

ENERGY

866 Mbps Wireless Broadband System
4.920-6.100GHz*



HIGH-PERFORMANCE. RUGGEDNESS. RELIABILITY.

Our top of the line product. The **ENERGY** is a high-performance broadband radio that delivers up to 866 Mbps data transfer rates and outstanding coverage in any outdoor environment. Perfect for the most demanding applications such as video streaming or backhaul applications, the Energy provides high-speed communications while offering features such as:

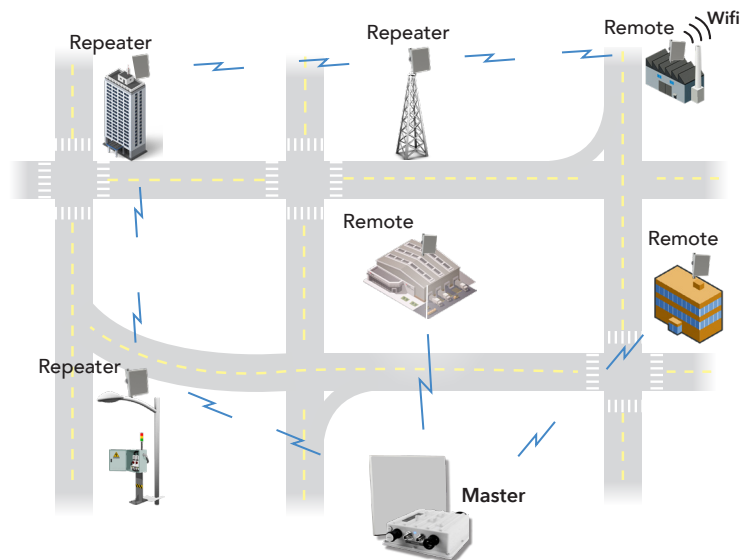
- PoE (802.3af/at compliant)
- Integrated GPS
- OFDM Technology
- Traffic Prioritization
- Operating Temp. -40°F to +176°F
- Dynamic Frequency Selection
- Received Signal Strength Indicator
- Built-in Audio Alignment Tool
- IP67 Weather Protection Rating
- Line of Sight Range of 20+ miles

KEY BENEFITS

- ✓ Our top-of-the-line radio with fastest throughput
- ✓ Best suited for Live Video applications
- ✓ Dedicated PoE port powers auxilliary devices--no need for added cabling or AC power
- ✓ Embedded GPS makes locating equipment easy in **STRATOS**
- ✓ Reliable connectivity no matter the weather!
- ✓ Works with earlier generation equipment to save you time and money!
- ✓ No digging needed! Easy installation gets you up and running faster
- ✓ Configurable channel widths
- ✓ Easily visible signal strength and power indicator

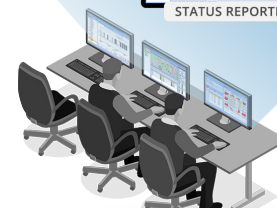
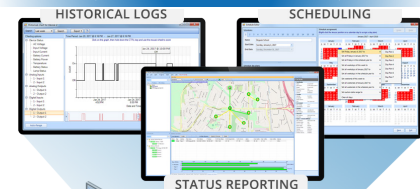
Visualize, Control and Monitor your
Encom Wireless Network with
STRATOS

(works with Stratos I/O or Stratos Elite)



Control Center

(or closest IP Access Point)



CENTRAL TRAFFIC OFFICE

ENERGY

PHYSICAL SPECIFICATIONS

	NON-INTEGRATED UNIT	INTEGRATED ANTENNA UNIT
Dimensions:	8.6" x 8.6" x 3.17"	10.15" x 10.15" x 4.5"
Weight:	3 lb.	5 lb.
Environmental:	IP67 Weather Protection Rating	IP67 Weather Protection Rating
Antenna Type:	2x N-Type connectors for external antenna	20 dBi Dual Polarity Panel Antenna
Operating Temperature:	-40°F to +176°F @ 95% humidity RHNC	-40°F to +176°F @ 95% humidity RHNC
Number of Radio Units:	Up to 2	Up to 2

WIRELESS INTERFACE

Frequency Range:	4.920- 6.100 GHz (*Subject to Country Regulation)
U.S. Restrictions:	5.250 & 5.720 GHz excluded
Peak Transmit Power:	30 dBm (1W)
Receive Sensitivity:	-96 dBm to -72 dBm
Channel Widths:	5 MHz, 10 MHz, 20 MHz, 40 MHz and 80 MHz
Modulations:	OFDM, BPSK, QPSK, 16QAM, 64QAM, 256QAM
Protocol:	IEEE 802.11a/n/ac, E-max (proprietary)
Data Rate:	Up to 866 Mbps in 802.11ac mode Up to 300 Mbps in 802.11n mode Up to 54 Mbps in 802.11a mode
MIMO:	2x2
Topology:	Point-to-Point, Point-to-Multipoint

GENERAL SPECIFICATIONS

Power	50-57 VDC Ethernet Port (802.3af/at Power Over Ethernet)
Consumption	ENERGY 5 INT: 17W + PoE Output
	ENERGY 5 EXT: 17W + PoE Output
	ENERGY 5 DUAL: 19W + PoE Output
Reset to Default	Built-in button
Alignment	Built-in LED Alignment: 4 Level LED Strip (-60 to -100 dBm)
GPS	Built-in GPS for location tracking
PoE Out	Port #2: PoE Out (802.3 af, MAX 13W) & Data

IEEE WIRELESS NETWORKING & SECURITY FEATURES

- Compression
- Dynamic Ack Timeout
- TLS EAP Method
- Pass-through EAP Method
- Hardware Retries
- Preamble Mode
- Periodic Calibration
- Disconnect Timeout
- On-fail Retry
- CSMA Disable
- Station Channel Scan List
- EMAX proprietary protocol
- 802.11a/n/ac
- 802.11i-WPA-PSK
- 802.11i-WPA2-PSK
- 802.11i-WPA-EAP
- 802.11i-WPA2-EAP
- 802.11i-TKIP
- 802.11i-AES-CCM
- 802.11i-802.1x
- 802.11i-RSN
- Radius Authentication
- MAC Access Control List
- FCC 15.247
- IC RSS-210
- RoHS Compliant

ORDERING OPTIONS

- **ENERGY INT:** Single Radio with Integrated Dual-Polarity Panel Antenna
- **ENERGY INT Dual:** Dual Radio with (1x) Integrated Dual-Polarity Panel Antenna & (2x) External Type-N Female Connectors
- **ENERGY EXT:** Single Radio with (2x) External Type-N Female Connectors

IEEE STANDARDS

802.11a/n/ac	WiFi protocols
802.11e	WMM and QOS
802.11h	DFS and TPC
802.1d	Ethernet Bridging
802.1p	Traffic Prioritization
802.1q	VLAN
802.1s	Spanning Tree
802.1w	Rapid Spanning Tree
802.3ab	Gigabit Ethernet
802.3ac	Extended Frame Size for 802.1q & 802.1p support
802.3ad	Link Aggregation/Port Bonding/Port Tracking
802.3af/at	Power over Ethernet
802.3i	10 Mbps Ethernet
802.3u	100 Mbps Ethernet and Auto-Negotiation
802.3x	Full Duplex and Flow Control
802.1ad	Service Tags
IGMP	Internet Group Management Protocol v1, v2

ADDITIONAL NETWORKING FEATURES

- OSPF
- FTP/TFTP
- HTTP
- Telnet
- SSH
- SNMP
- Syslog
- Routing
- Firewall/NAT
- NTP
- VPN
- DHCP Client/Server

ENCOM STRATOS I/O (free control/monitoring software included)

- Can now access I/O devices from any network
- Works with any broadband network (ENCOM or other)
- Profile-based configurations with SQL database
- Real-time signal strength and connection quality monitoring with user-defined color-coded link status
- Built-in bandwidth test, network traffic monitoring and spectrum scan tools
- Audio antenna alignment tool
- System-wide Ping tool
- Radio Discovery with remote radio IP change capability
- Network mapping with automatic geolocation for GPS enabled units
- User-defined email alerts for changes in online status, decreased signal levels (dBm), connection quality and changes in data rate
- Streamlined device programming and ability to manage all devices from a central location

*ENCOM Broadband radios require professional installation.

Specifications subject to change without notice. Visit www.encomwireless.com for updates.

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