

## Wireless Ethernet

The ESTeem Model 192E is a IEEE 802.11b compatible wireless LAN transceiver that can be used to build a Wireless Local Area Network (WLAN) for line-of-sight distances to 7 miles for fixed base and mobile applications. Our "license free" spread spectrum 2.4 GHz wireless radio modem allows users to bridge Ethernet segments or provide access to remote Ethernet clients for computer or PLC networking. The direct sequence spreading technique was selected to give the system very high data integrity in high noise industrial environments.

## Four Modes of Operation

The Model 192E can be configured in multiple applications with a single product to fit any wireless Ethernet application. The Model 192E can be programmed in one of four unique modes of operation:

**Access Point** - The Model 192E can be used as a high-power, industrial Access Point in a standard 802.11b WLAN networks.

**Access Point Repeater** - If used in Access Point Repeater mode the ESTeem will automatically associate with other Model 192Es programmed with the same configuration for routing message traffic over the wireless Ethernet network, servicing 802.11b clients and repeating all simultaneously without the need of a hardware backbone.

**EtherStation** - The ESTeem can also be configured as a client in an 802.11b network (EtherStation Mode) to greatly increase the range on mobile equipment and vehicles.

**Bridging Mode** - The ESTeem Bridging Mode will provide a wireless Ethernet network that will not accept requests from other 802.11b devices

## Data Privacy

Wireless network security is equivalent to wired networks by providing multiple security levels including the Wired Equivalent Privacy (WEP) that provides 128-bit data encryption.

For additional security, the ESTeem has included an Access Control List (ACL) where you can specify which Ethernet devices are allowed into the wireless Ethernet network. The ACL filter works on the Ethernet MAC address that is unique to all Ethernet devices in the world. With these combined security layers, the ESTeem has one of the most secure networks on the market.

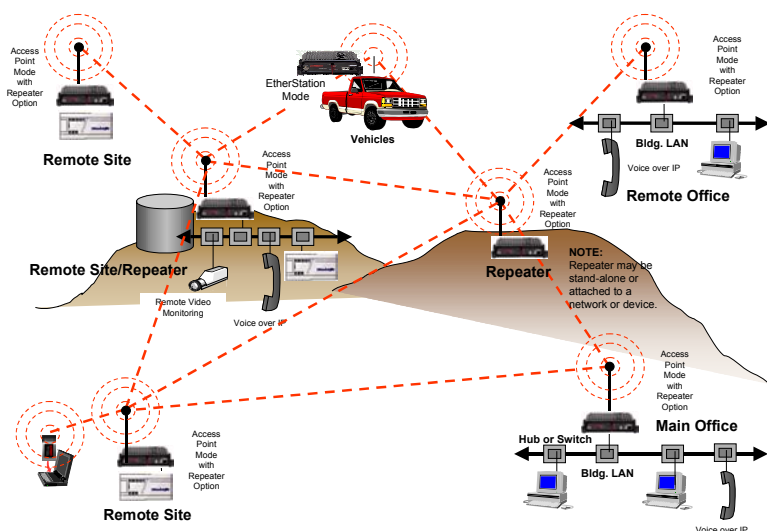


## Features

- **802.11b Compatible Interface**
- **11 to 1 Mbps Fixed or Auto-Scaling RF data rate**
- **1 Watt RF Output Power**
- **Range to 7 miles (192E) Line of Sight - Greater Ranges with Unlimited Repeater Hops**
- **2.4 GHz International Unlicensed Operation**
- **Industrial Hardened Case**
- **Extended Temperature Specifications**

## Increased Operating Range

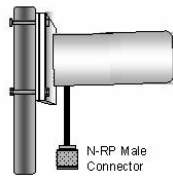
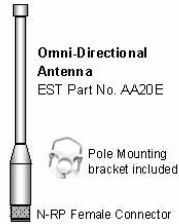
The high output power and internal Digi-Repeater feature allows the user to dramatically increase operating range of their wireless Ethernet network.



Model 192E Multiple Access Point Diagram with Multiple Repeaters

# Technical Specifications

# Model 192E



For Point to Point Applications use EST Part No. AA204ES

For Point to Multi-point Application use EST Part No. AA203ES

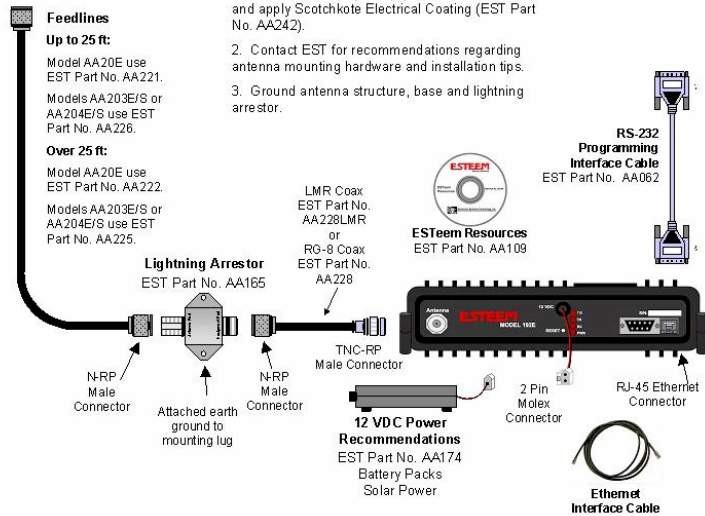
Pole mounting brackets included.

**Caution**

To comply with the FCC exposure compliance requirements, a separation distance of at least 19 cm must be maintained between the antenna and all persons.

### NOTES

1. Vapor wrap all external antenna coax connections with vinyl wrap (EST Part No. AA241) and apply Scotchkote Electrical Coating (EST Part No. AA242).
2. Contact EST for recommendations regarding antenna mounting hardware and installation tips.
3. Ground antenna structure, base and lightning arrester.



**Typical Outdoor Hardware Diagram**

### LED INDICATORS

- Power On
- Receiver Carrier Detect
- Transmitter Enable
- Link Status

### I/O - CONNECTORS

- Ethernet 10BaseT - RJ-45
- RS-232C Programming port – DB 9 Female (38,400 bps)
- Antenna Output – RP-TNC
- Input Power - 2 Pin Molex Female

### FREQUENCY OF OPERATION

- 2.412 to 2.462 GHz.
- Frequency selectable in 11 frequency zones

### RF DATA RATE

- 1, 2, 5.5, 11 Mbps fixed or dynamic scaling, software selectable

### TRANSMITTER

- 1 Watt RF output
- 50 ohms output impedance
- Protocol activated keying
- Direct sequence spread spectrum

### RECEIVER

- Double conversion superheterodyne
- -93 dBm 8E-2 Frame Error Rate
- 80 dB Image Rejection
- > 35 dBm Adjacent Channel Rejection

### POWER REQUIREMENTS

- 11-16 VDC @ 700 mA Transmit  
290 mA Receive

### SIZE

- 2.45 in. Height
- 8.16 in. Width
- 9.37 in. Length

### WEIGHT

- 5 lbs.
- Rugged die cast aluminum case

### ENVIRONMENT

#### Operating

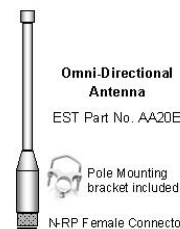
- Temperature -30° to 60° C
- Humidity 95% Non-condensing

#### Storage

- Temperature -40° to 100° C

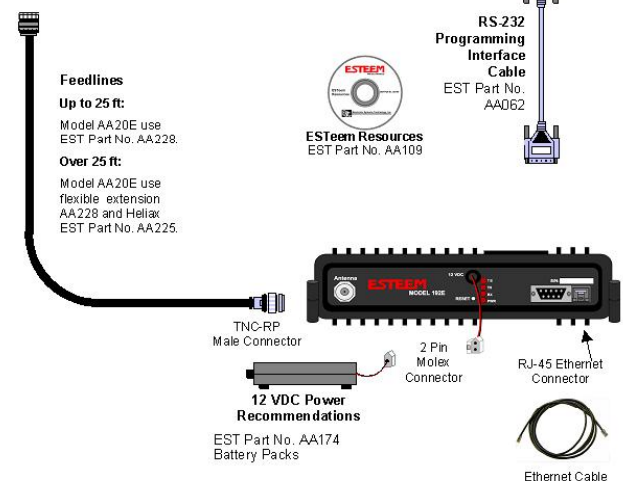
### WARRANTY

- 1 Year



**Caution**

To comply with the FCC exposure compliance requirements, a separation distance of at least 19 cm must be maintained between the antenna and all persons.



**Typical Indoor Hardware Diagram**

Specifications Subject to change without notice.  
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