



# ESTeEM

SECURE WIRELESS NETWORKING



## 195 Narrowband Series

The ESTeem 195 Narrowband series is the perfect radio solution designed for the rigors and security requirements of the Industrial and Public Safety applications when the VHF & UHF frequencies are needed for greater coverage in challenging terrains.

The ESTeem 195 provides Ethernet, Serial RS-232C, RS-422, RS485 and 4-Channel Sensor Interfaces in a single wireless device.

### Key Features

150-174 MHz, 217-220 MHz & 450-470 MHz  
Frequency options – FCC Licensed Exclusive Use

Multiple Modes of Operation - Same device can  
be used for master, repeater and/or remote

Edge-to-Edge AES-128 Cybersecurity

Ethernet and serial interfaces

Simple configuration

15+ Mile range

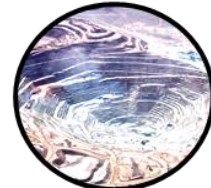
Built-in Full-Feature Spectrum Analyzer



Water/Wastewater



Oil & Gas



Mining



Power & Energy



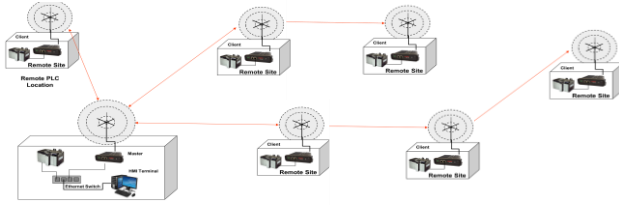
**ESTeem** Secure Wireless Networking

www.esteem.com

Phone (509) 735-9092

Revised: 4 January 2024

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## ESTEem 195 Specifications

	195M	195C	195H
<b>Transmitter/Receiver</b>			
Frequency of Operation (Software Selectable)	150 to 174 MHz (6.25 kHz / 12.5 kHz Channel Spacing)	440 to 470 MHz (6.25 kHz / 12.5 kHz Channel Spacing)	217 to 220 MHz (6.25kHz, 12.5 kHz, 25 kHz and 50 kHz Channel Spacing)
Frequency Stability, -30C to +60C	+/- .38ppm	+/- 2.5ppm	+/- 0.415ppm
RF Data Rate @ 12.5Khz channel spacing	12.5Kbps		(4.8Kbps @ 6.25kHz), ( 12.5Kbps @ 12.5kHz), (25Kbps @ 25kHz), and (50Kbps @ 50kHz)
Tx Output Power (Software Adjustable)	0.5 to 4 Watts		1 or 2 Watts
Tx Output Impedance	50 ohms		
Rx Sensitivity	-110 dBm		
FCC ID	ENPESTEEM195M	ENPESTEEM195C	ENPESTEEM195H
Industry Canada Type Acceptance	2163 192 195M	2163 192 195C	N/A
LED Indicators	Power (12V-Aux), Status Multi-Color LED (Tx, Rx, Rx-Valid, Rx-Error), RS-232 Tx/Rx, RS-485 Tx/Rx, RS-422 Tx/Rx, Ethernet Activity/ Link		
<b>Data Packet Information</b>			
Radio Addressing	1-254 Total Units, Digi-repeating allows up to 3 repeaters between end-points		
Data Packet Size	1-1500 Bytes		
Serial Data Interface Buffer Size	8Kbytes Tx / 8Kbytes Rx		
<b>Power Requirements</b>			
Receive / Without Ethernet Link	120 ma @ 12 VDC		
Receive / With Ethernet Link	160 ma @ 12 VDC		
Transmit @ 2 Watts RF Output	1350 ma @ 12 VDC		
Transmit @ 4 Watts RF Output	1540 ma @ 12 VDC		
External DC Power Input	10.8 to 15 VDC		
<b>Input/Output Connectors</b>			
Ethernet Port (10/100)	RJ-45 Female		
Serial Data Interfaces (One of four selectable)	RJ-45 Female		
Antenna Input/Output	TNC Female Connector		
External DC Input Connector	Mini-Combicon, 3 pin female		
<b>Protocols</b>			
Serial Data Interface, Master PLC mode protocols supported by auto-digi-repeater function	Allen Bradley DF1, Opto22, Modbus RTU/ASCII, and Transparent protocols		
Ethernet Interface protocols supported for remote access via ARP proxy on Master Gateway Unit	ICMP Echo (ping), Modbus/TCP (Aux Voltage, 4-20mA readings, RSSI, MCU Core Temperature), Remote Configuration		
Ethernet Interface protocols (direct access only)	Telnet, IP Configuration, Firmware upgrades		
<b>Mechanical / Environmental</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>Options</b>			
Outdoor Pole Mount Kit	AA195PM		
RJ-45 To DB9 Serial Adaptor	AA0621.1		
RJ-45 To Terminal Block Adaptor	AA066		
Antennas/Surge Protectors/Cables, etc.	Contact factory for various options (market@esteem.com or 509-735-9092)		
Security	AES-128		

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