



## Features

### General

- 802.11 b & g protocol compatible
- 54 Mbps RF Data Rate
- 2.4 GHz Unlicensed Frequency
- 1 Watt RF Output Power
- 5 to 7 Mile Range
- Industrial Hardened Case
- Direct Outdoor Pole Mountable
- Extended Temperature Specifications
- Power Over Ethernet Cable for Low Feedline Loss
- Redundant, Self Healing Network Architecture

### Modes of Operation

- Access Point
- Access Point with Repeater (hardwired backbone not required)
- Multiple Client Modes
- Bridging (Point To Point and Point to Multi-Point)

### Security

- WPA Compatible
- Temporal Key Integrity Protocol (TKIP)
- 802.1x/EAP Authentication
- Access Control List (ACL)
- 128/64 Bit WEP Encryption



Model 195E Series shown with outdoor pole mounting hardware and direct mount antennas.

## Wireless High Speed Ethernet

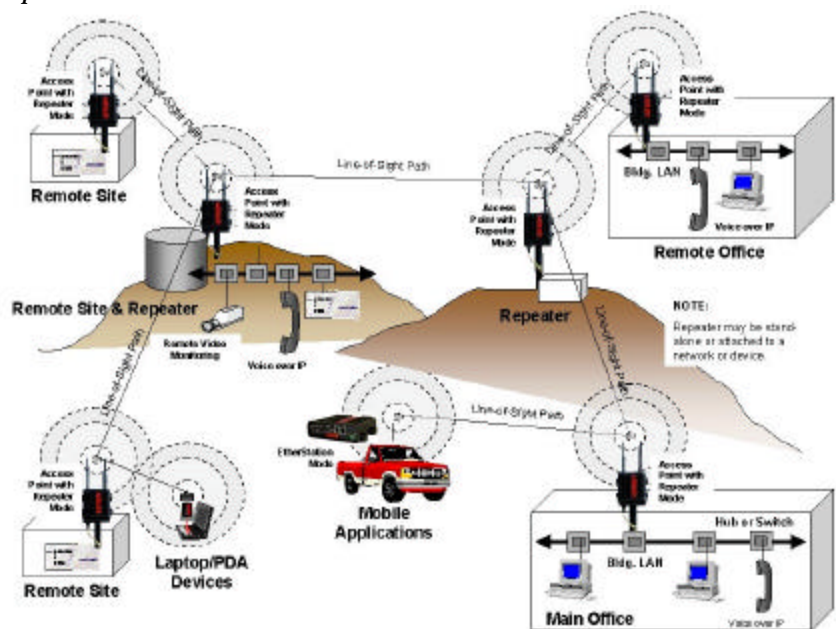
The ESTEEM Model 195Eg is the next generation Ethernet wireless modem designed for the rigors of the Industrial, Public Safety, and Federal markets. The Model 195Eg is an 802.11g protocol compatible product that operates to 54 Mbps with a 5 to 7 mile range. Now you have greater bandwidth for all your control, video, and voice over Ethernet needs, all on one radio channel. The Model 195Eg can be used to **Bridge Ethernet Networks** or as an **Access Point** for clients like laptops and PDAs. It even has **Client Mode** features so it can be used as a high powered Client in a mobile application.

## Model 195Eg Reduces Site Costs

- **New case design.** The new case design and weatherproofing kit allows the unit to be indoors or outdoor pole mounted in harsh environments. This feature eliminates the enclosure costs needed with other radios.
- **Reduces or eliminates costly RF feedlines.** By direct pole mounting you greatly reduce feedline cost or in the case of a direct mount antenna eliminate the feedline all together.
- **Reduces Radio Density in large sites.** Reducing the feedline length not only saves cost, but also increases transmitter-radiated power and received signal strength, giving you greater range. Greater range reduces the number of radios needed to cover large areas.
- **Higher RF Power.** Nothing beats more power. Compared to other radios, the 1-watt RF power output is like having a **"Nuclear Powered"** radio. Higher power means higher signal to noise ratios, which means better coverage in high noise environments and greater range to reduce the number of radios needed to cover large areas.
- **External lightning arrestors are not needed on outdoor sites.** The Model 195E Series has been designed with an integral lightning arrestor to further save site costs.
- **Lower installation costs.** The simple pole mounting saves installation time, but we didn't stop there, by powering the radio over the low cost Cat 5 Ethernet communications cable at distances to 300 feet, we helped to reduce additional time and expense.
- **Hardwired backbone not needed.** When used in the Access Point with Repeater Mode for large indoor and outdoor sites, substantial costs can be saved by not having to hardwire the Access Points to together.

## Need Training on Radio Technology?

ESTEEM provides monthly training classes on Site Design, RF Site Surveys, Installation, and Hardware Interfacing. Now the good part, our training is **Free**. All graduates receive our RF Site Design software program. You have applications, we have the experience from designing and manufacturing our products since 1984. ESTEEM has the patent on the **Wireless Modem**. *We speak radio.*



# Technical Specifications

# Model 195Eg

LED Indicators	
Power On/Off	Receiver On/Off
Carrier Detect On/Off	Transmitter On/Off
Link Status On/Off	

I/O Connectors	
Ethernet 10/100Base T	RJ-45
RS-232C Programming Port	RJ-45
Dual Antenna input/Outputs	TNC Reverse Female
Remote Input Power	Power Over Ethernet Cable
Direct Input Power	Optional, Header Screw Connector

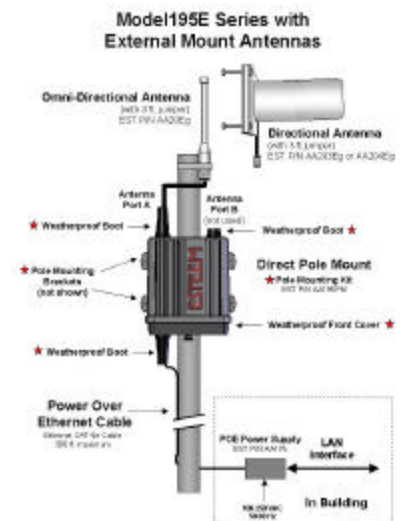
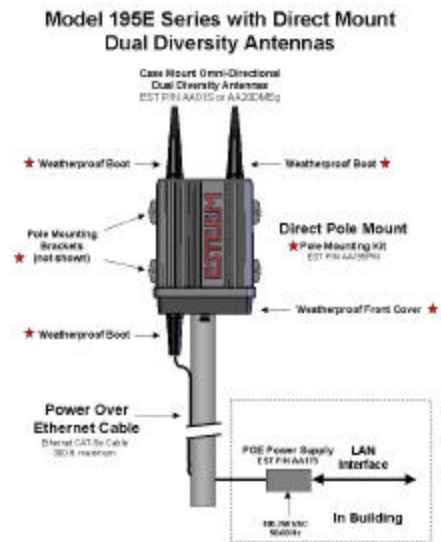
Transmitter	
Frequency of Operation	2.412 to 2.462 GHz Software Selectable in 11 Channels
RF Data Rates	1,2,5.5,6,9,11,12,18,24,36,48, & 54 Mbps Fixed or Auto Scaling
Tx Output Power	1 Watt
RF Output Impedance	50 ohms

Receiver	
Rx Sensitivity	-68 dBm @ 54 Mbps to -89 dBm @ 1 Mbps Frame Error Rate <10%

Power	
Power over Ethernet	IEEE 802.3af Standard Power Supply, 48 VDC @ 13 Watts
Power Connector on Unit	10 to 16 VDC
Receive	320 ma @ 12 VDC
Transmit	1000 ma @ 12 VDC

Case	
Dimensions	1.9 in. H x 6.7 in. W x 6.2 in. L
Weight	1.25 lbs.
Outdoor Pole Mounting Kit	Optional, EST P/N 195PM

Other	
Warranty	1 Year
Temperature Range	-30° to +60° C
Humidity	95% Non-condensing
FCC Type Acceptance	ENPESTEEM195EG
Industry Canada Type Acceptance	1457A-195EG



The unit can also be powered directly from 10 to 16 VDC, 1 A source using the optional male power connector shown. EST P/N AA195PP.

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