



Technical Specifications

MTEN-2500 Series Technical Specifications			
Power Requirements	UPS	Type: Internal, rechargeable Lithium-ion battery	
		Duration: Not less than 4 (6-7 hours typical)	
		Recharge time: 3 hours typical	
		Replacement: Field-replaceable with zero downtime	
		Lifecycle: Greater than 92% retained power/load capacity after 500 charges	
		Surge/Isolation: 40 Joules (RIA12 / EN50155 Compliant)/1.5KV Galvanic	
	Charging	AC	Range: 110-220vac, 50-60hz source, adaptor included as accessory
International: Universal plug adaptor for world-wide AC charging included as accessory			
Alternate: 400hz adaptor available			
DC		Vehicular: Standard Vehicular adaptor included as accessory	
		Alternate: Any 10-31 VDC source (optional adaptors available)	
		Load: 50/100 watts typical/200 maximum while charging	
Environmental	Max Operating Altitude: 15,000 ft max un-pressurized, unlimited pressurized altitude		
	Cooling: 100% Passive		
	Weather/Dust/Water resistant		
	Temperature: -40 to 80c (-40 to 175f)		
Physical	Size: 9x21x12 inches (airline carryon compliant)		
	Weight: 36 lbs without accessories, 45 pounds typical with accessories		
	Form Factor: Semi-rugged Aluminium roll/carry suitcase		
Configuration Ports	Type: 3 Router ports, 2 WMIC ports (typical depot use only)		
	Form Factor: DB-9		
Global Positioning System	Frequency: 12 channel, L1, 1575.42 MHz		
	Tracking: CPC (carrier-aided) 12 satellites simultaneously		
	Velocity: 500 m/s, Acceleration to 5 G		
	3D Resolution: 5 meters		
LAN Sub-net Connectivity	Ethernet	Ports: 18 total, 8 dedicated Unclassified (SBU), 8 dedicated Classified (SIN), 2 SBU/SIN crossover	
		Throughput: 100 Mbps (10BaseT or 100BaseTX with auto-crossover)	
		Form Factor: RJ-45	
		Standards: 802.1q, 802.1d, 802.3 and 802.3U complaint	
	Wireless	Clients: 244 SBU wireless client load (practical load depends on selected/available WAN throughput)	
		Access: WPA2 compliant wireless interface (legacy access adaptors available)	
		Standard: 802.11b/g (802.13 upgradeable near future)	
		Throughput: 1-54 Mbps shared depending on range, clients, and environmental factors	
		Security	DITSCAP Compliant/WPA2 compliant
			802.1X support with Protected Extensible Authentication Protocol (PEAP/TLS)
Per-user, per-session, Wired Equivalent Privacy (WEP) keys			
MAC address and standard 802.11 authentication mechanisms			
Prestandard Temporal Key Integrity Protocol (TKIP) WEP enhancements			
Key hashing (per-packet keying), message integrity check (MIC)			
Broadcast/30 minute key rotation			
WAN Uplink Connectivity	Ethernet	Ports: 2 ports available for agency/ satellite /commercial or other Ethernet-compatible uplink devices	
		Throughput: 100 Mbps (10BaseT or 100BaseTX with auto-crossover)	
		Form Factor: RJ-45	
	Wireless	Ports: 1 port available for agency/commercial 'hotspot' internet uplink	
		Standard: 802.11b/g	
	Cellular	Ports: 2 ports available (1 GSM; 1 CDMA) for internet uplink via host service provider	
		Compatibility: Verizon, Sprint, AT&T, Cingular, T-mobile networks	
		Throughput: 144K bps, 256K bps with EV-DO	
Standard: 1xRTT 2.5G(3G), T1A/E1A/IS-98C, IS-95A/B			
Smart Serial	Protocol: Code Division Multiple Access (CDMA), Time Division Multiple Access (TDMA/GSM) available		
	Ports: 2 ports available connection to any Serial Compliant IP Modem Interface		
	Throughput: 2 mbps synchronous/115 kbps asynchronous		
	Form Factor: Smart Serial		
		Support: HDLC, asynchronous, synchronous, octet-oriented PPP modes	



Product Characteristics & Capabilities

Capability/Characteristic	Definition/ Explanation
Portable	Small form, 40 pound, airline-carryon-size roller case
Mobile Network	Roaming subnets able to maintain connectivity to the home network regardless of location or movement using Mobile IP and a plurality of current and future connectivity options.
Plurality of connectivity options	Can connect to the Internet via virtually any transport method or media—landline Ethernet, SATCOM (Ethernet), GSM and/or CDMA Cellular, WiFi (802.11a/b/g), and radio (via IP interface devices) and others as they become available. Engineered for forward compatibility with any IPv4 or IPv6 compliant transport media (e.g. 802.16x).
Self Optimizing, No User Intervention Required	The mobile unit is configured to manage the process of sensing available connectivity options and selecting the best available option.
Silent Operation	No moving parts, fans or motors.
Conduction Cooled, Self Cooled	Conduction cooled via aluminum cladding on circuit cards, mounted in machined aluminum side “ladder” brackets, mounted in aluminum internal enclosures, mounted to the interior of the aluminum exterior carrying case. Heat is drawn away from components to the exterior of the unit. “Metal” path enhanced by latest evolution of conduction cooling aids. Unit exterior touchable warm after days of operation.
TEMPEST compliant	Components of the “Red” LAN are compartmentalized and isolated from the WAN router and “Black” LAN components (which are also compartmentalized). Compartments are sealed to achieve RF isolation.
Ruggedized	Structural integrity enhanced and secured by the amount and gauge of aluminum used to encase the internal components and modules for heat dissipation and RF isolation.
Fully Enabled Mobile IP solution	Operates as Mobile IP was envisioned—the Mobile unit manages the job of staying connected to the Internet transparently and without loss of session.
Secure Unclassified Traffic	Deployed units establish secure Mobile IP tunnel to the Base Station. All client traffic secured by IPSEC tunnel using AES 256 encryption inside the secure mobile IP tunnel. All wireless clients connect using a PKI certificate and EAP-TLS with 802.11i AES encryption, 802.1x authentication (controlled from the base side), and 30 minute key rotation. Wireless is WPA2 compliant. Wireless clients authenticated on the AAA server on the Network side prior to allowing access.
Secure Classified Traffic	Classified data/traffic is routed through an approved external Type 1 Encryption device prior to passing through the Unclassified side and out over the Internet or GIG to the base station.
Simultaneous Multi-Classification Traffic	Facilitates use by deployed classified and unclassified clients simultaneously, through “one” box (internally compartmentalized components used to achieve RF isolation and TEMPEST compliance.)