

Wireless Solution

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

The ESTeem Model 96C 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 254 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 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

Data privacy in the ESTeem is provided by three levels of data encoding in the firmware and by the user being able to define over four security and communications parameters that allow communications access to the modem giving over 200 million combinations.

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 over 100 software commands to allow the user to easily configure 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
- 450 to 470 MHz VHF operating frequencies
- Integral Digi-Repeater
- Frequency of operation Software Programmable
- Receiver Squelch Software Programmable
- Remote Programmability over the RF link
- Radio Diagnostic Programs included
- Radio Self-Test
- Packet Monitor
- Received Signal Strength Readout (optional)

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
- Hayes Software Emulation

SOFTWARE COMMANDS

- Auto Connect (Auto Dial)
- Auto Disconnect
- Call Back
- Call Waiting
- Alternate Routing
- Multi-Connect
- Global Broadcast

WARRANTY

- One Year

SWITCHES

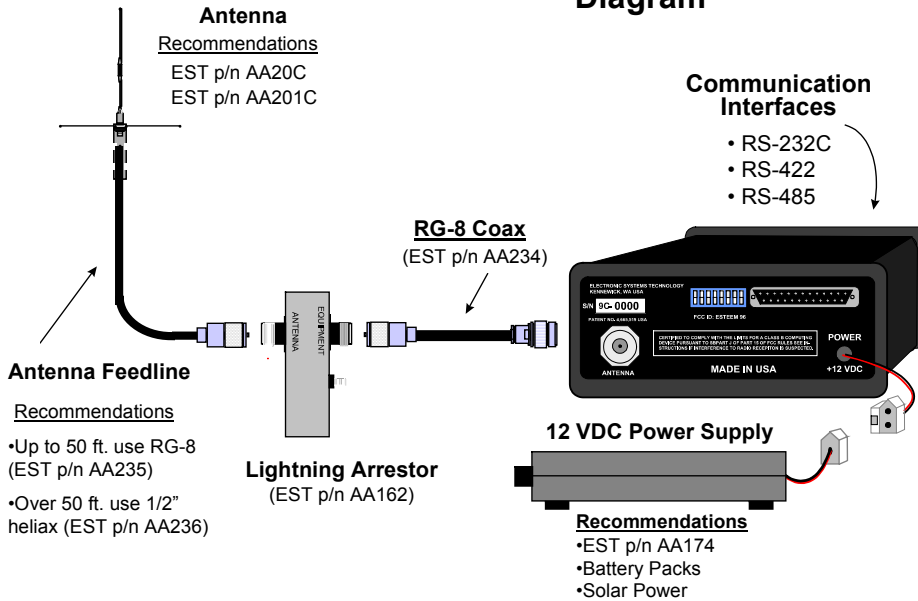
- Off/On/CPU Reset

- RS-232/422/485 Setup

Technical Specifications

Model 96C

Typical Outdoor Fixed Base Diagram



- Programmable
- Simplex or Half Duplex

RF POWER

- 2 Watts (4 Watts optional)

RF DATA RATE

- 9,600 bps

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 @ 600 MA Receive
3 A Transmit

SIZE

- 2 1/4 in. Height
- 5 1/4 in. Width
- 10 1/4 in. Length

WEIGHT:

- 3.2 lbs.

ENVIRONMENT

- -20° to 50° C
- 95% Non-condensing

WARRANTY

- 1 Year

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 50 to 9,600 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

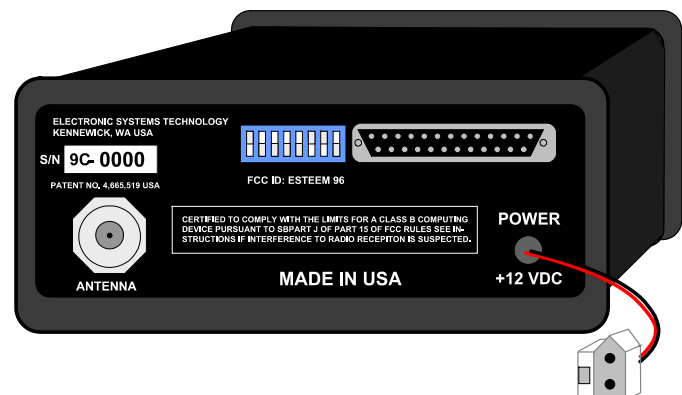
- Carrier Sensed Multiple Access with Collision Detection (CSMA-CD)
- Synchronous Data Link Control (SDLC)

ERROR CHECKING

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

FREQUENCY OF OPERATION

- 450 to 470 MHz.
- 12.5 KHz. Channel Spacing Software



Specifications subject to change without notice.

© Electronic Systems Technology, Inc.

Revised: 6 Sep 96

ELECTRONIC SYSTEMS TECHNOLOGY, INC.

415 North Quay Street • Kennewick, WA 99336

PH. (509) 735-9092 • Fax (509) 783-5475



em.com