



tRFU-2400

Features

- ISM 2.4 GHz Operating Frequency
- Direct Sequence Spread Spectrum (DSSS) RF technology
- RS-232/RS-485/RS-422 Interface Supported
- Half-duplex communication up to 115200 bps
- Full-duplex communication up to 57600 bps
- Fully External Switch for the Hardware Configuration
- Surge and ESD Protection
- DIN-Rail Mountable



Introduction

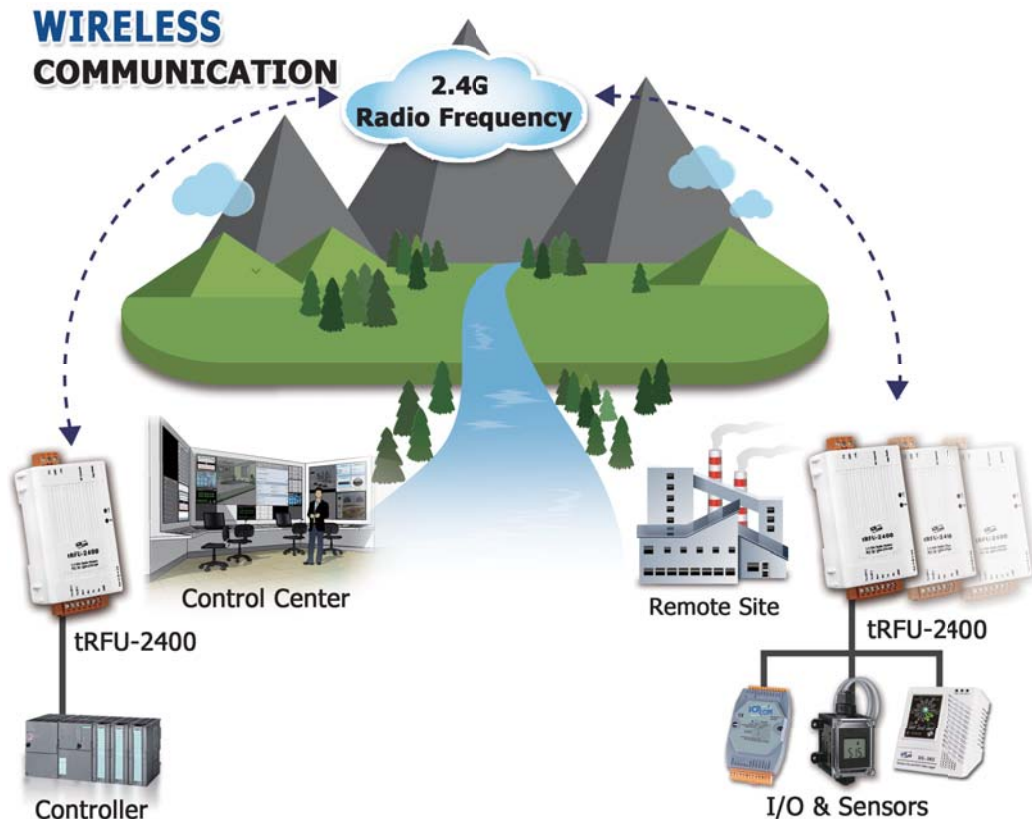
The tRFU-2400 is a 2.4 GHz radio frequency modem that also provides RS-232, RS-485 and RS-422 port interfaces. The tRFU-2400 is designed to act as a wireless bridge that converts a signal between serial and wireless formats, and is useful for applications where it is inconvenient to install physical wiring. The tRFU-2400 makes it easy to establish a low cost environment for data acquisition and control applications between a host and a range of remote sensors via wireless communication.

The tRFU-2400 is a spread spectrum radio frequency (RF) modem based on the IEEE 802.15.4 standard. The IEEE 802.15.4 standard is operating on the ISM bands using a transmission frequency range of between 2405 and 2480 MHz that is separated into 5 MHz segments, thereby providing 16 channels. Two operating modes are also supported, including Peer-to-Peer (P2P) mode, where the distinguishing feature is that it allows full-duplex communication, and Broadcast mode, which allows half-duplex functionality in multi-point communication.

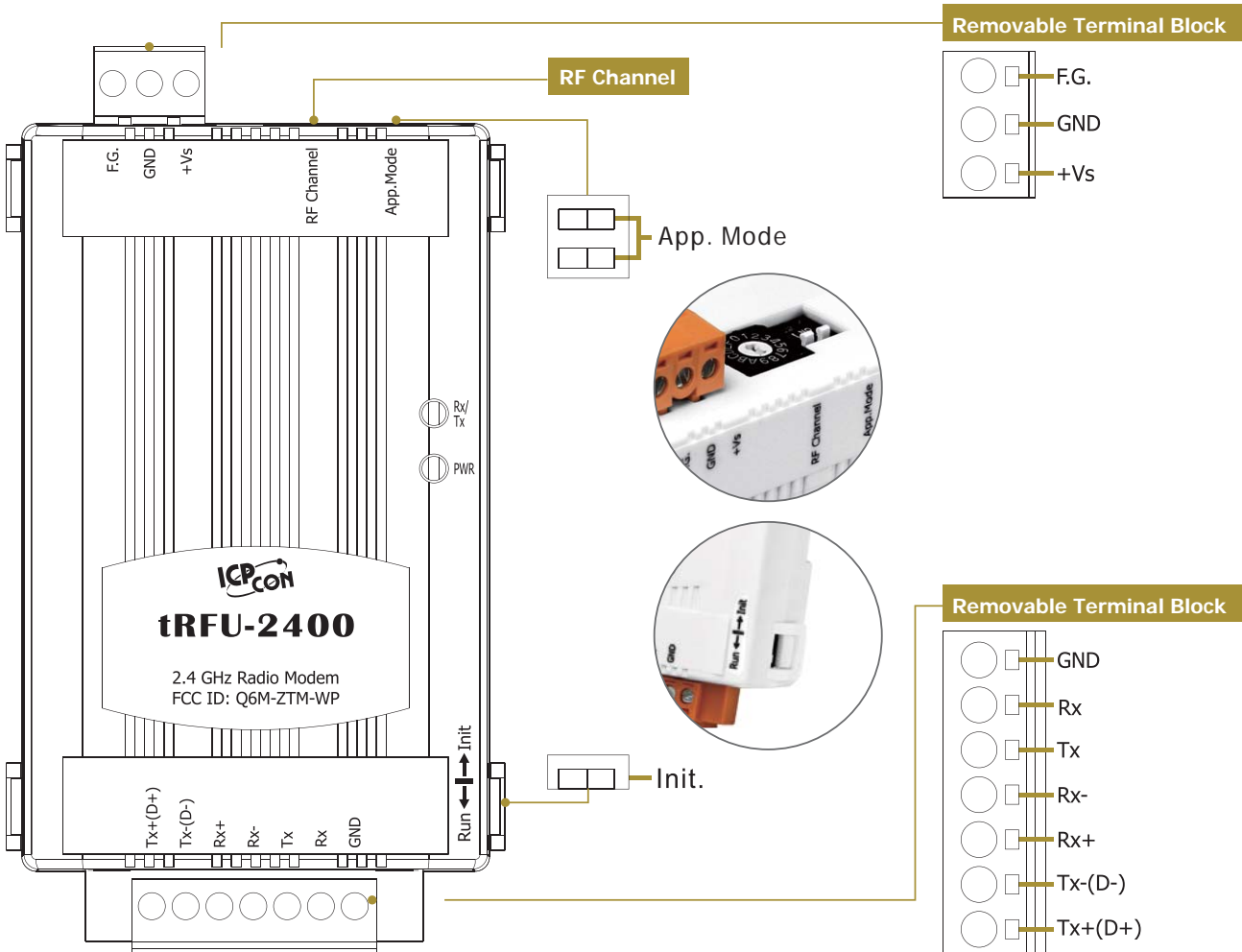
Specifications

Model Name		tRFU-2400	
Wireless			
Wireless	Modulation	OQPSK (Offset Quadrature Phase-shift Keying)	
	Spread Spectrum	DSSS (Direct-Sequence Spread Spectrum)	
	Channels	16	
	Sensitivity	-97 dBm	
	Transmission Power	11 dBm (Default), 17 dBm (Max.)	
	Antenna	3 dBi PCB Antenna	
	Transmission Range	180 m (Typical)	
Hardware			
COM0	COM 0	RS-232	TxD, RxD and GND
		RS-485	DATA+, DATA-; Internal ASIC Self-tuner; Non-isolated
		RS-422	TxD+, TxD-, RxD+, RxD
	Baud Rate	Full-duplex	2400 to 57600 bps
		Half-duplex	2400 to 115200 bps
	Data Format	N81, O81, E81, N82	
Buffer	2560 Bytes		
LED Indicators	Green	Rx/Tx	
	Yellow	Power State	
Power	EMS Protection	ESD, Surge, EFT and Hi-Pot	
	Required Supply Voltage	+10 VDC ~ +30 VDC	
	Power Consumption	0.4 W (Max.)	
Mechanical	Casing	Plastic	
	Flammability	UL 94V-0 materials	
	Dimensions (W × L × H)	52 mm x 95 mm x 27 mm	
	Installation	DIN-Rail	
Environmental	Operating Temperature	-25 to +75°C	
	Storage Temperature	-40 to +80°C	
	Relative Humidity	0 to 90% RH, Non-condensing	

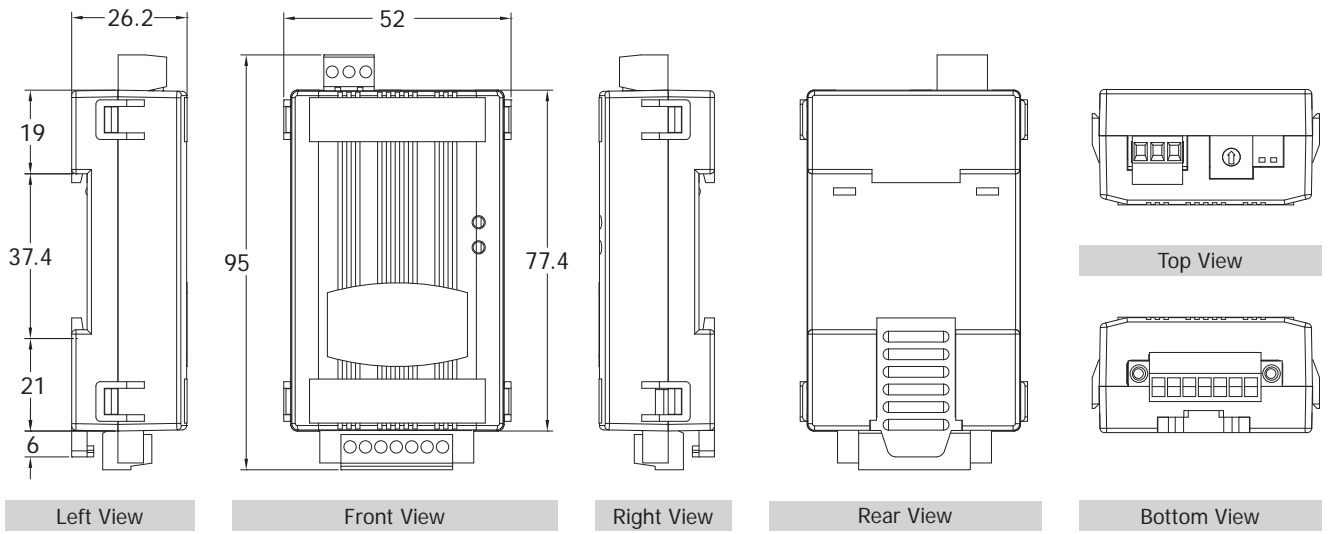
Applications



Appearance



■ Dimensions (Units: mm)



■ Ordering Information

tRFU-2400 CR	2.4 G RS-232/RS-485/RS-422 Wireless Modem (RoHS)
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