)	This is SavePersonToCsvExAnsi, a member of class NativeMethods.
	SavePhotoAsBitmapEx (see page 79)	This is SavePhotoAsBitmapEx, a member of class NativeMethods.
	SavePhotoAsJpegEx (see page 79)	This is SavePhotoAsJpegEx, a member of class NativeMethods.
	SaveRootCaCertificateEx (see page 79)	This is SaveRootCaCertificateEx, a member of class NativeMethods.
	SaveRrnCertificateEx (see page 79)	This is SaveRrnCertificateEx, a member of class NativeMethods.
	SelectReader (see page 79)	This is SelectReader, a member of class NativeMethods.
	SelectReaderByName (see page 80)	This is SelectReaderByName, a member of class NativeMethods.
	SetCallback (see page 80)	This is SetCallback, a member of class NativeMethods.
	SetStartup (see page 80)	This is SetStartup, a member of class NativeMethods.
	ShellCopyFile (see page 80)	This is ShellCopyFile, a member of class NativeMethods.

	ShowError (see page 80)	This is ShowError, a member of class NativeMethods.
	ShutdownWindows (see page 80)	This is ShutdownWindows, a member of class NativeMethods.
	StartEngine (see page 81)	This is StartEngine, a member of class NativeMethods.
	StopEngine (see page 81)	This is StopEngine, a member of class NativeMethods.
	StripFileName (see page 81)	This is StripFileName, a member of class NativeMethods.
	SuspendWindows (see page 81)	This is SuspendWindows, a member of class NativeMethods.
	TurnMonitorOff (see page 81)	This is TurnMonitorOff, a member of class NativeMethods.
	TurnMonitorOn (see page 81)	This is TurnMonitorOn, a member of class NativeMethods.
	VerifyPinEx (see page 82)	This is VerifyPinEx, a member of class NativeMethods.
	VerifySignature (see page 82)	This is VerifySignature, a member of class NativeMethods.

1.1.18.1 NativeMethods Methods

1.1.18.1.1 NativeMethods.ActivateCardEx Method

C#

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

Remarks

This is ActivateCardEx, a member of class NativeMethods.

1.1.18.1.2 NativeMethods.CardDecryptFile Method

C#

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

Remarks

This is CardDecryptFile, a member of class NativeMethods.

1.1.18.1.3 NativeMethods.CardEncryptFile Method

C#

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

Remarks

This is CardEncryptFile, a member of class NativeMethods.

1.1.18.1.4 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.

1.1.18.1.5 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.

1.1.18.1.6 NativeMethods.ClearFileAttributes Method

C#

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

Remarks

This is ClearFileAttributes, a member of class NativeMethods.

1.1.18.1.7 NativeMethods.ClearUnusedMemory Method

C#

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

Remarks

This is ClearUnusedMemory, a member of class NativeMethods.

1.1.18.1.8 NativeMethods.CreateCardBuffer Method

C#

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

Remarks

This is CreateCardBuffer, a member of class NativeMethods.

1.1.18.1.9 NativeMethods.CreateUnicodeFile Method

C#

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

Remarks

This is CreateUnicodeFile, a member of class NativeMethods.

1.1.18.1.10 NativeMethods.CurrentIPAddress Method

C#

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

Remarks

This is CurrentIPAddress, a member of class NativeMethods.

1.1.18.1.11 NativeMethods.DeactivateCardEx Method

C#

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

Remarks

This is DeactivateCardEx, a member of class NativeMethods.

1.1.18.1.12 NativeMethods.DecryptFileAES Method

C#

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

Remarks

This is DecryptFileAES, a member of class NativeMethods.

1.1.18.1.13 NativeMethods.DeleteCardBuffer Method

C#

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

Remarks

This is DeleteCardBuffer, a member of class NativeMethods.

1.1.18.1.14 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.

1.1.18.1.15 NativeMethods.DeleteToRecycleBin Method

C#

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

Remarks

This is DeleteToRecycleBin, a member of class NativeMethods.

1.1.18.1.16 NativeMethods.DirectoryExists Method

C#

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

Remarks

This is DirectoryExists, a member of class NativeMethods.

1.1.18.1.17 NativeMethods.DisplayCertificate Method

C#

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

Remarks

This is DisplayCertificate, a member of class NativeMethods.

1.1.18.1.18 NativeMethods.EmptyRecycleBin Method

C#

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

Remarks

This is EmptyRecycleBin, a member of class NativeMethods.

1.1.18.1.19 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.

1.1.18.1.20 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.

1.1.18.1.21 NativeMethods.EncryptFileAES Method

C#

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

Remarks

This is EncryptFileAES, a member of class NativeMethods.

1.1.18.1.22 NativeMethods.FileCopy Method

C#

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

Remarks

This is FileCopy, a member of class NativeMethods.

1.1.18.1.23 NativeMethods.FileDelete Method

C#

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

Remarks

This is FileDelete, a member of class NativeMethods.

1.1.18.1.24 NativeMethods.FileExists Method

C#

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

Remarks

This is FileExists, a member of class NativeMethods.

1.1.18.1.25 NativeMethods.FileExtensionIs Method

C#

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

Remarks

This is FileExtensionIs, a member of class NativeMethods.

1.1.18.1.26 NativeMethods.FileGetSize Method

C#

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

Remarks

This is FileGetSize, a member of class NativeMethods.

1.1.18.1.27 NativeMethods.FileIsExe Method

C#

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

Remarks

This is FileIsExe, a member of class NativeMethods.

1.1.18.1.28 NativeMethods.FileIsIcon Method

C#

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

Remarks

This is FileIsIcon, a member of class NativeMethods.

1.1.18.1.29 NativeMethods.FileIsImage Method

C#

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

Remarks

This is FileIsImage, a member of class NativeMethods.

1.1.18.1.30 NativeMethods.FileIsLink Method

C#

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

Remarks

This is FileIsLink, a member of class NativeMethods.

1.1.18.1.31 NativeMethods.FileOrFolderExists Method

C#

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

Remarks

This is FileOrFolderExists, a member of class NativeMethods.

1.1.18.1.32 NativeMethods.FileRename Method

C#

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

Remarks

This is FileRename, a member of class NativeMethods.

1.1.18.1.33 NativeMethods.FullPath Method

C#

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

Remarks

This is FullPath, a member of class NativeMethods.

1.1.18.1.34 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.

1.1.18.1.35 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.

1.1.18.1.36 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.

1.1.18.1.37 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.

1.1.18.1.38 NativeMethods.GenerateQRCodeEx Method

C#

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

Remarks

This is GenerateQRCodeEx, a member of class NativeMethods.

1.1.18.1.39 NativeMethods.GetCardBufferA Method

C#

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

Remarks

This is GetCardBufferA, a member of class NativeMethods.

1.1.18.1.40 NativeMethods.GetCardBufferSize Method

C#

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

Remarks

This is GetCardBufferSize, a member of class NativeMethods.

1.1.18.1.41 NativeMethods.GetCardBufferW Method

C#

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

Remarks

This is GetCardBufferW, a member of class NativeMethods.

1.1.18.1.42 NativeMethods.GetCardSerialNumber Method

C#

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

Remarks

This is GetCardSerialNumber, a member of class NativeMethods.

1.1.18.1.43 NativeMethods.GetEncodedCertificateSize Method

C#

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

Remarks

This is GetEncodedCertificateSize, a member of class NativeMethods.

1.1.18.1.44 NativeMethods.GetEncodedPhotoSize Method

C#

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

Remarks

This is GetEncodedPhotoSize, a member of class NativeMethods.

1.1.18.1.45 NativeMethods.GetFileMD5 Method

C#

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

Remarks

This is GetFileMD5, a member of class NativeMethods.

1.1.18.1.46 NativeMethods.GetFilesCount Method

C#

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

Remarks

This is GetFilesCount, a member of class NativeMethods.

1.1.18.1.47 NativeMethods.GetFileSHA1 Method

C#

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

Remarks

This is GetFileSHA1, a member of class NativeMethods.

1.1.18.1.48 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.

1.1.18.1.49 NativeMethods.GetISOCCode Method

C#

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

Remarks

This is GetISOCCode, a member of class NativeMethods.

1.1.18.1.50 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.

1.1.18.1.51 NativeMethods.GetReaderIndex Method

C#

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

Remarks

This is GetReaderIndex, a member of class NativeMethods.

1.1.18.1.52 NativeMethods.GetReaderName Method

C#

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

Remarks

This is GetReaderName, a member of class NativeMethods.

1.1.18.1.53 NativeMethods.GetReaderNameLen Method

C#

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

Remarks

This is GetReaderNameLen, a member of class NativeMethods.

1.1.18.1.54 NativeMethods.GetReadersCount Method

C#

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

Remarks

This is GetReadersCount, a member of class NativeMethods.

1.1.18.1.55 NativeMethods.GetSelectedReaderIndex Method

C#

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

Remarks

This is GetSelectedReaderIndex, a member of class NativeMethods.

1.1.18.1.56 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.

1.1.18.1.57 NativeMethods.GetStartup Method

C#

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

Remarks

This is GetStartup, a member of class NativeMethods.

1.1.18.1.58 NativeMethods.HibernateWindows Method

C#

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

Remarks

This is HibernateWindows, a member of class NativeMethods.

1.1.18.1.59 NativeMethods.IsAnimatedGIF Method

C#

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

Remarks

This is IsAnimatedGIF, a member of class NativeMethods.

1.1.18.1.60 NativeMethods.IsCardActivatedEx Method

C#

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

Remarks

This is IsCardActivatedEx, a member of class NativeMethods.

1.1.18.1.61 NativeMethods.IsCardPresentEx Method

C#

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

Remarks

This is IsCardPresentEx, a member of class NativeMethods.

1.1.18.1.62 NativeMethods.IsCardStillInsertedEx Method

C#

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

Remarks

This is IsCardStillInsertedEx, a member of class NativeMethods.

1.1.18.1.63 NativeMethods.IsConnectedToInternet Method

C#

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

Remarks

This is IsConnectedToInternet, a member of class NativeMethods.

1.1.18.1.64 NativeMethods.IsDirectory Method

C#

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

Remarks

This is IsDirectory, a member of class NativeMethods.

1.1.18.1.65 NativeMethods.IsEIDCardEx Method

C#

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

Remarks

This is IsEIDCardEx, a member of class NativeMethods.

1.1.18.1.66 NativeMethods.IsEngineActive Method

C#

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

Remarks

This is IsEngineActive, a member of class NativeMethods.

1.1.18.1.67 NativeMethods.IsMale Method

C#

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

Remarks

This is IsMale, a member of class NativeMethods.

1.1.18.1.68 NativeMethods.IsMediaCenter Method

C#

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

Remarks

This is IsMediaCenter, a member of class NativeMethods.

1.1.18.1.69 NativeMethods.IsMetroActive Method

C#

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

Remarks

This is IsMetroActive, a member of class NativeMethods.

1.1.18.1.70 NativeMethods.IsMultiTouchReady Method

C#

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

Remarks

This is IsMultiTouchReady, a member of class NativeMethods.

1.1.18.1.71 NativeMethods.IsTabletPC Method

C#

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

Remarks

This is IsTabletPC, a member of class NativeMethods.

1.1.18.1.72 NativeMethods.IsUnicodeFile Method

C#

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

Remarks

This is IsUnicodeFile, a member of class NativeMethods.

1.1.18.1.73 NativeMethods.IsValidFileName Method

C#

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

Remarks

This is IsValidFileName, a member of class NativeMethods.

1.1.18.1.74 NativeMethods.IsValidPathName Method

C#

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

Remarks

This is IsValidPathName, a member of class NativeMethods.

1.1.18.1.75 NativeMethods.IsWindows10 Method

C#

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

Remarks

This is IsWindows10, a member of class NativeMethods.

1.1.18.1.76 NativeMethods.IsWindows7 Method

C#

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

Remarks

This is IsWindows7, a member of class NativeMethods.

1.1.18.1.77 NativeMethods.IsWindows8 Method

C#

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

Remarks

This is IsWindows8, a member of class NativeMethods.

1.1.18.1.78 NativeMethods.IsWindowsVista Method

C#

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

Remarks

This is IsWindowsVista, a member of class NativeMethods.

1.1.18.1.79 NativeMethods.IsWindowsXP Method

C#

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

Remarks

This is IsWindowsXP, a member of class NativeMethods.

1.1.18.1.80 NativeMethods.IsWOW64 Method

C#

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

Remarks

This is IsWOW64, a member of class NativeMethods.

1.1.18.1.81 NativeMethods.LoadCertificate Method

C#

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

Remarks

This is LoadCertificate, a member of class NativeMethods.

1.1.18.1.82 NativeMethods.LoadPhoto Method

C#

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

Remarks

This is LoadPhoto, a member of class NativeMethods.

1.1.18.1.83 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.

1.1.18.1.84 NativeMethods.PortAvailable Method

C#

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

Remarks

This is PortAvailable, a member of class NativeMethods.

1.1.18.1.85 NativeMethods.ReadAddressEx Method

C#

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

Remarks

This is ReadAddressEx, a member of class NativeMethods.

1.1.18.1.86 NativeMethods.ReadAuthenticationCertificate Method

C#

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

Remarks

This is ReadAuthenticationCertificate, a member of class NativeMethods.

1.1.18.1.87 NativeMethods.ReadCaCertificate Method

C#

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

Remarks

This is ReadCaCertificate, a member of class NativeMethods.

1.1.18.1.88 NativeMethods.ReadIdentityEx Method

C#

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

Remarks

This is ReadIdentityEx, a member of class NativeMethods.

1.1.18.1.89 NativeMethods.ReadNonRepudiationCertificate Method

C#

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

Remarks

This is ReadNonRepudiationCertificate, a member of class NativeMethods.

1.1.18.1.90 NativeMethods.ReadPhotoEx Method

C#

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

Remarks

This is ReadPhotoEx, a member of class NativeMethods.

1.1.18.1.91 NativeMethods.ReadRootCaCertificate Method

C#

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

Remarks

This is ReadRootCaCertificate, a member of class NativeMethods.

1.1.18.1.92 NativeMethods.ReadRrnCertificate Method

C#

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

Remarks

This is ReadRrnCertificate, a member of class NativeMethods.

1.1.18.1.93 NativeMethods.RecycleBinEmpty Method

C#

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

Remarks

This is RecycleBinEmpty, a member of class NativeMethods.

1.1.18.1.94 NativeMethods.ReloadReadersList Method

C#

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

Remarks

This is ReloadReadersList, a member of class NativeMethods.

1.1.18.1.95 NativeMethods.RemoveCallback Method

C#

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

Remarks

This is RemoveCallback, a member of class NativeMethods.

1.1.18.1.96 NativeMethods.RemoveStartup Method

C#

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

Remarks

This is RemoveStartup, a member of class NativeMethods.

1.1.18.1.97 NativeMethods.SaveAuthenticationCertificateEx Method

C#

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

Remarks

This is SaveAuthenticationCertificateEx, a member of class NativeMethods.

1.1.18.1.98 NativeMethods.SaveCaCertificateEx Method

C#

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

Remarks

This is SaveCaCertificateEx, a member of class NativeMethods.

1.1.18.1.99 NativeMethods.SaveCardToToXMLStreamExA Method

C#

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

Remarks

This is SaveCardToToXMLStreamExA, a member of class NativeMethods.

1.1.18.1.100 NativeMethods.SaveCardToToXMLStreamExW Method

C#

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

Remarks

This is SaveCardToToXMLStreamExW, a member of class NativeMethods.

1.1.18.1.101 NativeMethods.SaveCardToXmlEx Method

C#

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

Remarks

This is SaveCardToXmlEx, a member of class NativeMethods.

1.1.18.1.102 NativeMethods.SaveCardToXmlExAnsi Method

C#

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

Remarks

This is SaveCardToXmlExAnsi, a member of class NativeMethods.

1.1.18.1.103 NativeMethods.SaveNonRepudiationCertificateEx Method

C#

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

Remarks

This is SaveNonRepudiationCertificateEx, a member of class NativeMethods.

1.1.18.1.104 NativeMethods.SavePersonCsvToStreamA Method

C#

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

Remarks

This is SavePersonCsvToStreamA, a member of class NativeMethods.

1.1.18.1.105 NativeMethods.SavePersonCsvToStreamW Method

C#

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

Remarks

This is SavePersonCsvToStreamW, a member of class NativeMethods.

1.1.18.1.106 NativeMethods.SavePersonToCsvEx Method

C#

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

Remarks

This is SavePersonToCsvEx, a member of class NativeMethods.

1.1.18.1.107 NativeMethods.SavePersonToCsvExAnsi Method

C#

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

Remarks

This is SavePersonToCsvExAnsi, a member of class NativeMethods.

1.1.18.1.108 NativeMethods.SavePhotoAsBitmapEx Method

C#

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

Remarks

This is SavePhotoAsBitmapEx, a member of class NativeMethods.

1.1.18.1.109 NativeMethods.SavePhotoAsJpegEx Method

C#

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

Remarks

This is SavePhotoAsJpegEx, a member of class NativeMethods.

1.1.18.1.110 NativeMethods.SaveRootCaCertificateEx Method

C#

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

Remarks

This is SaveRootCaCertificateEx, a member of class NativeMethods.

1.1.18.1.111 NativeMethods.SaveRrnCertificateEx Method

C#

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

Remarks

This is SaveRrnCertificateEx, a member of class NativeMethods.

1.1.18.1.112 NativeMethods.SelectReader Method

C#

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

Remarks

This is SelectReader, a member of class NativeMethods.

1.1.18.1.113 NativeMethods.SelectReaderByName Method

C#

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

Remarks

This is SelectReaderByName, a member of class NativeMethods.

1.1.18.1.114 NativeMethods.SetCallback Method

C#

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

Remarks

This is SetCallback, a member of class NativeMethods.

1.1.18.1.115 NativeMethods.SetStartup Method

C#

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

Remarks

This is SetStartup, a member of class NativeMethods.

1.1.18.1.116 NativeMethods.ShellCopyFile Method

C#

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

Remarks

This is ShellCopyFile, a member of class NativeMethods.

1.1.18.1.117 NativeMethods.ShowError Method

C#

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

Remarks

This is ShowError, a member of class NativeMethods.

1.1.18.1.118 NativeMethods.ShutdownWindows Method

C#

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

Remarks

This is ShutdownWindows, a member of class NativeMethods.

1.1.18.1.119 NativeMethods.StartEngine Method

C#

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

Remarks

This is StartEngine, a member of class NativeMethods.

1.1.18.1.120 NativeMethods.StopEngine Method

C#

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

Remarks

This is StopEngine, a member of class NativeMethods.

1.1.18.1.121 NativeMethods.StripFileName Method

C#

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

Remarks

This is StripFileName, a member of class NativeMethods.

1.1.18.1.122 NativeMethods.SuspendWindows Method

C#

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

Remarks

This is SuspendWindows, a member of class NativeMethods.

1.1.18.1.123 NativeMethods.TurnMonitorOff Method

C#

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

Remarks

This is TurnMonitorOff, a member of class NativeMethods.

1.1.18.1.124 NativeMethods.TurnMonitorOn Method

C#

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

Remarks

This is TurnMonitorOn, a member of class NativeMethods.

1.1.18.1.125 NativeMethods.VerifyPinEx Method

C#

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

Remarks

This is VerifyPinEx, a member of class NativeMethods.

1.1.18.1.126 NativeMethods.VerifySignature Method

C#

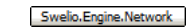
```
public static bool VerifySignature([In, Out] EIDCertificate Certificate, byte[] dataHash, int hashSize, byte[] signature, int signatureSize);
```

Remarks

This is VerifySignature, a member of class NativeMethods.

1.1.19 Network Class

Inheritance Hierarchy



C#

```
public static class Network;
```

File

Network.cs ([↗](#) see page 100)

Remarks

This is class Swelio.Engine.Network.

Members

Network Methods

	Name	Description
	PortAvailable (↗ see page 83)	Ports the available.

Network Properties

	Name	Description
	CurrentIPAddress (↗ see page 83)	Gets the current IP address.
	IsConnectedToInternet (↗ see page 83)	Gets a value indicating whether PC is connected to internet.

Network Methods

	Name	Description
	PortAvailable (↗ see page 83)	Ports the available.

Network Properties

	Name	Description
	CurrentIPAddress (↗ see page 83)	Gets the current IP address.
	IsConnectedToInternet (↗ see page 83)	Gets a value indicating whether PC is connected to internet.

1.1.19.1 Network Methods

1.1.19.1.1 Network.PortAvailable Method

Ports the available.

C#

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

Parameters

Parameters	Description
int portNumber	The port number.

1.1.19.2 Network Properties

1.1.19.2.1 Network.CurrentIPAddress Property

Gets the current IP address.

C#

```
public static string CurrentIPAddress;
```

1.1.19.2.2 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.

1.1.20 QRCode Class

QR Code encoder class

Inheritance Hierarchy






C#

```
public static class QRCode;
```




File

QRCode.cs (🔗 see page 101)

Members**QRCode Methods**

	Name	Description
	GenerateBitmap (see page 84)	Generates the bitmap.
	GeneratePng (see page 85)	Generates the PNG.
	GetBitmap (see page 85)	Gets the bitmap.

QRCode Methods

	Name	Description
	GenerateBitmap (see page 84)	Generates the bitmap.
	GeneratePng (see page 85)	Generates the PNG.
	GetBitmap (see page 85)	Gets the bitmap.

1.1.20.1 QRCode Methods**1.1.20.1.1 GenerateBitmap Method****1.1.20.1.1.1 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.

1.1.20.1.1.2 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.

1.1.20.1.2 GeneratePng Method

1.1.20.1.2.1 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.

1.1.20.1.2.2 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.

1.1.20.1.3 GetBitmap Method

1.1.20.1.3.1 QRCode.GetBitmap Method (string, ErrorCorrectionLevel)

Gets the bitmap.

C#

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

Parameters

Parameters	Description
string text	The text.

1.1.20.1.3.2 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.

1.1.21 RecycleBin Class

Send (see page 87) files directly to the recycle bin.

Inheritance Hierarchy

Swelio.Engine.RecycleBin

C#




```
public static class RecycleBin;
```

File

RecycleBin.cs (see page 101)

Members




RecycleBin Methods

	Name	Description
	Clear (see page 86)	This is Clear, a member of class RecycleBin.
	Send (see page 87)	Send file to recycle bin. Display dialog, display warning if files are too big to fit
	SendSilent (see page 87)	Send (see page 87) file silently to recycle bin. Surpress dialog, surpress errors, delete if too large.

RecycleBin Properties

	Name	Description
	IsEmpty (see page 87)	Gets a value indicating whether thee recycle bin is empty.

RecycleBin Methods

	Name	Description
	Clear (see page 86)	This is Clear, a member of class RecycleBin.
	Send (see page 87)	Send file to recycle bin. Display dialog, display warning if files are too big to fit
	SendSilent (see page 87)	Send (see page 87) file silently to recycle bin. Surpress dialog, surpress errors, delete if too large.

RecycleBin Properties

	Name	Description
	IsEmpty (see page 87)	Gets a value indicating whether thee recycle bin is empty.

1.1.21.1 RecycleBin Methods

1.1.21.1.1 RecycleBin.Clear Method

C#

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

Remarks

This is Clear, a member of class RecycleBin.

1.1.21.1.2 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

1.1.21.1.3 RecycleBin.SendSilent Method

Send (see page 87) 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

1.1.21.2 RecycleBin Properties

1.1.21.2.1 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.

1.1.22 WindowsOperations Class

Windows power management class

Inheritance Hierarchy



C#







```
public static class WindowsOperations;
```

File







WindowsOperations.cs (see page 101)

Members

WindowsOperations Methods

	Name	Description
	Hibernate ( see page 88)	Hibernate computer
	Shutdown ( see page 88)	Shutdown Computer
	Suspend ( see page 88)	Suspends computer

WindowsOperations Methods

	Name	Description
	Hibernate ( see page 88)	Hibernate computer
	Shutdown ( see page 88)	Shutdown Computer
	Suspend ( see page 88)	Suspends computer

1.1.22.1 WindowsOperations Methods

1.1.22.1.1 WindowsOperations.Hibernate Method

Hibernate computer

C#

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

1.1.22.1.2 WindowsOperations.Shutdown Method

Shutdown Computer

C#

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

Parameters

Parameters	Description
ShutdownOption option	The option.

1.1.22.1.3 WindowsOperations.Suspend Method

Suspends computer

C#

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

1.1.23 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 96)

1.1.24 Swelio.Engine.CertificateType Enumeration

C#

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

File

CertificateType.cs (🔗 see page 97)

Remarks

This is record Swelio.Engine.CertificateType.

1.1.25 Swelio.Engine.ChangeWindowMessageFilterFlags Enumeration

C#

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

File

NativeTypes.cs (🔗 see page 100)

Remarks

This is record Swelio.Engine.ChangeWindowMessageFilterFlags.

1.1.26 Swelio.Engine.DocumentType Enumeration

C#

```
public enum DocumentType {  
    Unknown,  
    BelgianCitizen,  
    EuropeanCommunity,  
    NonEuropeanCommunity,  
    KidsCard,  
    BootstrapCard,  
    HabilitationCard,  
    ForeignerCard  
}
```

File

DocumentType.cs ([see page 97](#))

Remarks

This is record Swelio.Engine.DocumentType.

1.1.27 Swelio.Engine.ErrorCorrectionLevel Enumeration

C#

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

File

QRCode.cs ([see page 101](#))

Remarks

This is record Swelio.Engine.ErrorCorrectionLevel.

1.1.28 Swelio.Engine.ExportFormat Enumeration

C#

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

File

ExportFormat.cs ([see page 98](#))

Remarks

This is record Swelio.Engine.ExportFormat.

1.1.29 Swelio.Engine.FileEncoding Enumeration

C#

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

File

FileEncoding.cs ([see page 98](#))

Remarks

This is record Swelio.Engine.FileEncoding.

1.1.30 Swelio.Engine.Gender Enumeration

C#

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

File

Gender.cs ([see page 99](#))

Remarks

This is record Swelio.Engine.Gender.

1.1.31 Swelio.Engine.PhotoFormat Enumeration

C#

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

File

PhotoFormat.cs ([see page 101](#))

Remarks

This is record Swelio.Engine.PhotoFormat.

1.1.32 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 101](#))

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.

1.1.33 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 100](#))

Remarks

This is type Swelio.Engine.ReaderCallbackDelegate.

1.2 Files

The following table lists files in this documentation.

Files

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1.2.1 Address.cs

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1.2.2 Card.cs

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1.2.3 CardDate.cs

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1.2.4 CardEvent.cs

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1.2.5 CardEventArgs.cs

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1.2.6 CardNumber.cs

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1.2.7 CardReader.cs

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1.2.8 CertificateType.cs

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1.2.9 DocumentType.cs

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1.2.10 Encryption.cs

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1.2.11 ExportFormat.cs

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1.2.12 FileEncoding.cs

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1.2.13 FileOperations.cs

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1.2.14 Gender.cs

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1.2.15 Identity.cs

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1.2.16 InteropHelper.cs

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1.2.17 Manager.cs

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1.2.18 NationalNumber.cs

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1.2.19 NativeMethods.cs

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1.2.20 NativeTypes.cs

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1.2.21 Network.cs

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1.2.22 PhotoFormat.cs

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1.2.23 QRCode.cs

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1.2.24 RecycleBin.cs

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1.2.25 WindowsOperations.cs

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