

Wireless High Speed Ethernet and Serial Ports

The ESTeem Model 195Ea, 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 195Ea 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 195Ea *Access Point Mode* with the *Self-Healing MESH* feature. 195Ea products have a *Client Mode* so it can be used in mobile applications under a 195Ea radio canopy. The Model 195Ea also has a user enabled 802.11a protocol for use with 5.8 GHz Wifi devices.



Frequency	RF Data Rate
5.8 GHz Unlicensed	6 to 54 Mbps

Model 195Ea 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 195Ea 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

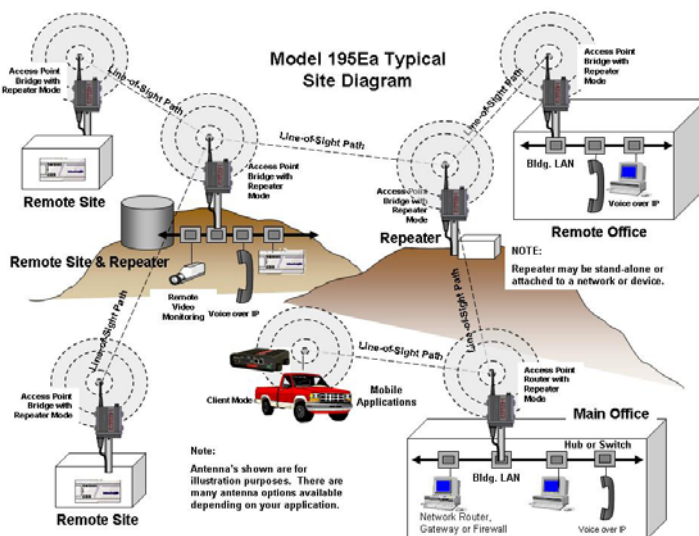
- MESHing Self Healing Network Architecture
- 5 to 10+ Mile Nominal Range
- Industrial Hardened Case
- Direct Outdoor Pole Mountable
- Extended Temperature Specifications
- Power over Ethernet Cable (PoE)
- Dual Ethernet Ports
- Serial RS-232 Communications Port

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

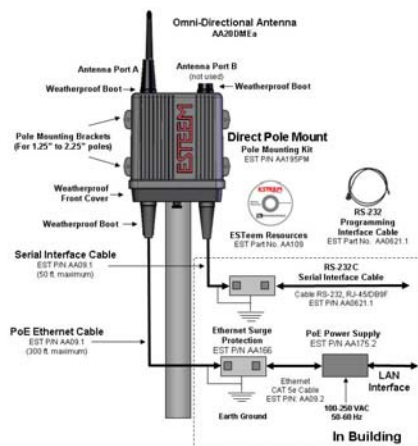
Security

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



ESTeem 195Ea Specifications	
Transmitter/Receiver	
Frequency of Operation (Software Selectable)	5.745 to 5.825 GHz (17-channels)
RF Data Rate	6, 9, 12, 18, 24, 36, 48 and 54 Mbps (8 steps)
Tx Output Power (Software Selectable)	125, 250, 375 and 500 mW (Pk) (4-levels)
Tx Output Impedance	50 ohms
Rx Sensitivity	-96 to -70 dBm
FCC Type Acceptance	ENPESTEEM195EA
Industry Canada Type Acceptance	2163A-195EA
LED Indicators	Power (On/Off) - Carrier Detect (On/Off) - Transmitter (On/Off) - Receiver (On/Off)
Power Requirements	
Receive	250 ma @ 12 VDC
Transmit	1250 ma @ 12 VDC
PoE Power Supply	(IEEE 802.3at, 30 watts) (opt)
External Power Input	10 to 28 VDC @ 1250 ma
Input/Output Connectors	
Ethernet Port 1 (10/100)	RJ-45 Female
Ethernet Port 2 (10/100)	
802.11 Compatibility	802.11a
RS-232C Comm Port (2,400 to 115.2 K baud)	RJ-45 Female
RS-232C Programming Port (38,400, N, 8, 1)	
Antenna Input/Outputs	TNC Reverse 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 195Ea
Direct Mount Antenna
w/Surge Protection**

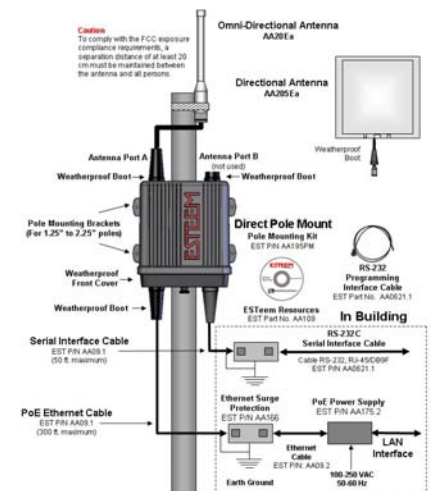


Only single Ethernet connection is shown in diagrams.



The unit can also be powered directly from 10 to 28 VDC, 2 amp source using the optional male power connector shown. EST P/N AA195PP.

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



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Specifications subject to change without notice

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Revised: 18 Feb 2014