

### Wireless Solution

ESTeem® wireless modem products provide a "Wireless Solution" by eliminating conventional hard wiring, leased phone lines, or cellular costs.

The ESTeem Model 95 comes with the industry standard RS-232C, RS-422, and RS-485 asynchronous communications ports to give the user a new dimension to "Local Area Networking".

Our packet burst, narrow band, frequency agile, UHF communications products allow the user to create a "Radio Area Network" of up to 255 users on a single frequency. The packet burst communications technique was chosen to give the system very high data integrity in high noise industrial environments. The ESTeem incorporates forward error correction and CRC error checking that provides received data accuracy of greater than one part in 100 million.

### Packet Protocols

By using a Carrier-Sensed-Multiple-Access (CSMA) communication protocol no polling station or token is required in the ESTeem network. When an ESTeem has information to send, it will check to see if the channel is clear before transmitting its packet and await an acknowledge. The ESTeem is a Master/Master system, meaning any ESTeem of the same model type can communicate with any other ESTeem of the same model type.

### Data Privacy

Transmitted data privacy is insured by the use of an interleaving technique of the modulated data, user definable commands for unit addressing, network addressing, and security lock-out of software programming.

### Increased Operating Range

The internal Digi-Repeater feature allows the user to increase operating range by relaying transmissions through a maximum of three ESTeems to reach the destination ESTeem. An ESTeem can operate as an operating node, a repeater node, or both simultaneously for added flexibility.

### User Friendly

The ESTeem has user programmable software to allow the configuration of the unit for any application. These commands are saved in the ESTeem's internal non-volatile memory.



### FEATURES

#### Transceiver

- 9,600 bps RF data rate
- 72 to 73 MHz VHF operating frequencies
- 66 to 72 MHz & 73 to 79 MHz (custom order)
- Integral Digi-Repeater
- Frequency of operation Software Programmable
- Receiver Squelch Software Programmable
- Remote Programmability of all features over the RF link
- Radio Diagnostic Programs included
- Radio Self-Test
- Packet Monitor
- Received Signal Strength Output

#### Interfaces

- RS-232C, RS-422, and RS-485 communications ports for hardware interfacing

#### Protocols

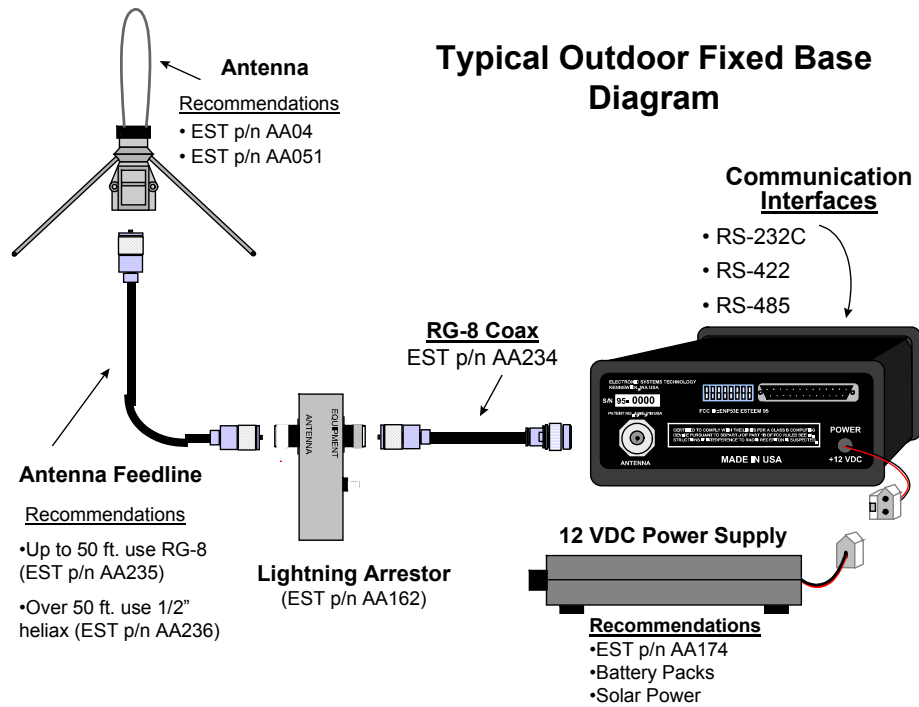
- Integral PLC And RTU Protocol Drivers
- Point-to-Point Protocol
- Point-to-Multi-Point Protocol
- Polled With Report-By-Exception Protocol
- Contingent Protocol
- Transparent Protocol

#### WARRANTY

- One Year

# Technical Specifications

# Model 95



## FREQUENCY OF OPERATION

- 72 to 73 MHz. (standard)
- 66 to 72 MHz & 73 to 79 MHz (custom)
- 20 KHz. Frequency Selectability - Software Programmable
- 12.5 KHz. Frequency Selectability - Software Programmable (custom)
- Simplex

## RF POWER

- 1 Watt

## RF DATA RATE

- 9,600 bps @ 20 KHz Channel Spacing
- 9,600 bps @ 12.5 KHz Channel Spacing

## RECEIVER SENSITIVITY

- < 1 uv

## RECEIVER SQUELCH

- Four Levels - Software Programmable

## MINIMUM RADIO TURN AROUND TIME

- < 180 ms + Data (W/ACK)
- < 90 ms + Data (W/O ACK)

## POWER REQUIREMENTS

- 11-15 VDC @ 250 MA Rx  
700 MA Tx

## SIZE

- 2 1/4 in. Height
- 5 1/4 in. Width
- 7 in. Length

## WEIGHT:

- 2.2 lbs.

## ENVIRONMENT

- -20° to 50° C
- 95% Non-condensing

## WARRANTY

- 1 Year

## SWITCHES

- Off/On/CPU Reset
- RS-232/422/485 Setup

## LED INDICATORS

- Power On
- Receiver Carrier Detect
- Transmitter Enable
- Link Connect/Disconnect
- Auto Connect Enable
- RS-232/422/485 Framing Error

## I/O - CONNECTORS

- RS-232C/422/485 - 25 Pin Sub D Female
- Antenna Output - TNC
- Input Power - 2 Pin Molex Female

## ADDRESSING RANGE

- 0 to 253

## DATA INPUT

- RS-232/422/485 Async
- Selectable 600 to 19,200 baud
- 5 to 8 data bits
- Even, Odd or no parity
- One or Two Stop Bits

## DATA BUFFERS

- Transmit 2020 bytes
- Receive 2020 bytes

## FLOW CONTROL

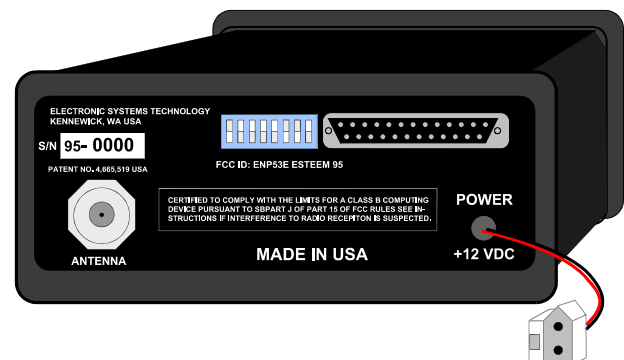
- Hardware or Software

## DATA TRANSMISSION PROTOCOL

- Carrier Sensed Multiple Access with Collision Detection (CSMA-CD)

## ERROR CHECKING

- 16 Bit Cyclic Redundancy check (CRC) with Packet Acknowledge and Retry



Specifications subject to change without notice.  
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