EN-4000™ BROADBAND LTE ROUTER

The EN-4000™ is a highly customizable broadband LTE router designed for both commercial and hardened industrial use. Its modular design can be customized for a wide range of applications and services. It adds speed, capacity, and flexibility to the EN™ series of cellular enabled routers. The EN-4000™ base configuration includes, 5 10/100 Ethernet ports, redundant power supplies (AC and DC) in either a metal or plastic enclosure, and is DIN rail mountable. The EN-4000™ with 3 modular expansion slots can be customized to include a 4-port Power over Ethernet switch, 2 cellular modules, 802.11 Wi-Fi 2.4/5 GHZ module, additional GigE Ethernet ports, Fiber optic ports, dual RS-232, RS-485, RS-422 serial data ports, and I/O contacts.

The EN-4000™ supports several advanced IP routing protocols and security features including IPsec VPN (AES 256/3DES), stateful firewall, Ethernet switching, and legacy industrial protocol to IP internetworking, i.e. MODBUS and DNP3. This allows the EN-4000™ to support legacy SCADA and M2M applications commonly used by Utilities, Power, Oil & Gas and Water companies. With the modular hardware interfaces and support of legacy protocols the EN-4000™ can be used to replace aging copper line connections while simultaneously upgrading to IP connectivity. This makes the EN-4000™ incredibly valuable for continued ROI as a way preserve existing CAPEX by not having to rip and replace older working legacy hardware while upgrading to more secure and versatile Ethernet/IP connectivity.

As a member of the EN™ Series of broadband routers the EN-4000™ provides exceptional features at a low-cost with no user fees. All of the EN™ routers come with a three year hardware warranty, an intuitive web GUI interface, built in Firewall, advanced IP routing features, VPN and layer 4 firewall feature support.

Manage the EN-4000™ with enCloud™

Additionally, all of the EN™ routers can be monitored and managed with Encore’s enterprise management system, enCloud™. enCloud™ offers many features that will make managing your entire network of EN™ routers easier, including Cellular data limit enforcement for individual and group data plans, firmware updates, no touch deployment for new hardware, and reseller and customer tiers to assist in delivering managed network services for multiple customers.
## TECHNICAL SPECIFICATIONS

### GENERAL FEATURES
- Protocol management and translation of legacy industry serial protocols
- SNMPv3
- Access for control via SSH, Telnet, and web access interface
- Up to four antennas - 3G/4G LTE cellular, 802.11 Wi-Fi, and GPS services.
- Three slots for optional interface modules
- enCloud™ Enterprise Management System
- Disaster Recovery and Traffic Load Sharing over WAN connections
- QoS enforcement to prioritize critical traffic
- Redundant power sources

### SECURITY APPLIANCE FEATURES
- Stateful inspection firewall
- IEEE 802.11i (WPA2, RSN)
- DMZ LAN port
- NAT (Network Address Translation)
- SSL/TLS1
- SSH (Secure Shell)
- IP Sec (RFC 2401) with AES 256 and 3DES
- Generic Router Encapsulation GRE (RFC 1701)
- Internet Key Exchange—IKE (RFC-2409)
- RADIUS authentication
- Open VPN

### TRANSPORT PROTOCOLS
- **WAN**
  - IP over Ethernet (compatible with MPLS services)
  - Frame Relay (RFC-1490, IP over FR)
  - Asynchronous PPP
  - Synchronous PPP
  - X.25
  - MLPPP
  - PPPoE
  - Selective Layer Encryption (SLE) for VPN Optimization (patented)
- **IP**
  - IP Versions 4 and 6
  - IP Routing (RIP v1/v2), OSPF, BGP, or static routing
  - DHCP client/server/BootP/Relay
  - IP QoS and traffic prioritization
  - IP fragmentation/reassembly
  - IP routing over VPN; TCP and UDP
  - 802.1q VLAN tagging
  - Virtual Redundant Routing Protocol (VRRP)
  - Dead Peer Detection

### CELLULAR
- LTE CAT 4, Bands: 800/900/1800/2100/2600 Mhz
- GSM TECHNOLOGY/BANDS
- UMTS/HSPA Triple-band 900/1900/2100 MHz
- EDGE/GPRS Dual-band 900/1800 MHz
### TECHNICAL SPECIFICATIONS

#### MANAGEMENT
- enCloud™ Enterprise Management
- SNMP v3
- Craft Interface
- GUI Web Management
- Telnet
- SSH (secure shell)
- Syslog

#### PHYSICAL FEATURES
**EN-4000™ Front Panel**
- 4 LEDs for module, system status, and power indication
- Two antenna connectors for internal wireless modules
- 2 groups of 4 LEDs for wireless signal strength indication for two cellular modules
- Reset switch

**EN-4000™ Back Panel**
- Two antenna connectors for factory-installed internal radios: Cellular: 3G, EVDO, 4G LTE; 802.11ac
- One 10/100 Mbit/s Ethernet RJ-45 (WAN)
- Four 10/100 Mbit/s switched Ethernet RJ-45 (LAN)
- 5 V DC input (from AC line-power adapter)
- Additional power connector for optional factory-installed PSU, settable to other DC voltages

#### OPTIONAL MODULES
- Single Optical Ethernet (SFP) interface for fiber, 1 Gig/s
- 10/100/1000 Mbit/s Switched Ethernet over copper
- Dual high-speed serial ports (RS-232, RS-485, RS-422)
- Cellular 4G LTE, 3G, HSPA+, HSPA, 2G
- Wi-Fi Access/Client
- Commercial miniPCI modules such as the latest Wi-Fi
- 4-Port PoE Switch
- Input/Output Contact Module, 3 Input, 2 Out

#### SERIAL DATA SUPPORT
- Up to 4 serial ports supporting EIA/TIA RS-485, RS-232, RS-422
- Legacy Protocol support for IEC 60870-5-101/103/104 MODBUS
- Other Protocols Available

#### POWER SUPPLY OPTIONS
- Redundancy between AC input and any DC
- DC: 12, 24, 48; 13 Watts maximum
- AC: 100-240 V AC Auto ranging adapter, 50-60 Hz

#### ENVIRONMENTAL
- Operating Temperature: -40 C to +85 C (Industrial Hardened)
- -20 C to +65 C (Extended Temperature Commercial)
- Storage: -40 C to +85 C
- Humidity: 5% to 95%, non-condensing

#### MECHANICAL
- Height: 1.6 inches/40 mm
- Width: 5.7 inches/145 mm
- Depth: 4 inches/100 mm
- Weight: 1 lb. (0.45 kg)

#### STANDARDS COMPLIANCE
- RoHS Compliant
- EMC: FCC Part 15, EN 55011/CISPR II, IEC 61850-3, IEEE 1613
- Product Safety: UL/CSA 60950-1, CAN/CSA-C22.2 No. 60950-1-03, EN 60950-1

*Specifications subject to change without notice*
Enterprise SMB

Hot Spot

Industrial SCADA - M2M