20. How to Connect a Barcode Reader

This chapter explains how to connect a Barcode reader and the relevant settings.
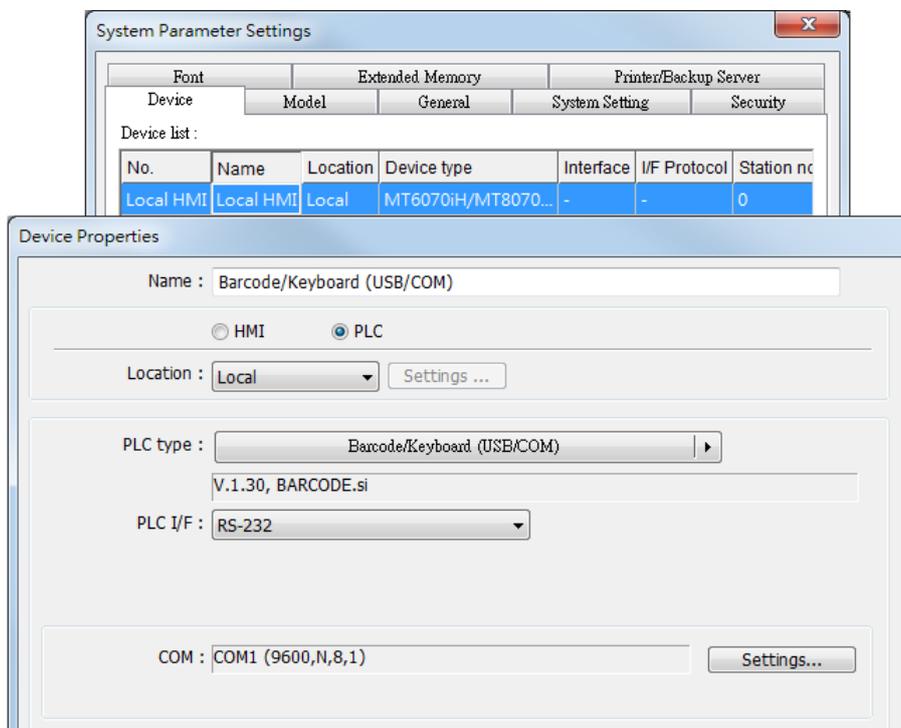
20.1.   Overview

HMI can connect with barcode reader via the following interfaces:
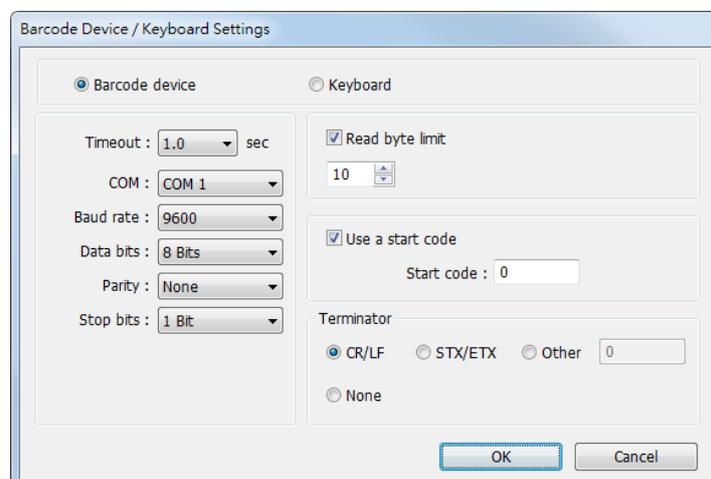- USB
- COM port

To connect a barcode reader, please add a new device by the following steps.

20.2.   Steps to Connect a Barcode Reader

1.   In EasyBuilder Pro click [System Parameters] » [Device list] and add a new device.

2.   Click [Settings] and finish [Barcode Device / Keyboard Settings].

Setting	Description
Timeout	When select [Barcode device], if the device reads slowly, a longer timeout is suggested to read data completely. When select [Keyboard], a time range can be set for keyboard entries. The system starts counting time from the first entry.
COM **Baud rate** **Data bits** **Parity** **Stop bits**	When using COM port, please set the communication parameters correctly. When using USB, there is no need to set the parameters.
Read byte limit	If this check box is selected, the number of bytes a barcode reader reads is restricted in order to prevent overloading. The range is 10 to 512. Please note that the data cannot be read if it exceeds the limit.
Use a start code	If this check box is selected, the data is only valid when the first data is identical to the start code, otherwise the data will be ignored. The start code will not be stored in the address of barcode reader. For example: if the start code is 255 (0xff), and the data read is: 0xff 0x34 0x39 0x31 0x32 0x30 0x30 0x34 0x37 The data saved in the designated barcode reader address will be: 0x34 0x39 0x31 0x32 0x30 0x30 0x34 0x37
Terminator	Terminator means the end of data. When a terminator is detected, it stands for the end of data stream.
CR/LF	0x0a or 0x0d stands for the end of data stream.
STX/ETX	0x02 or 0x03 stands for the end of data stream.
Other	Users can set the terminator.
None	If this check box is selected, HMI will save all the data to the designated address of barcode reader.

When finish setting, a new device is added to the [Device list].

Now the barcode reader can be selected in [PLC type] when creating an object. The address types are listed in the following table.

Address Type	Address Name	Description
Bit	FLAG	**FLAG 0** indicates the status of data reading. When reading data, the status of FLAG 0 is set OFF and will return ON after reading successfully.
	RESET	**RESET 0** clears the data of BARCODE and RESULT when set ON.
	CONNECT_STATUS	**CONNECT_STATUS 0** indicates whether the barcode reader (USB interface) is connected. When the status is ON, the barcode reader is connected.
Word	BARCODE	**BARCODE 0:** Number of bytes currently read. **BARCODE 1 ~ n:** Stores the data read.
	RESULT	**RESULT 0** indicates the result of data reading. The following codes indicate: **0x00** Waiting to read BARCODE. **0x01** BARCODE successfully read. **0x02** Invalid BARCODE format. **0x03** The number of bytes specified in [Read byte limit] exceeded. **0x04** The Start Code of the data read does not match the setting. **0x05** The Terminator of the data read does not match the setting.

Example 1

The following is a setting example, the barcode is 9421007480830. BARCODE 0 is the address of Numeric Object (BYTES) and BARCODE 1 ~ n is the address of ASCII object (BARCODE).

In the example the data stored in the barcode reader address is listed in the following table:

Barcode Reader Address	Data
BARCODE 0	13 bytes (decimal) However, the data saved is 14 bytes = 7 words. It is because when the number of bytes is an odd number, the system adds a byte (0x00) to make it an even number.
BARCODE 1	3439 (HEX)
BARCODE 2	3132 (HEX)
BARCODE 3	3030 (HEX)
BARCODE 4	3437 (HEX)
BARCODE 5	3038 (HEX)
BARCODE 6	3338 (HEX)
BARCODE 7	0030 (HEX)

Note

■ HMI can only connect with one USB barcode reader. When the device list in the project includes this kind of device, the system register LB-9064: [enable USB barcode device (disable keyboard) (when ON)] is set ON. To enable USB keyboard again and stop using USB barcode reader, please set LB-9064 OFF.

⬇ Click the icon to download the demo project. Please confirm your internet connection.