



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

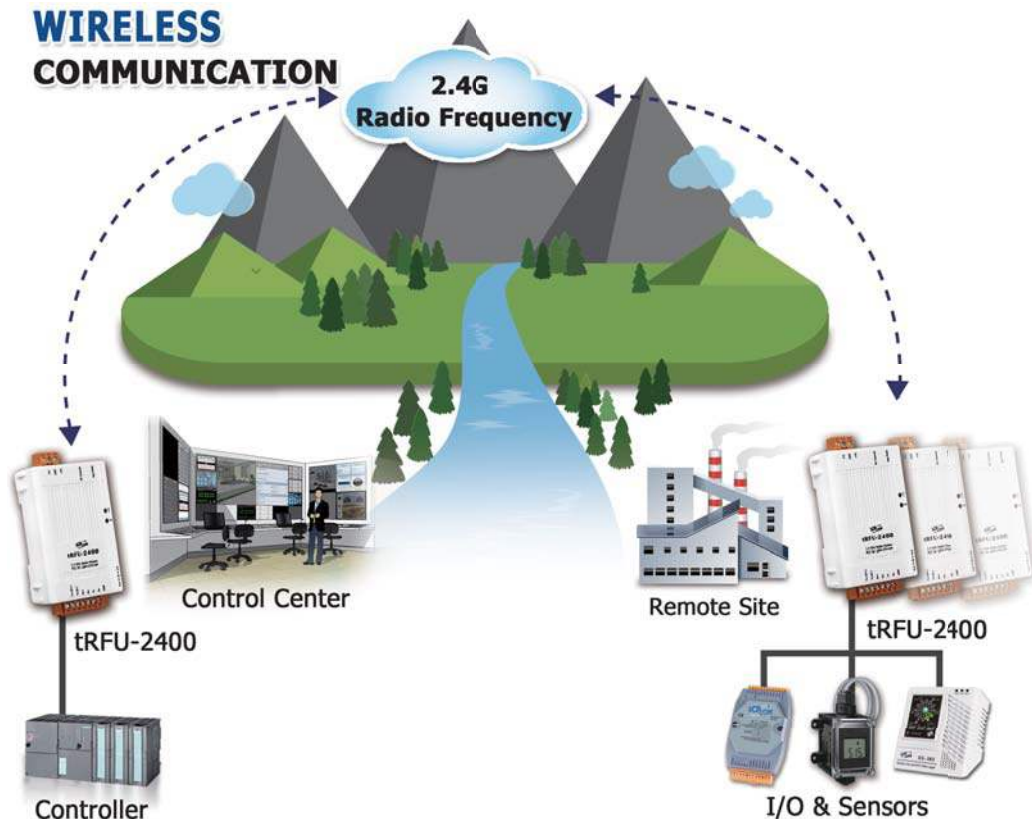
The tRFU-2400 is a 2.4 GHz radio frequency modem that also provides RS-232, RS-485 and RS-422 port interfaces. The tRFU-2400 is designed to act as a wireless bridge that converts a signal between serial and wireless formats, and is useful for applications where it is inconvenient to install physical 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.

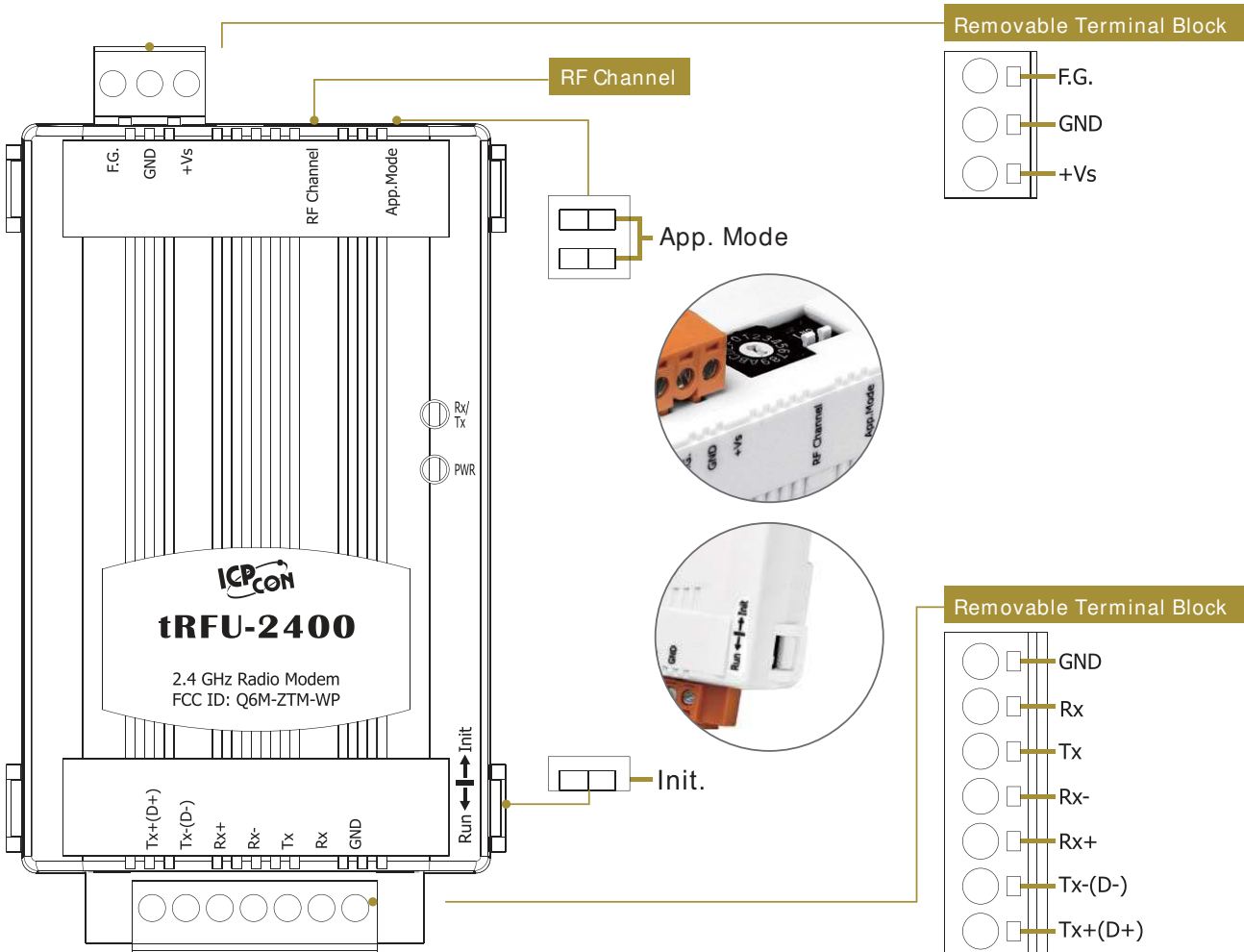
Specifications

| 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 x L x 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 | |

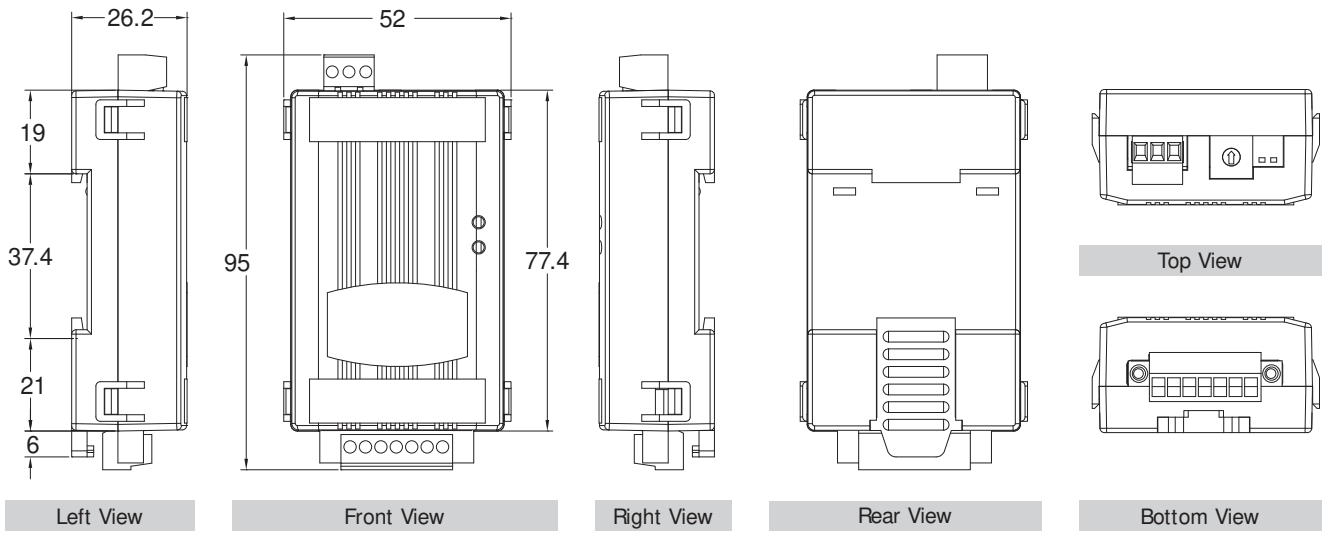
Applications



Appearance



■ Dimensions (Units: mm)



■ Ordering Information

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