



Specifications

General	
Data Rate	9.6 kbps raw over-the-air
Frequency Band	FCC: 216.0-221.9875 MHz
Channel Bandwidth	12.5 kHz
Timing Modes (mutually exclusive)	<ul style="list-style-type: none"> GPS (Base) <ul style="list-style-type: none"> - NMEA 0183 via COM2 - 1PPS 0-5 VDC PTP (Base) <ul style="list-style-type: none"> - IEEE 1588-2008 PTPv2 Over the Air (Mobile)
Over-the-Air frame structure	TDMA, 8 timeslots per second, 117 Bytes per slot with FEC, 133 Bytes per slot without FEC

Radio	
TX Power	2-25 Watts (33-44 dBm)*
Output Impedance	50 Ohms
Modulation	GMSK
Frequency Stability	1.0 ppm (-30C - +60C)
RX Noise Figure	< 7 dB

* 2 Watts max for FCC Part 90 below 220 MHz

216-220 MHz RF Performance (Wide Deviation)	
RX Sensitivity (w/ FEC)	-114 dBm for 10% PER typ.
RX Co-Channel**	-15 dBc
RX Adjacent Channel**	1 st : 44 dB, 2 nd : 57 dB, 3 rd - 5 th : 60 dB
Intermodulation Rejection**	500 kHz / 1 MHz: 60 dB
Blocking**	> 1 MHz: -29dBm

220-222 MHz RF Performance (Narrow Deviation)	
RX Sensitivity (w/ FEC)	-109 dBm for 10% PER typ.
RX Co-Channel**	-15 dBc
RX Adjacent Channel**	1 st : 45 dB, 2 nd : 57 dB, 3 rd - 5 th : 60 dB
Intermodulation Rejection**	500 kHz / 1 MHz: 60 dB
Blocking**	> 1 MHz: -24dBm

** For 10% PER at 3 dB above sensitivity

For additional information, please visit
http://sc.ge.com/*td220x

GE MDS reserves the right to make changes to specifications of products described in this data sheet at any time.

Physical Interface	
DB-25 Connector	1 x 10-BASE-T Ethernet 2 x RS-232C Serial Ports (1.2 to 115.2 kbps) 1 x GPS PPS input (TTL)
USB	USB Type 1.1
Antenna	Type N Connector (Female)
Power	2-pin locking molded cable
LEDs	PWR, ETH, TX, RX

Protocols	
Wireless	Open (no MAC) with STFP protocol.
Ethernet	IEEE 802.3, IP (DHCP, ICMP, UDP, TCP, ARP), STFP over UDP/IP
Management	Serial Console, Telnet, SNMP, SYSLOG3
Encryption	AES-128

Environmental	
Temperature: 25 W / 30% Duty*** 10 W / 30% Duty*** 2 W / 100% Duty	-40C - +60C (-40F - +140F) -40C - +70C (-40F - +158F) -40C - +70C (-40F - +158F)
Humidity	95% at 40C (104F) non-condensing
Input Power	11.5 to 14.2 VDC, 13.8 VDC nominal

*** Consider GE MDS eNETL2T Power Amplifier for 100% Duty Cycle Applications over 2 Watts.

Power Consumption	
Transmit (25 W)	< 7 A at 13.8 VDC
Receive	< 300 mA at 13.8 VDC

Mechanical	
Case	Die Cast Aluminum
Mounting Options	Flat surface mount brackets, DIN rail
Dimensions	7.2" L x 5.2" W x 2.0" H
Weight	2.5 lbs

Agency Approvals	
FCC	CFR Title 47 Parts 2, 15, 80, 90, 95
CSA	Class 1 Div 2 Groups A, B, C and D for hazardous locations (ANSI/UL equivalent)

Maximum Ratings	
RF Power Level into Antenna Jack	0 dBm