

ZEBRA : PRINTER

Supported version TOP Design Studio V1.0 or higher



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We want to thank our customers who use the Touch Operation Panel.

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Select a TOP model and an external device.
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Refer to this section to check the addresses which can communicate with an external device.

1. System configuration

The system configuration of TOP and "ZEBRA PRINTER" is as follows:

| Series | Link I/F | Communication method | Communication setting | Cable |
|---------------|----------|----------------------|--|------------------------------------|
| ZEBRA PRINTER | - | RS-232C | 3. TOP communication setting | 5.1. Cable table 1 |

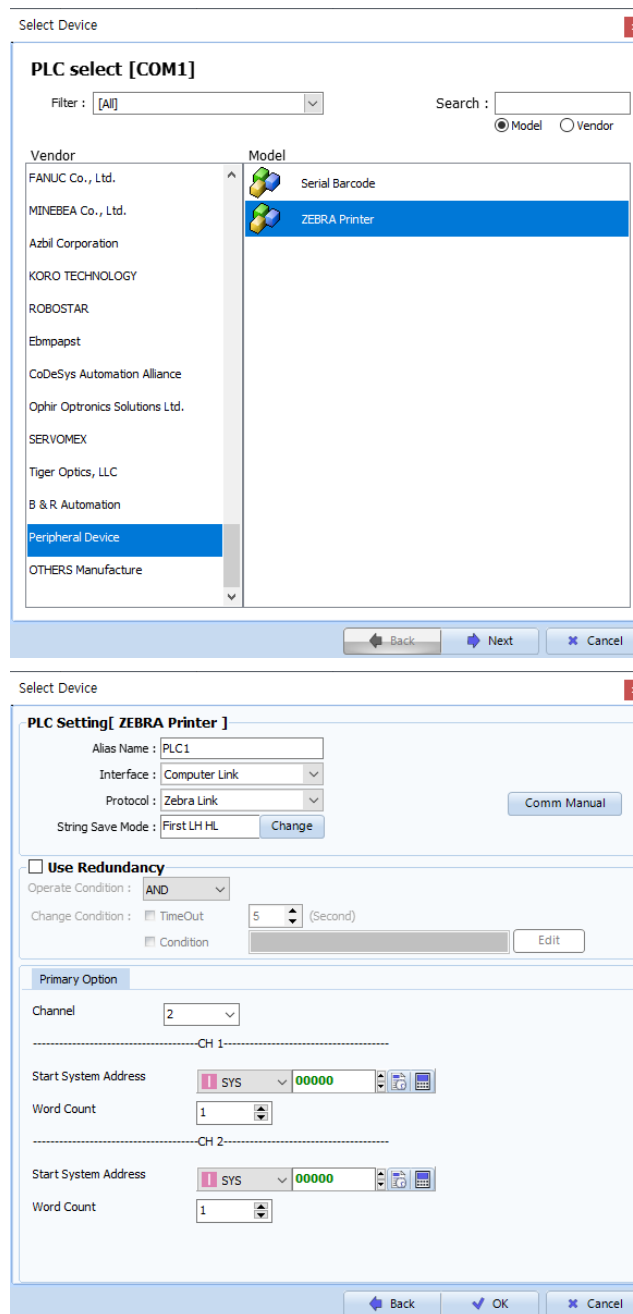
■ Connection configuration

- 1:1 (one TOP and one external device) connection



2. External device selection

- Select a TOP model and a port, and then select an external device.



| Settings | | Contents | | | | | |
|-----------------|---------------|--|-------|-----------|----------|---------------|---------------|
| TOP | Model | Check the TOP display and process to select the touch model. | | | | | |
| External device | Vendor | Select the vendor of the external device to be connected to TOP. Select "Peripheral Device". | | | | | |
| | PLC | Select an external device to connect to TOP. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Model</th> <th>Interface</th> <th>Protocol</th> </tr> </thead> <tbody> <tr> <td>Zebra Printer</td> <td>Computer Link</td> <td>Zebra Link</td> </tr> </tbody> </table> <p>Please check the system configuration in Chapter 1 to see if the external device you want to connect is a model whose system can be configured.</p> | Model | Interface | Protocol | Zebra Printer | Computer Link |
| Model | Interface | Protocol | | | | | |
| Zebra Printer | Computer Link | Zebra Link | | | | | |

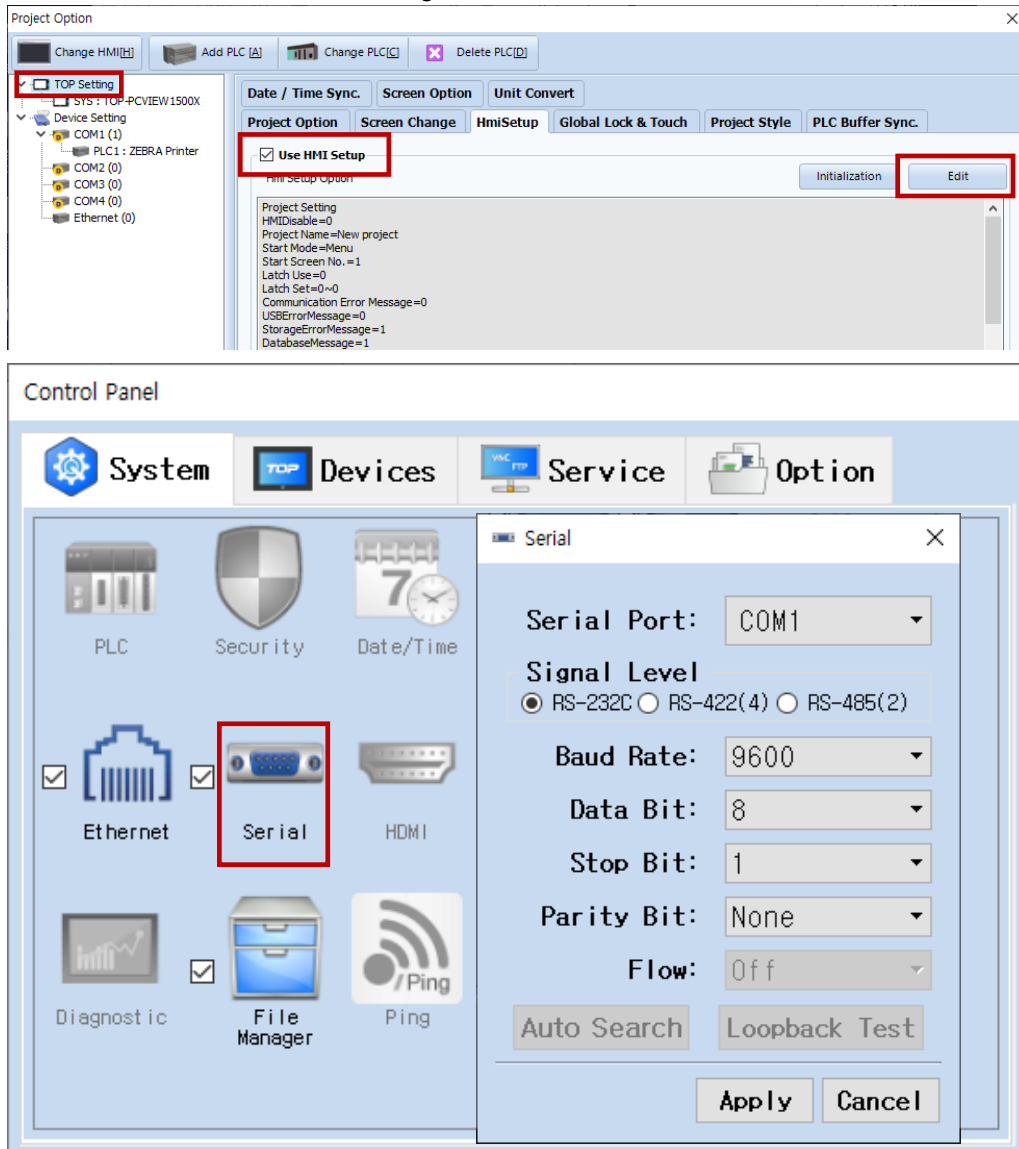
3. TOP communication setting

The communication can be set in TOP Design Studio or TOP main menu. The communication should be set in the same way as that of the external device.

3.1 Communication setting in TOP Design Studio

(1) Communication interface setting

- [Project > Project Property > TOP Setting] → [Project Option > "Use HMI Setup" Check > Edit > Serial]
- Set the TOP communication interface in TOP Design Studio.



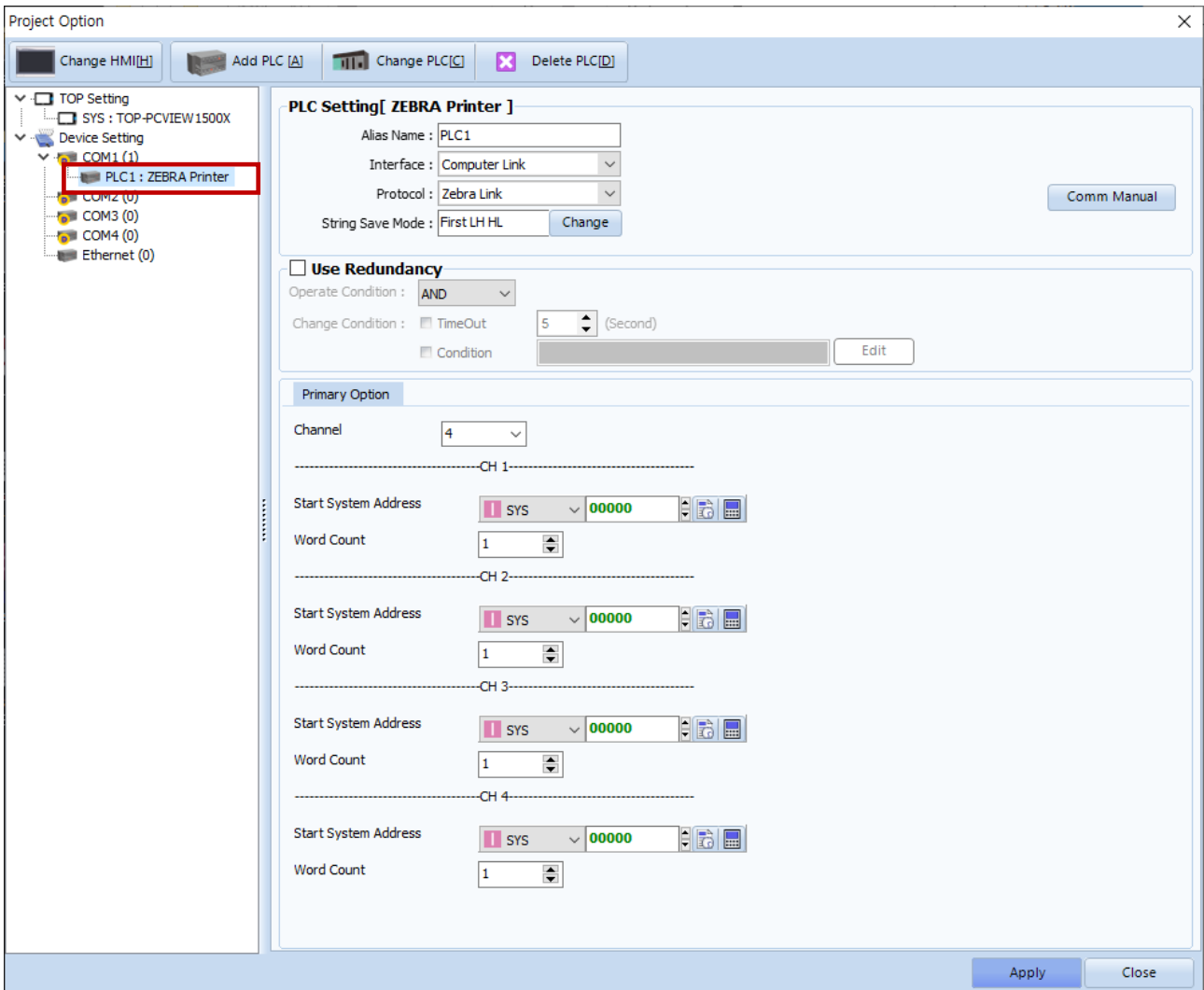
| Items | TOP | External device | Remarks |
|---------------------|---------|-----------------|---------|
| Signal Level (port) | RS-232C | RS-232C | Fixed |
| Baud Rate | 9600 | | Fixed |
| Data Bit | 8 | | Fixed |
| Stop Bit | 1 | | Fixed |
| Parity Bit | NONE | | Fixed |

* The above settings are examples recommended by the company.

| Items | Description |
|--------------|---|
| Signal Level | Select the serial communication method between the TOP and an external device. |
| Baud Rate | Select the serial communication speed between the TOP and an external device. |
| Data Bit | Select the serial communication data bit between the TOP and an external device. |
| Stop Bit | Select the serial communication stop bit between the TOP and an external device. |
| Parity Bit | Select the serial communication parity bit check method between the TOP and an external device. |

(2) Communication option setting

- [Project > Project Property > Device Setting > COM > "ZebraPrinter"]
 - Set the options of the Computer Link communication driver in TOP Design Studio.

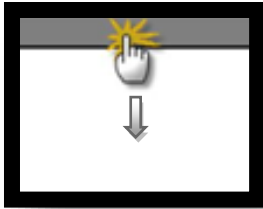


| Items | Settings | Remarks |
|---------------|---|--|
| Interface | Configure the communication interface between the TOP and an external device. | Refer to "2. External device selection". |
| Protocol | Configure the communication protocol between the TOP and an external device. | |
| TimeOut (ms) | Set the time for the TOP to wait for a response from an external device. | |
| SendWait (ms) | Set the waiting time between TOP's receiving a response from an external device and sending the next command request. | |

3.2. Communication setting in TOP

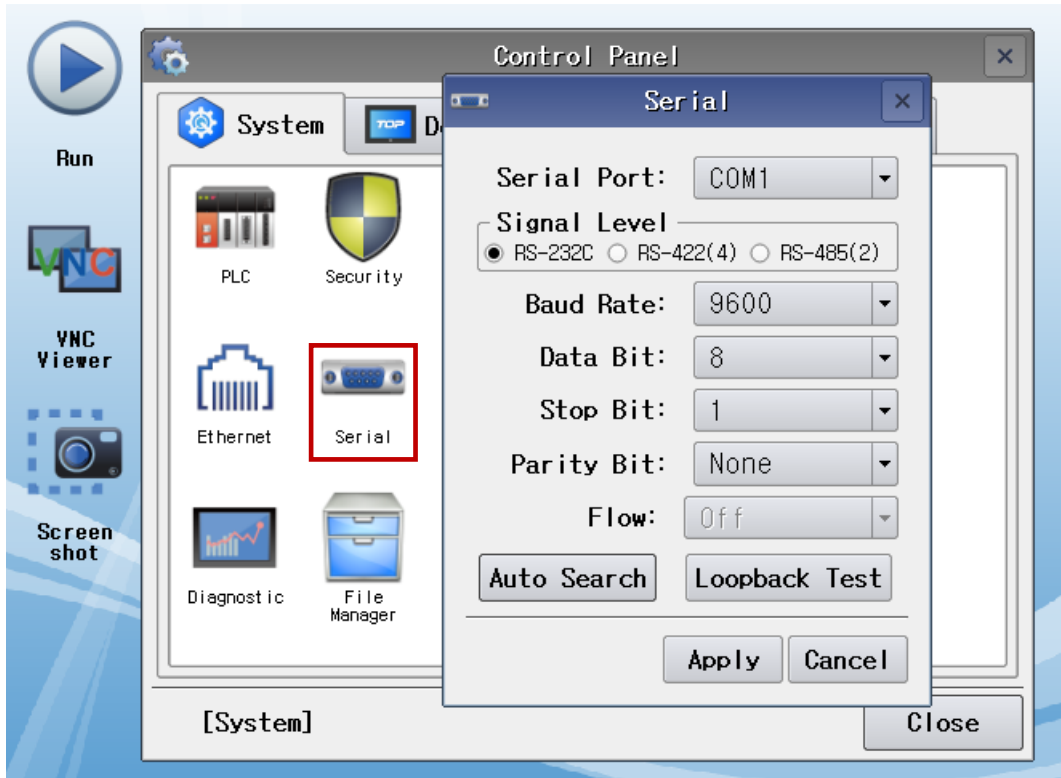
* This is a setting method when "Use HMI Setup" in the setting items in "3.1 TOP Design Studio" is not checked.

- Touch the top of the TOP screen and drag it down. Touch "EXIT" in the pop-up window to go to the main screen.



(1) Communication interface setting

- [Main Screen > Control Panel > Serial]



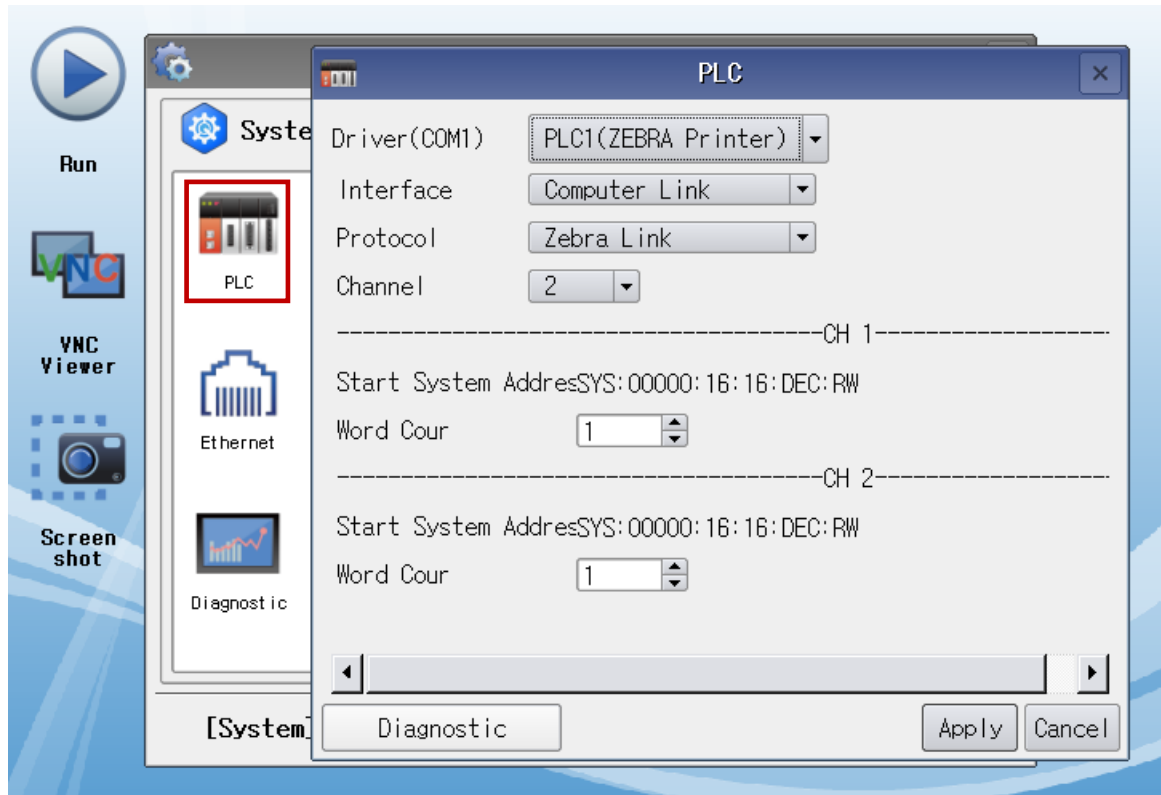
| Items | TOP | External device | Remarks |
|---------------------|---------|-----------------|---------|
| Signal Level (port) | RS-232C | RS-232C | Fixed |
| Baud Rate | 9600 | | Fixed |
| Data Bit | 8 | | Fixed |
| Stop Bit | 1 | | Fixed |
| Parity Bit | NONE | | Fixed |

* The above settings are setting examples recommended by the company.

| Items | Description |
|--------------|---|
| Signal Level | Select the serial communication method between the TOP and an external device. |
| Baud Rate | Select the serial communication speed between the TOP and an external device. |
| Data Bit | Select the serial communication data bit between the TOP and an external device. |
| Stop Bit | Select the serial communication stop bit between the TOP and an external device. |
| Parity Bit | Select the serial communication parity bit check method between the TOP and an external device. |

(2) Communication option setting

■ [Main Screen > Control Panel > PLC]



| Items | Settings | Remarks |
|---------------|---|--|
| Interface | Configure the communication interface between the TOP and an external device. | Refer to "2. External device selection". |
| Protocol | Configure the communication protocol between the TOP and an external device. | |
| TimeOut (ms) | Set the time for the TOP to wait for a response from an external device. | |
| SendWait (ms) | Set the waiting time between TOP's receiving a response from an external device and sending the next command request. | |

3.3 Communication diagnostics

- Check the interface setting status between the TOP and external device.
 - Touch the top of the TOP screen and drag it down. Touch "EXIT" in the pop-up window to go to the main screen.
 - Check if the COM port settings you want to use in [Control Panel > Serial] are the same as those of the external device.

- Diagnosis of whether the port communication is normal or not
 - Touch "Communication diagnostics" in [Control Panel > PLC].
 - The Diagnostics dialog box pops up on the screen and determines the diagnostic status.

| | |
|-----------------------|--|
| OK | Communication setting normal |
| Time Out Error | Communication setting abnormal - Check the cable, TOP, and external device setting status. (Reference: Communication diagnostics sheet) |

- Communication diagnostics sheet
 - If there is a problem with the communication connection with an external terminal, please check the settings in the sheet below.

| Items | Contents | Check | | Remarks | |
|----------------------|---------------------------------------|---------------------------|---|--|----|
| System configuration | How to connect the system | OK | NG | 1. System configuration | |
| | Connection cable name | OK | NG | | |
| TOP | Version information | OK | NG | 2. External device selection 3. Communication setting | |
| | Port in use | OK | NG | | |
| | Driver name | OK | NG | | |
| | Other detailed settings | OK | NG | | |
| | Relative prefix | Project setting | OK | | NG |
| | | Communication diagnostics | OK | | NG |
| | Serial Parameter | Transmission Speed | OK | | NG |
| Data Bit | | OK | NG | | |
| Stop Bit | | OK | NG | | |
| Parity Bit | | OK | NG | | |
| External device | CPU name | OK | NG | 4. External device setting | |
| | Communication port name (module name) | OK | NG | | |
| | Protocol (mode) | OK | NG | | |
| | Setup Prefix | OK | NG | | |
| | Other detailed settings | OK | NG | | |
| | Serial Parameter | Transmission Speed | OK | | NG |
| | | Data Bit | OK | | NG |
| | | Stop Bit | OK | | NG |
| Parity Bit | | OK | NG | | |
| Check address range | OK | NG | 6. Supported addresses (For details, please refer to the PLC vendor's manual.) | | |

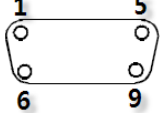
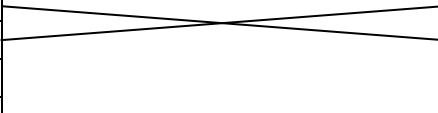
4. Cable table

This chapter introduces a cable diagram for normal communication between the TOP and the corresponding device.
 (The cable diagram described in this section may differ from the recommendations of "ZebraPrinter")

5.1. Cable table 1

■ 1:1 connection

TOP COM Port (9 pin)

| TOP COM | | | Cable connection | PLC | |
|--|-------------|------------|--|-------------|------------|
| Pin arrangement* Note 1) | Signal name | Pin number | | Signal name | Pin number |
|  <p>Based on communication cable connector front, D-SUB 9 Pin male (male, convex)</p> | CD | 1 |  | 1 | CD |
| | RD | 2 | | 2 | RD |
| | SD | 3 | | 3 | SD |
| | DTR | 4 | | 4 | DTR |
| | SG | 5 | | 5 | SG |
| | DSR | 6 | | 6 | DSR |
| | RTS | 7 | | 7 | RTS |
| | CTS | 8 | | 8 | CTS |
| | | 9 | | 9 | |

***Note 1)** The pin arrangement is as seen from the connecting side of the cable connection connector.

5. Supported addresses

The devices available in TOP are as follows:

The device range (address) may differ depending on the CPU module series/type. The TOP series supports the maximum address range used by the external device series. Please refer to each CPU module user manual and be take caution to not deviate from the address range supported by the device you want to use.

| Device | Word Address | 16BIT |
|-------------------|--------------|-------|
| Operation Address | PRINTER | - |

| Items | Contents |
|-------------------|--|
| Operation Address | Device for print start condition. Prints the configured data corresponding to the input value entered for the number of channels of the printer settings. Ex) By entering 2 into the operation address of the device, the second channel will start printing data equal to the number of words starting from the configured start address. |
| Channels | Configures the number of frames to be printed through the ZEBRA PRINTER. |
| Start Address | The start address of the data to be printed. |
| Words | The word count of the data to be printed. |

<Caution>

ZEBRA PRINTER prints data equal to the number of words starting from the configured start address.

If there are any NULL data included within this range, only the ASCII data will be printed.