

# ***SEKONIC***

OPTICAL  
MARK READER

**Windows API  
Reference Manual**

# Index

1. Introduction .....	1
2. Provided Files .....	2
3. System Requirements .....	3
3.1 System Requirements .....	3
3.2 Development Tools .....	3
4. API Function Reference .....	4
4.1 Constants .....	4
4.2 API System Controls .....	7
4.2.1 OMR_OpenDeviceUSB .....	7
4.2.2 OMR_CloseDevice .....	7
4.2.3 OMR_GetLastError .....	7
4.2.4 OMR_FormatMessage .....	8
4.2.5 OMR_GetST .....	8
4.3 Reader Settings .....	9
4.3.1 OMR_SetNumberOfColumnsToRead .....	9
4.3.2 OMR_GetNumberOfColumnsToRead .....	9
4.3.3 OMR_SetReadingMethod .....	10
4.3.4 OMR_GetReadingMethod .....	10
4.3.5 OMR_SetBackSensorUnit .....	11
4.3.6 OMR_GetBackSensorUnit .....	11
4.3.7 OMR_SetSheetFeedMode .....	12
4.3.8 OMR_GetSheetFreeMode .....	12
4.3.9 OMR_SetSheetThickness .....	13
4.3.10 OMR_GetSheetThickness .....	13
4.3.11 OMR_SetWarningError .....	14
4.3.12 OMR_GetWarningError .....	15
4.3.13 OMR_SetPanelConfig .....	16
4.3.14 OMR_GetPanelConfig .....	16
4.3.15 OMR_SetBuzzerConfig .....	17
4.3.16 OMR_GetBuzzerConfig .....	17
4.3.17 OMR_SetID .....	18
4.3.18 OMR_GetID .....	18
4.3.19 OMR_SetSleepTime .....	19
4.3.20 OMR_GetSleepTime .....	19
4.4 Operation Requests .....	20
4.4.1 OMR_Reset .....	20
4.4.2 OMR_FeedSheet .....	20
4.4.3 OMR_MoveHopper .....	20
4.4.4 OMR_EjectSheet .....	21
4.4.5 OMR_InitialSetting .....	21
4.4.6 OMR_CancelError .....	21
4.5 Data Requests .....	22
4.5.1 OMR_GetMarks .....	22
4.5.2 OMR_GetStatus .....	23
4.5.3 OMR_GetSensorInfo .....	24
4.5.4 OMR_GetDeviceInfo .....	25
4.5.5 OMR_GetMachineName .....	26

4.5.6 OMR_GetVersion .....	26
4.6 Printer Settings .....	27
4.6.1 OMR_SetPrintUnit .....	27
4.6.2 OMR_GetPrintUnit .....	27
4.6.3 OMR_SetPrintOrder .....	28
4.6.4 OMR_GetPrintOrder .....	28
4.6.5 OMR_SetPrinterMode .....	29
4.6.6 OMR_GetPrinterMode .....	29
4.6.7 OMR_SetPrintPosition .....	30
4.6.8 OMR_GetPrintPosition .....	30
4.6.9 OMR_SetPrintAngle .....	31
4.6.10 OMR_GetPrintAngle .....	31
4.6.11 OMR_SetPrintFontSize .....	32
4.6.12 OMR_GetPrintFontSize .....	32
4.6.13 OMR_SetPrintFontPitch .....	33
4.6.14 OMR_GetPrintFontPitch .....	33
4.6.15 OMR_SetPrintString .....	34
4.6.16 OMR_GetPrintString .....	34
4.7 Bar Code Controls .....	35
4.7.1 OMR_GetBarcodeInfo .....	35
4.7.2 OMR_GetBarcodeData .....	35
4.7.3 OMR_SetBarcodeReaderUnit .....	36
4.7.4 OMR_GetBarcodeReaderUnit .....	36
4.7.5 OMR_SetBarCodeArea .....	37
4.7.6 OMR_GetBarCodeArea .....	37
4.7.7 OMR_SetBarCodeReadType .....	38
4.7.8 OMR_GetBarCodeReadType .....	38
4.7.9 OMR_SetBarCodeCheckDigit .....	39
4.7.10 OMR_GetBarCodeCheckDigit .....	39
4.7.11 OMR_SetBarCodeUpcOption .....	40
4.7.12 OMR_GetBarCodeUpcOption .....	40
4.8 API List .....	41

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# 1. Introduction

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This manual explains the use of API(\*) for USB communications(ver.1.1/2.0) control of Sekonic's OMR SR-2300/5500/3500/6000/6500/1800.

The Microsoft Windows platform environment was utilized for developing efficient OMR control applications. Regarding further details on the platform environment, please refer to the "System Requirements" section.

In order to control OMR, it is necessary to have a personal computer (PC) connected to the OMR by a USB cable.

OMR will operate according to control commands from the PC.

Functions will be created for each command (and response), so that they can be utilized as API reference.

This document provides detailed explanation on each function, and explains the parameters that can be transferred to each function. Actual usage examples are included for reference as well.

API usage can be classified into the following 4 categories:

- (1) System control : interface initialization (connection) etc.
- (2) Setting Parameters : conduct necessary mark-sheet reading settings.
- (3) Action Command : Commands for reading and disposing paper, etc.
- (4) Data Reques : Collects data such as mark sheet reading results and OMR condition, etc.

Each of the sample functions mentioned above are simple, but do include how to declare variables and how to augment the utility of the functions.

Please also refer to the OMR users guide.

(\*)API=Application Programming Interface

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## 2. Provided Files

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The API that is necessary for controlling Sekonic's OMR through USB communication (Ver.1.1/2.0) is provided by the following files.

- (1) OMRAPI.DLL  
Main file - dynamic library, that provides API functions
- (2) OMRAPI.h  
Heading file for OMRAPI.
- (3) OMRAPI.LIB  
Insertion library that can be linked to OMRAPI.DLL when this is being used.

Below are USB device driver.

- (4) Sksr6500.sys  
A USB device driver used only for Sekonic's OMR.
- (5) SkSr6500.sys / SkSr1800.inf  
Information file for the device driver

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## 3. System Requirements

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### 3.1 System Requirements

Sekonic's OMR's USB connection (ver. 1.1) operates in the following environment.

- (1) Operating System (\*1)
  - Microsoft Windows 2000 Professional
  - Microsoft Windows XP (32-bit)
  - Microsoft Windows Vista (32-bit)
  - Microsoft Windows 7 (32-bit)
- (2) Hard Disk (HD) Capacity
  - At least 5 MB available memory space.
- (3) Memory
  - At least 8 MB available memory when using Windows.
- (4) Device Driver
  - The included device driver must be installed.

(\*1) When the Microsoft finished the support for the system, our support for these operation system will be completed.

### 3.2 Development Tools

This DLL uses only Windows standard API.

Other libraries are not used, therefore, it can be used from within common Windows application development tools (Visual C++, Visual Basic, Borland C++ Builder, etc.).

When using DLL from the development tool, please refer to the operation manual of each development tool and/or reference documents. You can also read the various tool manuals and references in order to use DLL from within the Development tools. It is also possible to document DLL call routine within the code using the Win32API LoadLibrary function. For further details, please refer to Win32API reference materials.

When actually writing code, note that OMRAPI.h must be included.

When executing a compiled application, it must be located in the same folder as the OMRAPI.DLL or must be located in a folder with a path.

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## 4. API Function Reference

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### 4.1 Constant

API return value is based on OMR\_STATUS type.

OMRSTATUS is defined as, typed unsigned int OMR\_STATUS, and includes the following constants.

C Constant Name	Actual Value	Content
SR_SUCCESS	0x00000000	Normal
SR_UNSUCCESSFUL	0x00000001	Error stop (details unknown)
SR_DISCONNECTED	0x00000002	OMR not yet connected
SR_WRONG_PARAMETER	0x00000003	Parameter Incorrect
SR_MEMORY_ERROR	0x00000004	Failure to obtain memory with in DLL
SR_TIMEOUT	0x00000005	Connection Time-Out
SR_RECEIVE_NAK	0x00000006	Received NAK from OMR
SR_WRONG_RESPONSE	0x00000007	Response Format Incorrect
SR_ERROR_STATUS_A1	0x00010000	Main body: Memory Error 1
SR_ERROR_STATUS_A2	0x00010001	Main body: Memory Error 2
SR_ERROR_STATUS_A3	0x00010002	Mainbody: Hopper Activation Error
SR_ERROR_STATUS_A4	0x00010003	Mainbody: Download Error
SR_ERROR_STATUS_A5	0x00010004	Mainbody: Sensor Type Error
SR_ERROR_STATUS_A6	0x00010005	Mainbody: Option Error
SR_ERROR_STATUS_A7	0x00010006	Hardware: Unit Not Connected
SR_ERROR_STATUS_A8	0x00010007	Mainbody: Power Supply Error
SR_ERROR_STATUS_B1F	0x01020000	Front Sensor Unit: Network Communication Error
SR_ERROR_STATUS_B2F	0x01020001	Front Sensor Unit: Internal Communication Error
SR_ERROR_STATUS_B3F	0x01020002	Front Sensor Unit: Memory Error
SR_ERROR_STATUS_B4F	0x01020003	Front Sensor Unit: Adjust Value Error
SR_ERROR_STATUS_B5F	0x01020004	Front Sensor Unit: Download Error
SR_ERROR_STATUS_B6F	0x01020005	Front Sensor Unit: Internal Error
SR_ERROR_STATUS_B7F	0x01020006	Front Reader Unit: Version Compatibility Error
SR_ERROR_STATUS_B1B	0x02020000	Back Sensor Unit: Network Communication Error
SR_ERROR_STATUS_B2B	0x02020001	Back Sensor Unit: Internal Communication Error
SR_ERROR_STATUS_B3B	0x02020002	Back Sensor Unit: Memory Error
SR_ERROR_STATUS_B4B	0x02020003	Back Sensor Unit: Adjust Value Error
SR_ERROR_STATUS_B5B	0x02020004	Back Sensor Unit: Download Error
SR_ERROR_STATUS_B6B	0x02020005	Back Sensor Unit: Internal Error
SR_ERROR_STATUS_B7B	0x02020006	Back Sensor Unit: Version Compatibility Error
SR_ERROR_STATUS_C1	0x03030000	Barcode Reader Unit: Network Communication Error
SR_ERROR_STATUS_C2	0x03030001	Barcode Reader Unit: Internal Communication Error
SR_ERROR_STATUS_C3	0x03030002	Barcode Reader Unit: Memory Error
SR_ERROR_STATUS_C4	0x03030003	Barcode Reader Unit: Sensor Error
SR_ERROR_STATUS_C5	0x03030004	Barcode Reader Unit: Download Error
SR_ERROR_STATUS_C6	0x03030005	Barcode Reader Unit: Internal Error
SR_ERROR_STATUS_C7	0x03030006	Barcode Unit: Version Compatibility Error
SR_ERROR_STATUS_D1	0x04040000	Printer Unit: Network Communication Error
SR_ERROR_STATUS_D2	0x04040001	Printer Unit: Internal Communication Error
SR_ERROR_STATUS_D3	0x04040002	Printer Unit: Memory Error
SR_ERROR_STATUS_D4	0x04040003	Printer Unit: Download Error
SR_ERROR_STATUS_D5	0x04040004	Printer Unit: Internal Error
SR_ERROR_STATUS_D6	0x04040005	Printer Unit: Version Compatibility Error

C Constant Name	Actual Value	Content
SR_ERROR_STATUS_E1	0x05050000	Stacker Unit: Network Communication Error
SR_ERROR_STATUS_E2	0x05050001	Stacker Unit: Internal Communication Error
SR_ERROR_STATUS_E3	0x05050002	Stacker Unit: Memory Error
SR_ERROR_STATUS_E4	0x05050003	Stacker Unit: Download Error
SR_ERROR_STATUS_E5	0x05050004	Stacker Unit: Internal Error
SR_ERROR_STATUS_E6	0x05050005	Stacker Unit: Version Compatibility Error
SR_ERROR_STATUS_F1	0x1f060000	(reserved)
SR_ERROR_STATUS_F2	0x1f060001	(reserved)
SR_ERROR_STATUS_F3	0x1f060002	(reserved)
SR_ERROR_STATUS_F4	0x1f060003	(reserved)
SR_ERROR_STATUS_F5	0x1f060004	Command Error
SR_ERROR_STATUS_F6	0x1f060005	Parameter Error
SR_ERROR_STATUS_F7	0x1f060006	Protocol Error
SR_ERROR_STATUS_G1	0x20070000	Main body: Cover Open
SR_ERROR_STATUS_G2	0x25070001	Stacker Unit: Cover Open
SR_ERROR_STATUS_H1	0x30080000	Main body: No Paper
SR_ERROR_STATUS_H2	0x30080001	Main body: Paper Feed Sensor Jam
SR_ERROR_STATUS_H3	0x30080002	Main body: Read Sensor Paper Jam
SR_ERROR_STATUS_H4	0x30080003	Main body: Output Section Paper Jam
SR_ERROR_STATUS_I1	0x35090000	Stacker Unit: Printer Paper Sensor Unit Jam
SR_ERROR_STATUS_I2	0x35090001	Stacker Unit: Main Paper Outlet Jam
SR_ERROR_STATUS_I3	0x35090002	Stacker Unit: Selected Paper Outlet Jam
SR_ERROR_STATUS_P1	0x42100000	Back Sensor Unit: Disconnected
SR_ERROR_STATUS_P2	0x43100001	Barcode Unit: Disconnected
SR_ERROR_STATUS_P3	0x44100002	Printer Unit: Disconnected
SR_ERROR_STATUS_P4	0x45100003	Stacker Unit: Disconnected
SR_ERROR_STATUS_Q1	0x40110000	Sheet Empty
SR_ERROR_STATUS_Q2	0x40110001	Double Feed Error
SR_ERROR_STATUS_Q3	0x40110002	Left Side Skewer Error
SR_ERROR_STATUS_Q4	0x40110003	Mark Scewer Error
SR_ERROR_STATUS_R1	0x40120000	Main body: Hopper Emergency Termination
SR_ERROR_STATUS_R2	0x40120001	Main body: Extract Error
SR_ERROR_STATUS_R3	0x40120002	Main body: Sheet Insert Time-Out
SR_ERROR_STATUS_R4M	0x40120003	Front/Back Sensor Unit: Timing Mark Error
SR_ERROR_STATUS_R4F	0x41120003	Front Sensor Unit: Timing Mark Error
SR_ERROR_STATUS_R4B	0x42120003	Back Sensor Unit: Timing Mark Error
SR_ERROR_STATUS_R5M	0x40120004	Front/Back Reader Unit: Configuration Error
SR_ERROR_STATUS_R5F	0x41120004	Front Reader Unit: Configuration Error
SR_ERROR_STATUS_R5B	0x42120004	Back Reader Unit: Configuration Error
SR_ERROR_STATUS_S1F	0x41130000	Front Sensor Unit: White Label Error
SR_ERROR_STATUS_S2F	0x41130001	Front Sensor Unit: Black Label Error
SR_ERROR_STATUS_S1B	0x42130002	Back Sensor Unit: White Label Error
SR_ERROR_STATUS_S2B	0x42130003	Back Sensor Unit: Black Label Error
SR_ERROR_STATUS_S3	0x40130002	Main body: Read Sensor Stain Error
SR_ERROR_STATUS_T1	0x40140000	Main body: Paper Remaining near Paper Feed Sensor
SR_ERROR_STATUS_T2	0x40140001	Main body: Paper Remaining near Beginning Reader Sensor
SR_ERROR_STATUS_T3	0x40140002	Main body: Paper Remaining near Paper Output Sensor
SR_ERROR_STATUS_T4	0x45140003	Stacker Unit: Paper Remaining in Printer Paper Sensor Unit
SR_ERROR_STATUS_T5	0x45140004	Stacker Unit: Paper Remaining in Main Paper Outlet
SR_ERROR_STATUS_T6	0x45140005	Stacker Unit: Paper Remaining in Selected Paper Outlet
SR_ERROR_TERM	0xffffffff	Nondefined Status Information