

### Wireless High Speed Ethernet and Serial Ports

The ESTeem Model 195Ed is designed for the rigors of the Industrial, Public Safety, and Federal markets, is the next generation wireless modem with *two Ethernet ports* and *one independent Serial RS-232C data port*. The Model 195Ed provides wireless networking with an RF data rate of *6 to 54 Mbps*, at a 5 to 10+ mile range depending on the antenna used. Now you have greater bandwidth for all your control, video, and VoIP needs, on one radio channel. Wireless networks over large geographical areas become a reality using the 195Ed *Access Point Mode* with the *Self-Healing MESH* feature. 195Ed products have a *Client Mode* so it can be used in mobile applications under a 195Ed radio canopy.



Frequency	RF Data Rate
902 to 928 MHz Unlicensed	6 to 54 Mbps

### Model 195Ed Reduces Site Costs

- **Outdoor case design.** The new NEMA 4 case design and weatherproofing kit allows the unit to be indoor or outdoor pole mounted in harsh environments. This feature eliminates the enclosure costs needed with other radios.
- **Eliminates costly RF feed lines.** Direct pole mounting eliminates feedline cost and high signal losses.
- **Lower installation costs.** Simple pole mounting saves installation time and expense.

### Software Features

- **High Security AES Encryption.** The 195Ed uses the high-security 128-bit AES-CCMP compatible with both IEEE 802.11i and WPA-2 encryption. This level of security is required in most municipal, public safety and federal applications.
- **Simple Network Management Protocol (SNMP).** SNMP open protocol support is standard in the 195E Series that is used for critical network diagnostics and management.
- **Rapid Spanning Tree Protocol (RSTP – IEEE 802.1d).** The Rapid Spanning Tree Protocol will allow faster recovery times in the ESTeem Mesh networks.
- **Enhanced Network Operation.** The 195E Series includes support for VLAN pass-through and IGMP Snooping to support enhanced network functionality.

### Features

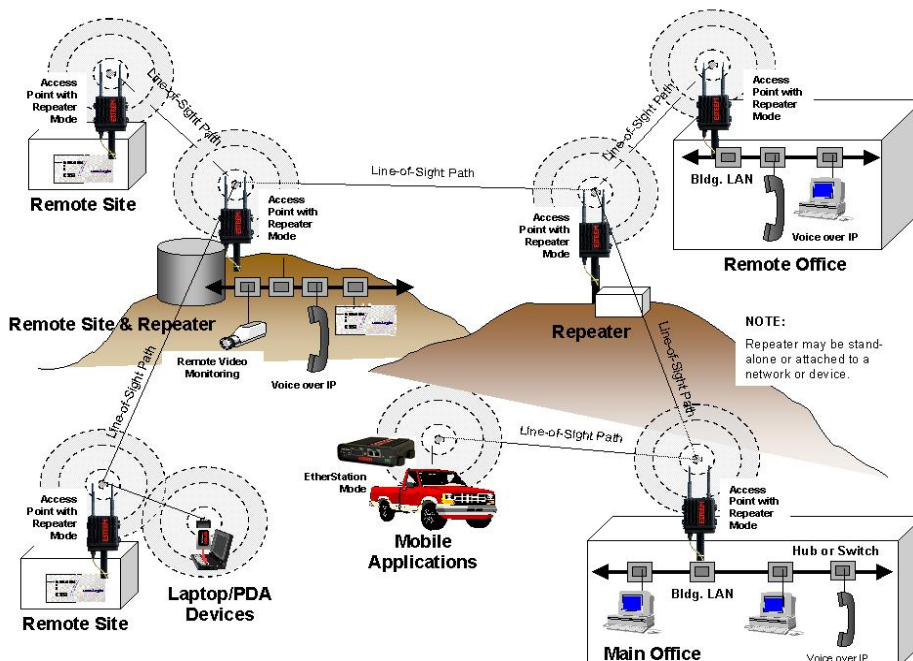
- MESHing Self Healing Network Architecture
- 5 to 10+ Mile Nominal Range
- Industrial Hardened Case
- Direct Outdoor Pole Mountable
- Extended Temperature Specifications
- Power over Ethernet Cable (PoE)
- Dual Ethernet Ports
- Serial RS-232 Communications Port

### Modes of Operation

- Ethernet Bridge Mode
  - Point-to-Point
  - Point-to-Multipoint
  - All Bridges can be Repeaters Available in all Access Point and Bridging Modes
- Access Point (AP) AP/Bridge, Router and Masquerade
- Client Modes (Mobile)
  - EtherStation
  - Station Router
  - Station Masquerade

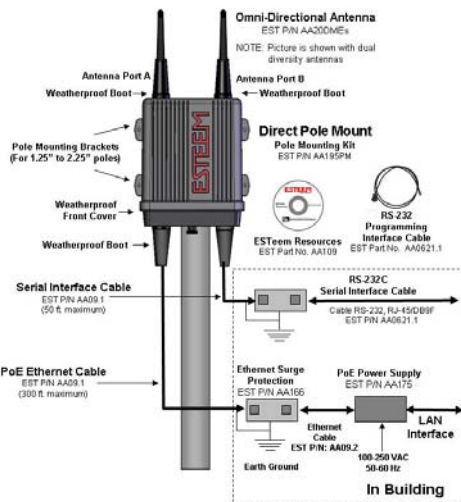
### Security

- AES Encryption (CCMP)
- WPA - Temporal Key Integrity Protocol (TKIP)
- 128/64 Bit WEP Encryption
- Access Control List (ACL)



ESTeem 195Ed Specifications	
<b>Transmitter/Receiver</b>	
Frequency of Operation (Software Selectable)	902 to 928 MHz (4-channels)
RF Data Rate	6, 9, 12, 18, 24, 36, 48 and 54 Mbps (8 steps)
Tx Output Power (Software Selectable)	250, 500, 750, and 1000 mW (Pk) (4-levels)
Tx Output Impedance	50 ohms
Rx Sensitivity	-95 to -72 dBm
FCC Type Acceptance	ENPESTEEM195ED-1
Industry Canada Type Acceptance	1457A-195E1
LED Indicators	Power (On/Off) - Carrier Detect (On/Off) - Transmitter (On/Off) - Receiver (On/Off)
<b>Power Requirements</b>	
Receive	200 ma @ 12 VDC
Transmit	450 ma @ 12 VDC
PoE Power Supply	(IEEE 802.3at,30 watts) (opt)
External Power Input	10 to 28 VDC @ 450 ma
<b>Input/Output Connectors</b>	
Ethernet Port 1 (10/100)	RJ-45 Female
Ethernet Port 2 (10/100)	n/a
802.11 Compatibility	n/a
RS-232C Comm Port (2,400 to 115.2 K baud)	RJ-45 Female
RS-232C Programming Port (38,400, N, 8, 1)	RJ-45 Female
Antenna Input/Outputs	TNC Reverse Female
External DC Input Power	Mini-Combicon, 3 pin female
<b>Case</b>	
Temperature Range	-30° to +60° C
Humidity	95% Non-condensing
Dimensions	1.9 in. H x 6.7 in. W x 6.2 in. L
Weight	1.25 lbs.
Product Warranty	1 Year
<b>Other</b>	
Outdoor Pole Mt. Kit	AA195PM (opt)
PoE Power Supply	AA175 (opt)
External DC Input Power Connector	AA195PP (opt)

**Model 195Ed  
Direct Mount Antennas  
w/Surge Protection**

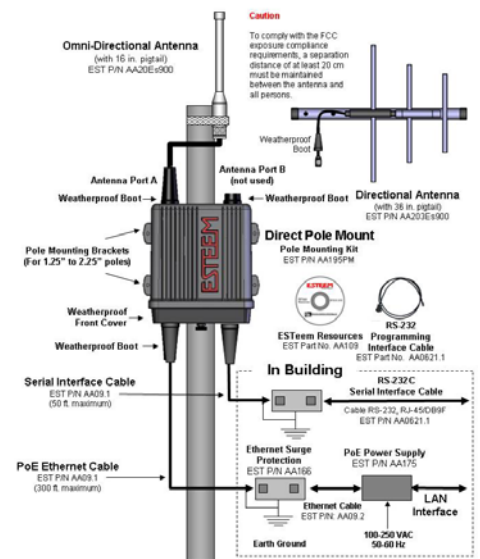


Only single Ethernet connection shown in diagrams.



The unit can also be powered directly from 10 to 28 VDC, 1 amp source using the optional male power connector shown. EST P/N AA195PP.

**Model 195Ed  
External Mount Antenna  
w/Surge Protection**



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Specifications subject to change without notice

www.esteem.com  
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