



I-8142iW-G

2-port Isolated
RS-422/485 Module

I-8144iW-G

4-port Isolated
RS-422/485 Module

Features

- Serial Port with +/-4 kV ESD Protection
- Baud Rate of up to 115200 bps
- Built-in Self-Tuner or Auto-Direction Control
- 2500 Vdc Isolation
- Internal 128-byte Hardware FIFO for each Port
- LED Indicators for TxD, RxD and Power Status



Introduction

The I-8142iW-G provides 2 isolated RS-422/485 serial ports, while the I-8144iW-G provides 4 isolated RS-422/485 serial ports. It is equipped with a 128-byte hardware FIFO for each port and offers speeds up to 115.2 kbps with support for RS-422 full-duplex communication.

In the harsh industrial environment, the onboard ESD protection devices can divert this potentially damaging charge away from sensitive circuitry and protect the I-8142iW/I-8144iW from permanent damage.

The serial communication modules are designed for use with intelligent devices like bar code readers, serial printers, intelligent sensors, instrumentation equipment, computers, and almost any device with an RS-422/485 port.

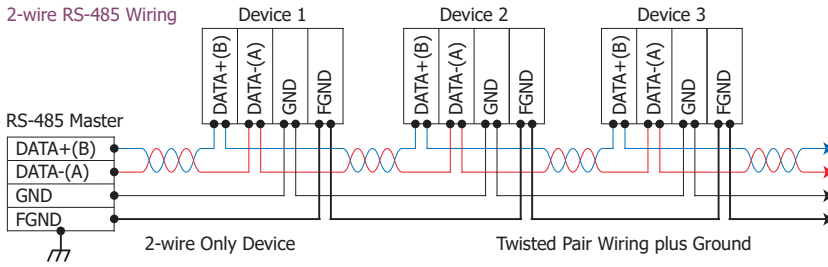
Specifications

Models	I-8142iW	I-8144iW
LED Indicators/Display		
Power	1 LED	
TxD	2 LEDs	4 LEDs
RxD	2 LEDs	4 LEDs
Isolation		
Intra-module Isolation, Field-to-Logic	2500 VDC	
EMS Protection		
ESD (IEC 61000-4-2)	±4 kV Contact for each Terminal	
Power		
Power Consumption	1.5 W (Without Resistor)	1.75 W (Without Resistor)
	2 W (With 2 Resistors, 1/4 Watt, 120 Ω 5%)	3 W (With 4 Resistors, 1/4 Watt, 120 Ω 5%)
Mechanical		
Dimensions (W × L × H)	30 mm × 115 mm × 102 mm	
Environment		
Operating Temperature	-25 ~ +75 °C	
Storage Temperature	-40 ~ +85 °C	
Humidity	10 ~ 90% RH, Non-condensing	

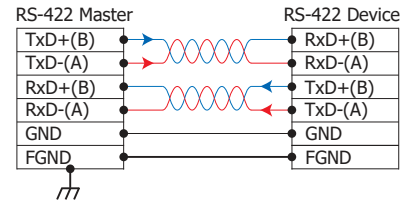
Models	I-8142iW	I-8144iW
COM Ports		
Ports	2 × RS-422/485	4 × RS-422/485
Interface	Isolated RS-422/485 (The RS-422 and RS-485 can not be used simultaneously) RS-422: TxD+, TxD-, RxD+, RxD-, GND RS-485: D+, D-, GND	
Baud Rate	115200 bps Max.	
Parity	None, Even, Odd, Mark, Space	
Data Bit	5, 6, 7, 8	
Stop Bit	1, 1.5, 2	
FIFO Size	Internal 128 bytes for each port	
2-wire Cabling/ 4-wire Cabling	Belden 9841 (2P twisted-pair cable)/ Belden 9842 (4P twisted-pair cable), If different cables are used, the transmission distance may change	
4-wire Cabling	Max. of 256 devices. in a single RS-485 network without using a repeater	
Transfer Distance	Max. of 1,200 m at 9.6 kbps; Max. of 400 m at 115.2 kbps	
Self-Tuner Asic inside	Yes	

Wire Connections

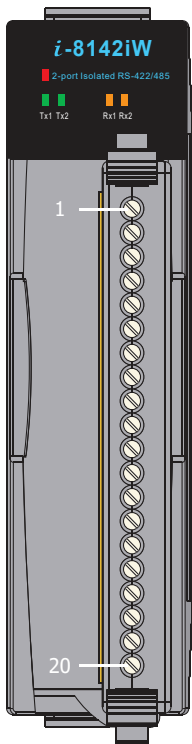
2-wire RS-485 Wiring



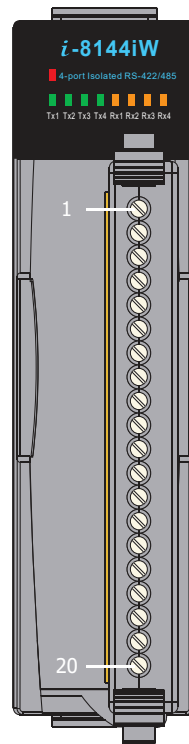
4-wire RS-422 Wiring



Pin Assignments

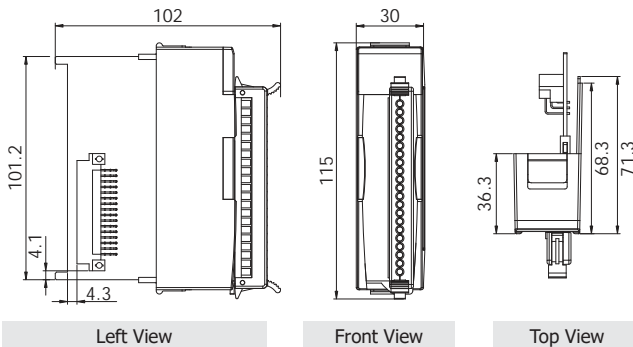


Terminal No.	Pin Assignment
01	D1+/TxD1+
02	D1-/TxD1-
03	RxD1+
04	RxD1-
05	GND1
06	D2+/TxD2+
07	D2-/TxD2-
08	RxD2+
09	RxD2-
10	GND2
11	N.C.
12	N.C.
13	N.C.
14	N.C.
15	N.C.
16	N.C.
17	N.C.
18	N.C.
19	N.C.
20	N.C.



Terminal No.	Pin Assignment
01	D1+/TxD1+
02	D1-/TxD1-
03	RxD1+
04	RxD1-
05	GND1
06	D2+/TxD2+
07	D2-/TxD2-
08	RxD2+
09	RxD2-
10	GND2
11	D3+/TxD3+
12	D3-/TxD3-
13	RxD3+
14	RxD3-
15	GND3
16	D4+/TxD4+
17	D4-/TxD4-
18	RxD4+
19	RxD4-
20	GND4

Dimensions (Units: mm)



Ordering Information

I-8142iW-G CR	2-port Isolated RS-422/485 Module (Gray Cover) (RoHS)
I-8144iW-G CR	4-port Isolated RS-422/485 Module (Gray Cover) (RoHS)