I-9144i
4-port Isolated RS-422/485 Module

Features

- Includes 4 Isolated RS-422/485 Ports
- Baud Rate of up to 115200 bps
- Internal 128-byte Hardware FIFO for Each Port
- Built-in Self-Tuner or Auto-Direction Control
- RoHS Compliant & Halogen Free
- +/-4 kV ESD Protection on Each Port
- LED Indicators for TxD, RxD and Power Status
- 2500 Vrms Isolation
- Low Power Consumption
- Fire-retardant Materials Used (UL94-V0 Level)

Introduction

The I-9144i provides 4 isolated RS-422/485 serial ports. Each port is equipped with a 128-byte hardware FIFO 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-9144i 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.

Applications

- Factory, Building and Home Automation

Software

- Supports interrupt driven software library
- Supports VxCOM library

System Specifications

Model	I-9144i
LED Indicators	
System LED Indictor	1 LED as Power Indicator
I/O LED Indicator	4 LEDs as TxD Indicators; 4 LEDs as RxD Indicators
Isolation	
Intra-module Isolation, Field-to-Logic	2500 Vrms
EMS Protection	
ESD (IEC 61000-4-2)	±4 kV Contact for Each Channel
Power	
Power Consumption	3 W (With 2 Resistors,1/4 Watt, 120 Ω 5%)
Mechanical	
I/O Connector	Removable 20-Pin Terminal Block
Dimensions (L x W x H)	144 mm x 31 mm x 133 mm
Environment	
OperatingTemperature	-25 ~ +75°C
Storage Temperature	-40 ~ +85°C
Humidity	10 ~ 90% RH, Non-condensing

I/O Specifications

Model	I-9144i
RS-422/485 Interface	
Ports	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
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
Transfer Distance	Max. 1,200 m at 9.6 kbps; Max. 400 m at 115.2 kbps
4-wire Cabling	A max. of 256 devices in a single RS-485 network without using a repeater
Controller	16C850 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

Wire Connections

2-wire RS-485 Wiring
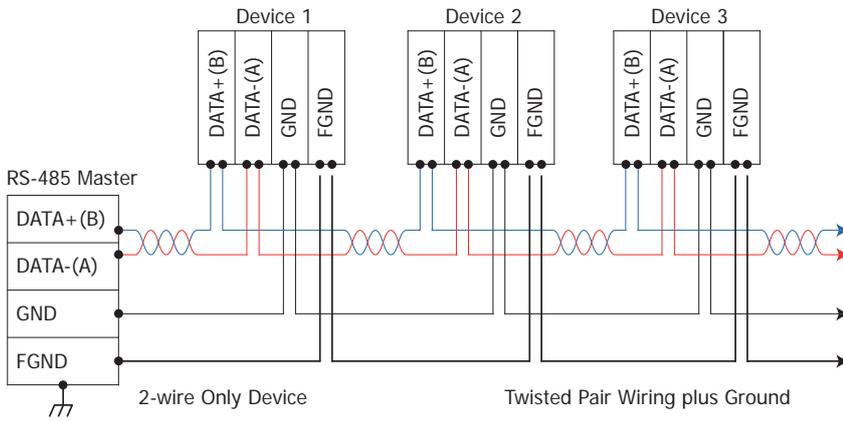
4-wire RS-422 Wiring

Dimensions (Units: mm)

Left Side View

Front View
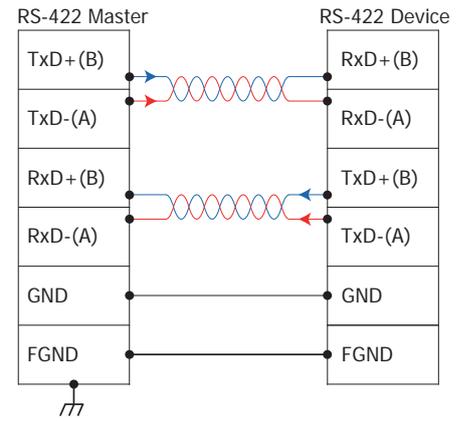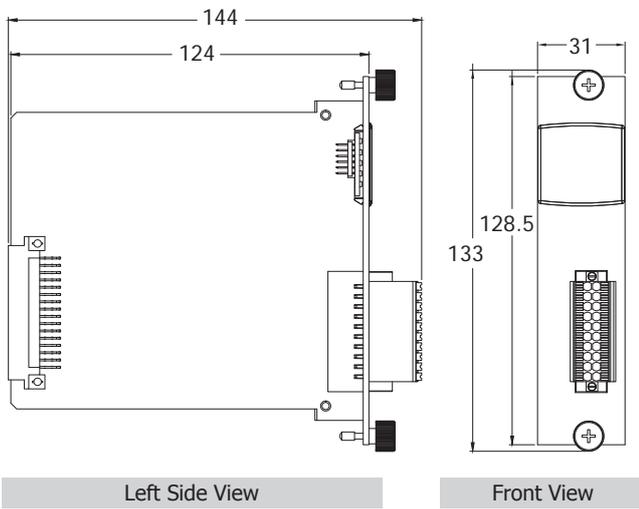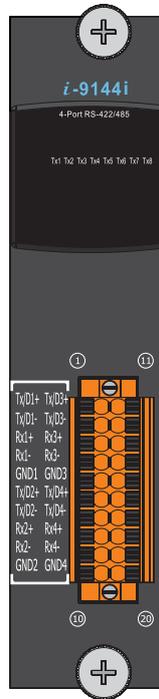
Pin Assignments

Pin Assignment	Terminal No.		Pin Assignment
D1+/TxD1+	1	11	D3+/TxD3+
D1-/TxD1-	2	12	D3-/TxD3-
RxD1+	3	13	RxD3+
RxD1-	4	14	RxD3-
GND1	5	15	GND3
D2+/TxD2+	6	16	D4+/TxD4+
D2-/TxD2-	7	17	D4-/TxD4-
RxD2+	8	18	RxD4+
RxD2-	9	19	RxD4-
GND2	10	20	GND4

Ordering Information

I-9144i CR	4-port Isolated RS-422/485 Module (RoHS)