

Wireless High Speed Ethernet and Serial Ports

The ESTeem Model 195Ep 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 195Ep provides wireless networking with an RF data rate of *1 to 54 Mbps*, at a nominal 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 195Ep *Access Point Mode* with the *Self-Healing MESH* feature. 195Ep products have a *Client Mode* so it can be used in mobile applications under a 195Ep radio canopy.



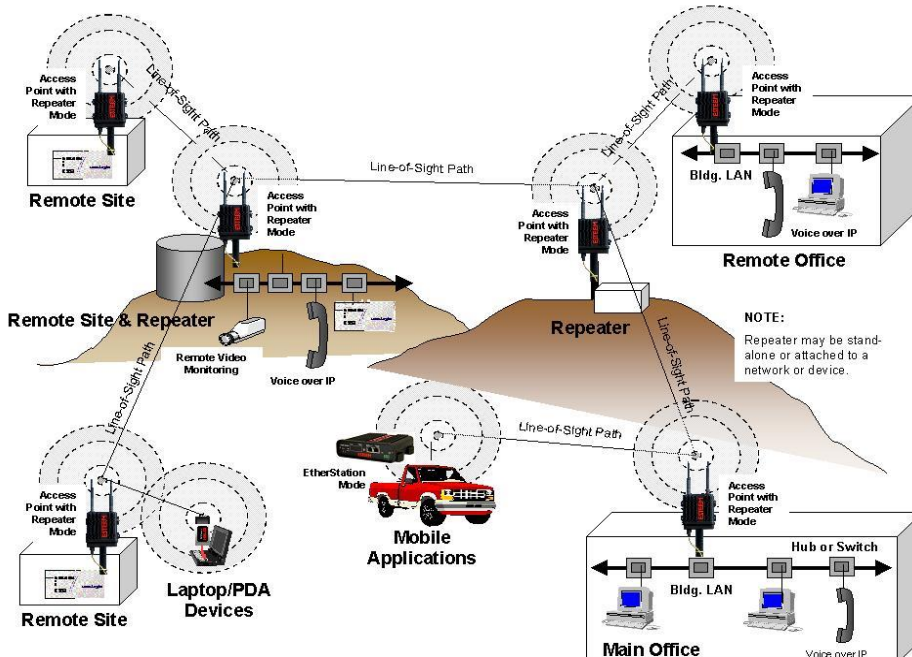
| Frequency | RF Data Rate |
|------------------|--------------|
| 4.9 GHz Licensed | 1 to 54 Mbps |

Model 195Ep 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 195Ep 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

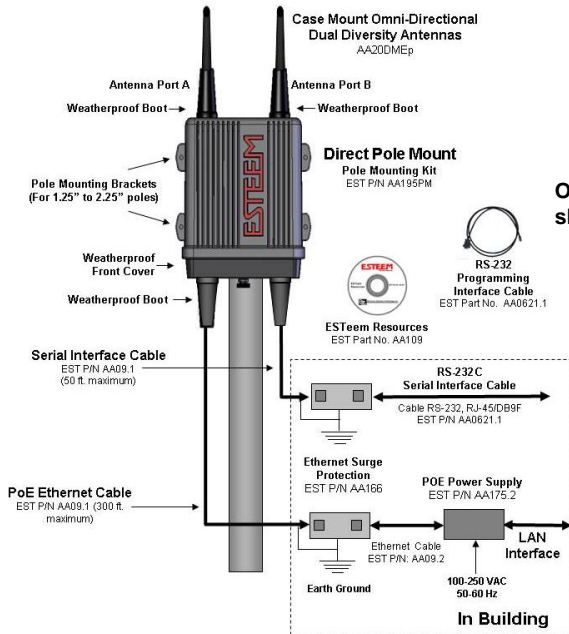
- Ethernet Bridge Mode
 - Point-to-Point
 - Point-to-Multipoint
 - All Bridges can be Repeaters Available in all Access Point and Bridging Modes
- Access Point (AP) AP/Bridge, Router and Masquerade
- Client Modes (Mobile)
 - EtherStation
 - Station Router
 - Station Masquerade

Security

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

| ESTeem 195Ep Specifications | |
|--|---|
| Transmitter/Receiver | |
| Frequency of Operation (Software Selectable) | 4.960 to 4.980 GHz (2-channels) |
| RF Data Rate | 1, 2, 5.5, 6, 9, 11,12, 18, 24, 36, 48, and 54 Mbps (12 steps) |
| Tx Output Power (Software Selectable) | 250, 500, 1000, to 2000 mW (Pk) (4-levels) |
| Tx Output Impedance | 50 ohms |
| Rx Sensitivity | -92 to -68 dBm |
| FCC Type Acceptance | ENPESTEEM195EP |
| Industry Canada Type Acceptance | 1457A-195EP |
| LED Indicators | Power (On/Off) - Carrier Detect (On/Off) - Transmitter (On/Off) - Receiver (On/Off) |
| Power Requirements | |
| Receive | 320 ma @ 12 VDC |
| Transmit | 1500 ma @ 12 VDC |
| PoE Power Supply | (IEEE 802.3at,30 watts) (opt) |
| External Power Input | 10 to 28 VDC @ 1500 ma |
| Input/Output Connectors | |
| 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 Female |
| External DC Input Power | Mini-Combicon, 3 pin female |
| Case | |
| 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 |
| Other | |
| Outdoor Pole Mt. Kit | AA195PM (opt) |
| PoE Power Supply | AA175.2 (opt) |
| External DC Input Power Connector | AA195PP (opt) |

Model 195Ep Direct Mount Antennas w/Serial Port and Surge Protection

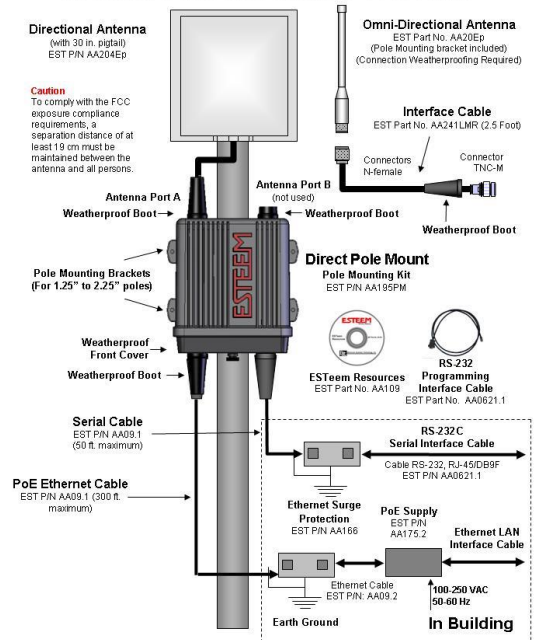


Only single Ethernet connection shown in diagrams.



The unit can also be powered directly from 10 to 28 VDC, 1.5 amp source using the optional male power connector shown. EST P/N AA195PP.

Model 195Ep External Antenna w/Serial Port and Surge Protection



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Specifications subject to change without notice

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