

FEATURES:

- Supports both 900 MHz & 2.4 GHz FHSS Client/Server wireless networks
- 900MHz transmit power is adjustable between 10mW and 1W (0-30dBm) and 2.4GHz power is fixed at 125mW (21 dBm)
- Standard rubber antennas are 2 dBi dipole for 900MHz and 7dBi collinear for 2.4 GHz.
- 10-30VDC power input is ideal for solar powered systems
- Wireless network parameters configured via non-intrusive magnetic operator interface
- ST-96/M wireless serial modem model connects RS-485 ports
- ST-96/R wireless repeater model has two radios and two antennas operating on separate FHSS networks. Data is repeated onto a different FHSS network to avoid data collisions in modbus or other bidirectional protocols
- ST-96/R allows conversion from 900 MHz to 2.4 GHz
- Configurable as the wireless network's "Client" or "Server"
- Standard models suitable for Division 2 hazardous areas when supplied with 10-0295 RP-SMA antenna bushing. Division 1 areas require optional "Explosion-Proof" antennas (see order guide).



Shown with dual rubber dipole antennas as in ST-96R "Repeater"

ST-96M "Modem" has single antenna and RS-485 port

DESCRIPTION:

R.C. Systems ST-96 "Wireless Modem/Repeaters" are available in ST-96M and ST-96R models. ST-96M "Modems" convert RS-485 data to 900 MHz or 2.4 GHz FHSS Client/Server wireless networks. Each network must have one radio set as Server and all others are Clients. Hop and Destination address settings allow many different networks within the same installation.

ST-96M modems are useful if the RS-485 device is a long distance from a desirable antenna location. For example, R. C. Systems' ST-35, ST-71, ST-72 & ST-90 Controller products are available with wireless interfaces but these require the controller be close to the antenna due to losses in long coax cables. ST-96M's may be at the desired antenna location with twisted pair copper wiring back to the controller's RS-485 & power supply terminals. Modbus slave ports may be multi-dropped to the same ST-96M.

ST-96R "Repeaters" are similar to ST-96M modems except they have 2 radios instead of an RS-485 port and one radio. ST-96R Repeaters receive and retransmit transmissions between 2 other wireless devices that are out of range of each other. The two ST-96R radios must be on different hopping networks and one may even be 900 MHz and the other 2.4 GHz.

Primary ST-96 applications are for interfacing to R. C. Systems products but other RS-485 devices may also be converted to wireless by adding ST-96M and ST-96R's. 900MHz model's transmit power is adjustable between 10mW and 1W (0-30dBm) and 2.4GHz models power is fixed at 125mW (21 dBm).

SPECIFICATIONS

ST-96 MODELS:

ST-96M/2400 Modem has one RS-485 port and one 2.4 GHz radio

ST-96R/2400 Repeater has two 2.4GHz radios

ST-96M/900 Modem has one RS-485 port and one 900 MHz radio

ST-96R/900 Repeater has two 900 MHz radios

PERFORMANCE

2.4 GHz Frequency Range = 2400 - 2483.5 MHz with 42 hops

2.4 GHz Conducted Transmit Power is 125mW / 21dBm

2.4 GHz Indoor/Urban Range = up to 1500 feet with 7dBi collinear antenna

2.4 GHz Outdoor RF LOS Range = up to 2 miles with high-gain antenna

2.4 GHz Receiver Sensitivity = -98 dBm

900 MHz Frequency Range = 902 - 928 MHz with 50 hops

900 MHz Conducted Transmit Power (selectable) = 10mW-1W / 0-30 dBm

900 MHz Indoor/Urban Range = up to 3000 feet with 2dBi dipole antenna

900 MHz Outdoor RF LOS Range = up to 5 miles with high-gain antenna

900 MHz Receiver Sensitivity = -100 dBm

DISPLAY

64 x 128 pixel LCD

AMBIENT TEMPERATURE RANGE

-40 - 60 degrees C

POWER SUPPLY

10 - 30 VDC at less than 2 watts

HOUSING & AREA CLASSIFICATIONS

NEMA 4X / NEMA 7 instrument enclosure is suitable for Class 1, Division 1, Gr. A,B,C,D

Area Classification should be Division 2 or nonhazardous when ST-96 housing is equipped with 10-0295 Antenna Fittings

Division 1 Area Classifications require "Explosion-Proof" 1000-2301 or 1000-2193 Antenna options (add "XP" suffix when ordering)

ORDERING INFORMATION

ST-96 MODELS

ST-96M/2400 Modem Suitable for Div 2; Includes 1, 1000-2300

ST-96R/2400 Repeater Suitable for Div 2; Includes 2, 1000-2300

ST-96M/900 Modem Suitable for Div 2; Includes 1, 1000-2189

ST-96R/900 Repeater Suitable for Div 2; Includes 2, 1000-2189

ST-96M/2400/XP Modem Suitable for Div 1; Includes 1, 1000-2301

ST-96R/2400/XP Repeater Suitable for Div 1; Includes 2, 1000-2301

ST-96M/900/XP Modem Suitable for Div 1; Includes 1, 1000-2193

ST-96R/900/XP Repeater Suitable for Div 1; Includes 2, 1000-2193

ST-96 SPARE PARTS & ACCESSORIES

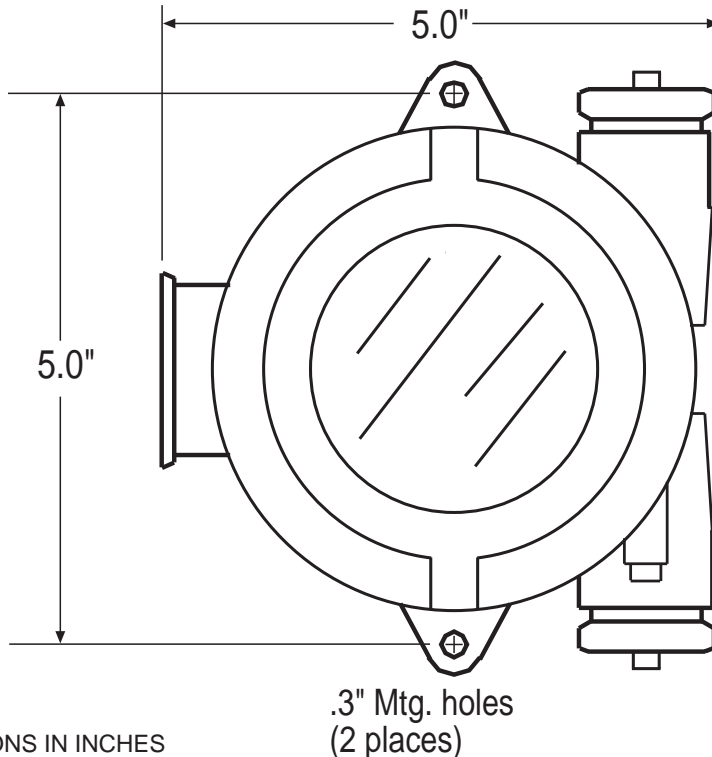
10-0295 3/4" NPT to RP-SMA Antenna Fitting

1000-2300 2.4 GHz Collinear Rubber Antenna

1000-2189 900 MHz Dipole Rubber Antenna

1000-2301 2.4 GHz Dipole Explosion-Proof Antenna

1000-2193 900 MHz Dipole Explosion-Proof Antenna



3/4" NPFT HUBS
(3 places)
Shown with 10-0295 RP-SMA
antenna fittings in 2 hubs

ALL DIMENSIONS IN INCHES