



I-8142iW-G/I-8144iW-G

I-8142iW-G: 2-port Isolated RS-422/485 Module
 I-8144iW-G: 4-port Isolated RS-422/485 Module

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 on board 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-232 or RS-422/485 port.

I/O Specifications

Models	I-8142iW	I-8144iW
RS-422/485 Interface		
Number of Ports	2	4
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	
2-wire Cabling/ 4-wire Cabling	Belden 8941 (2P twisted-pair cable)/ Belden 8942 (4P twisted-pair cable), If different cables are used, the transmission distance may change	
Transfer Distance	Max. of 1,200 m at 9.6 kbps; Max. of 400 m at 115.2 kbps	
4-wire Cabling	Max. of 256 devices. in a single RS-485 network without using a repeater	
Controller	16C950 Compatible Speed: 115200 bps max. Data Bit: 5, 6, 7, 8 Stop Bit: 1, 1.5, 2 Parity: None, Even, Odd, Mark, Space FIFO: Internal 128 bytes for each port	
Self-Tuner Asic inside	Yes	
Interrupt	Shared Interrupt	
Bus	Parallel I/O Module	
Connector	Removable 20-Pin Terminal Block	
Intra-module Isolated, Field to Logic	2500 V _{mms}	
ESD Protection	+/-4 kV (Contact for each channel)	

RS-422/485 Interface

Features

- High-profile Module
- 2500 V_{mms} Isolation
- Serial Port with +/-4 kV ESD Protection
- Internal 128-byte Hardware FIFO for each Port
- Baud Rate of up to 115200 bps
- LED Indicators for Tx/D and Power Status
- Built-in Self-Tuner or Auto-Direction Control
- RoHS Compliant with no Halogen
- Low power consumption
- Made from fire retardant materials (UL94-V0 Level)



Applications

- Factory Automation
- Building Automation
- Home Automation

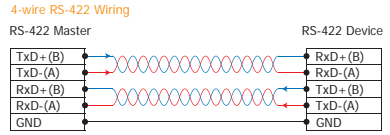
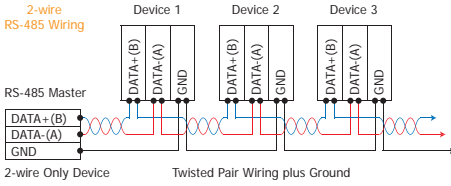
System Specifications

Models	I-8142iW	I-8144iW
LED Indicators		
Power	1 LED	
TxD	2 LEDs	4 LEDs
RxD	2 LEDs	4 LEDs
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 x L x H)	30 mm x 102 mm x 115 mm	
Environment		
Operating Temperature	-25 °C ~ +75 °C	
Storage Temperature	-30 °C ~ +80 °C	
Humidity	10 ~ 95% RH, non-condensing	

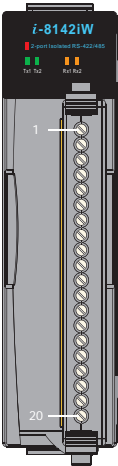
Software

Software
Supports interrupt driven software library
Supports VxCOM library

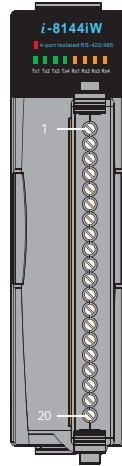
Wiring



Pin Assignments

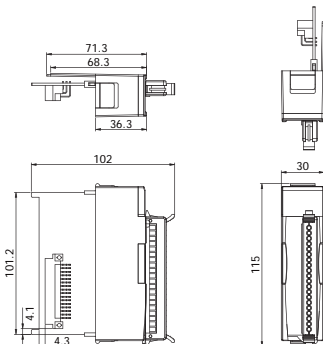


Terminal No.	Pin Assignment
01	D1+/TxD1+
02	D1-/TxD1-
03	RxD1+
04	RxD1-
05	GND1
06	D2+/TxD2+
07	D2-/TxD2-
08	RxD2+
09	RxD2-
10	GND2
11	N.C.
12	N.C.
13	N.C.
14	N.C.
15	N.C.
16	N.C.
17	N.C.
18	N.C.
19	N.C.
20	N.C.



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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 (Unit: mm)



Ordering Information

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