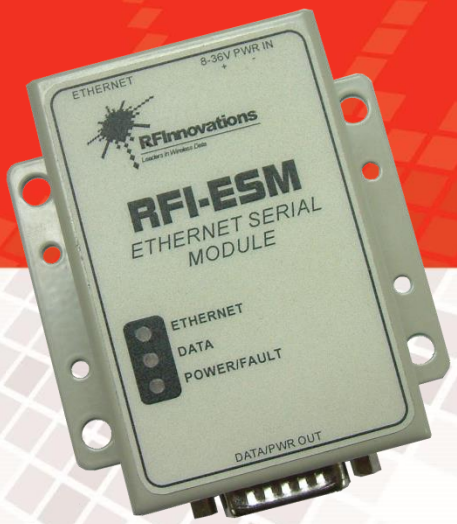
RFInnovations

Leaders in Wireless Data

an STI Engineering product

Ethernet Serial Module



The RFI-ESM enables Ethernet communication over a wide area data radio network.

The module transparently transfers all protocols at the Ethernet MAC layer including FTP and industry standard TCP/IP Modbus and DNP protocols.

Features

- IEEE 802.3 MAC layer operation for simple deployment
- Transparently transfers all protocols above Ethernet
- 10/100 BaseT Ethernet
- LED and software diagnostics

Ethernet Bridge Application

The RFI-ESM is suited for applications in Utilities, Mining, Agriculture and Transport industries where reliable wide area Ethernet data transfer is critical.

The module can be used in small and large scale telemetry systems offering the convenience of Ethernet and the wide area coverage of traditional telemetry systems

The RFI-ESM transparently moves data from end-to-end at speeds of up to 115 kbps and when used with RF Innovations data radio modems can transport Ethernet data up to 50 km*.

Serial Device Server Application

The RFI-ESM can also be used as a serial device server to provide an RS232 interface on a TCP/IP port. This effectively allows connection of RS232 devices onto an Ethernet network. When used with RF Innovations radios existing Ethernet infrastructure can be utilized as a backbone to provide connectivity to remote RS232 devices.

*Maximum practical point-to-point distance with line of sight and suitable antennas.

STI Engineering

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Specifications

Wireless Ready	Designed specifically for use with RF Innovations wireless wide-area networks
Plug and Play	No configuration required for common applications
Filtering	Configurable packet filtering on source or destination address or Ethernet packet type to reduce the bandwidth used for unnecessary traffic
MAC Address Forwarding	Effectively connect two LAN segments regardless of network layer protocol and IP addressing
Auto MDIX	The module will automatically detect if the Ethernet data signals are backwards and properly match the connected device without the need for a crossover cable
Industrial Grade	Built for industrial applications where environmental conditions are more severe than commercial grade equipment
Traffic Statistics	Ethernet traffic statistics for quantifing data passing through the unit

PHYSICAL
Dimensions: 94mm x 80mm x 26mm
Weight: 100g
Construction: Powder coated aluminum chasis and cover

WAN
Serial Data: RS-232 Asynchronous with handshaking
Interface Speed: 300bps to 115200bps software selectable

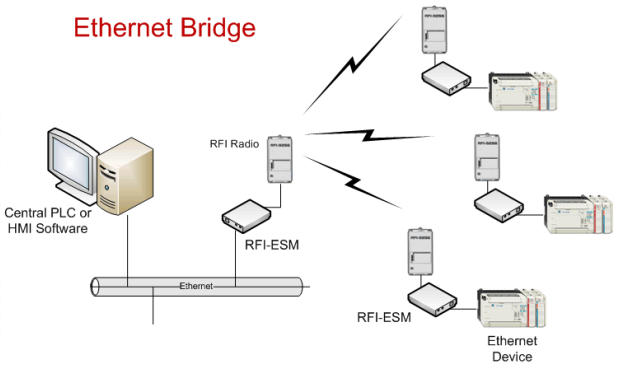
LAN
Ethernet: 10BaseT or 100BaseT auto detect
Mode: Half duplex or Full duplex auto detect

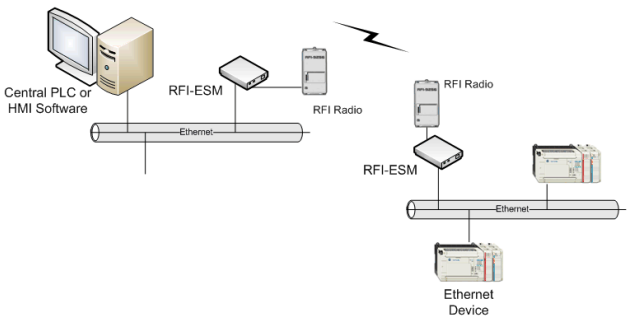
GENERAL
Operating Voltage: 9V to 30V DC (negative ground)
Operating Current: 150mA @12.5 VDC
Operating Humidity: Up to 90% non-condensing relative humidity
Operating Temperature: -10 to +60˚C

CONNECTORS
LAN: RJ45 socket
WAN: Custom DB15 connector
Power: Phoenix PH1176508 (mating connector supplied)

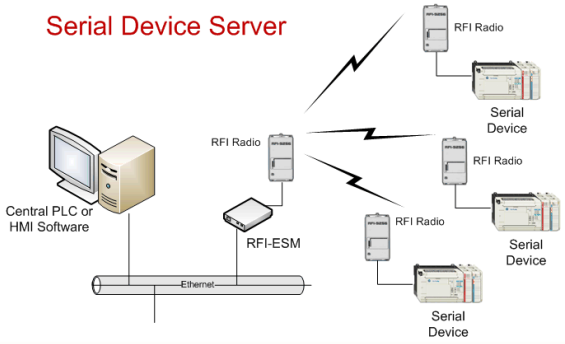
Specifications subject to change without notice V080904

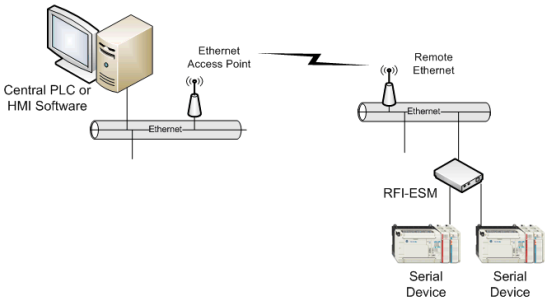
Ethernet Bridge





Serial Device Server





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