EN-4000™

EN-4000™ Prime Applications

- Legacy to IP conversion
- SCADA
- Power Grid Monitoring
- Sub-station Security
- Video Surveillance
- Power over Ethernet
- Business Continuity
- Digital Signage
- Custom Configurations
- Distributed Enterprise

EN-4000™ Features

- Supports Dual Cellular modules
- Wi-Fi Access point, Client or Hotspot
- Automatic Traffic Load sharing between wireline and wireless links
- Multiple interface support, GigE, Fiber, Serial
- Pass Through/Bridge Operation
- License free VRRP, and GRE routing protocols
- Assign traffic to different ports
- Redundant power sources AC & DC
- IPsec VPN (Tunnel, NAT-T, Dead Peer Detection)
- VPN IP Security AES 256 and 3DES, SSL/TLS and SSH
- Open VPN (Client, Server w/Certificates)

Cloud Management Available with enCloud™ Enterprise Management System

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.

encore!networks™

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

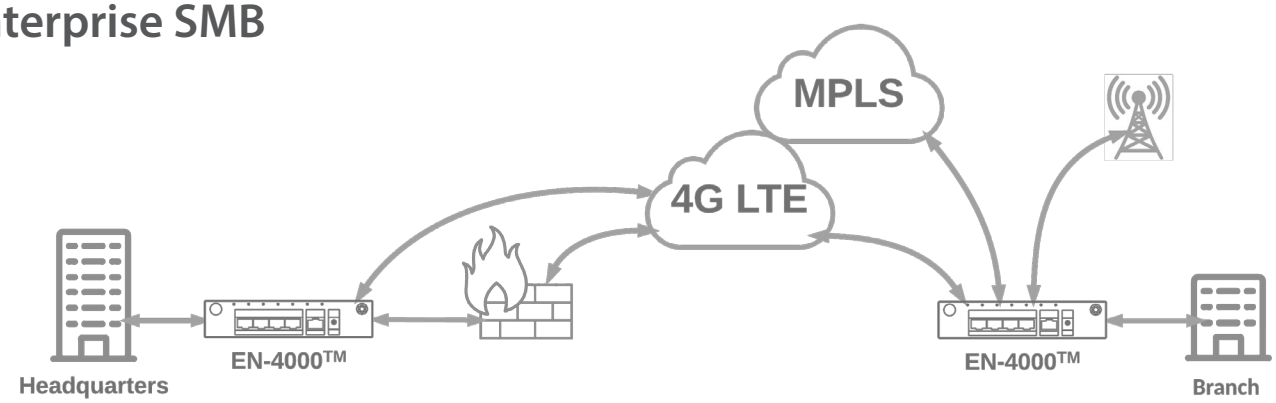
LTE CAT 4, Bands: 800/900/1800/2100/2600 Mhz
GSM TECHNOLOGY/BANDS
UMTS/HSPA Triple-band 900/1900/2100 MHz
EDGE/GPRS Dual-band 900/1800 MHz

TECHNICAL SPECIFICATIONS

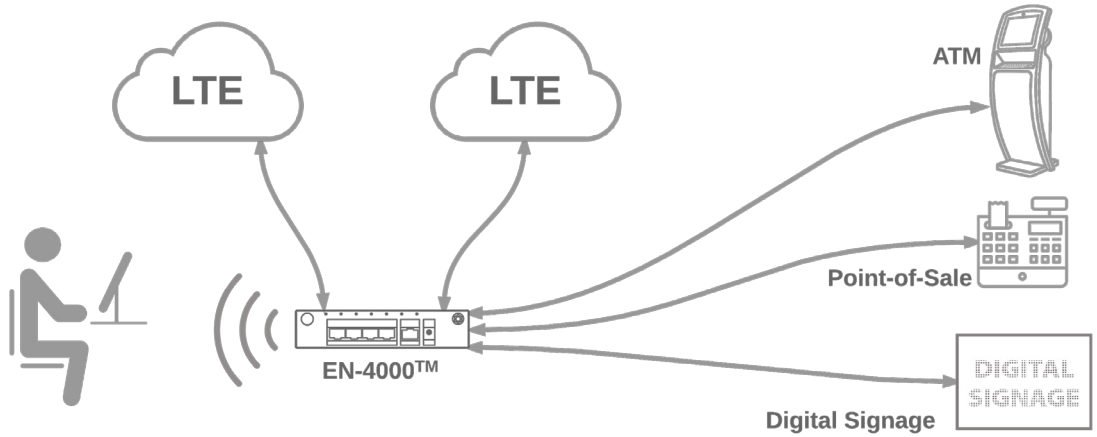
MANAGEMENT	enCloud™ Enterprise Management SNMP v3 Craft Interface GUI Web Management Telnet SSH (secure shell) Syslog
PHYSICAL FEATURES	**EN-4000™ Front Panel** 4 LEDs for module, system status, and power indication Two antenna connectors for internal wireless modules 2 groups of 4 LEDs for wireless 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

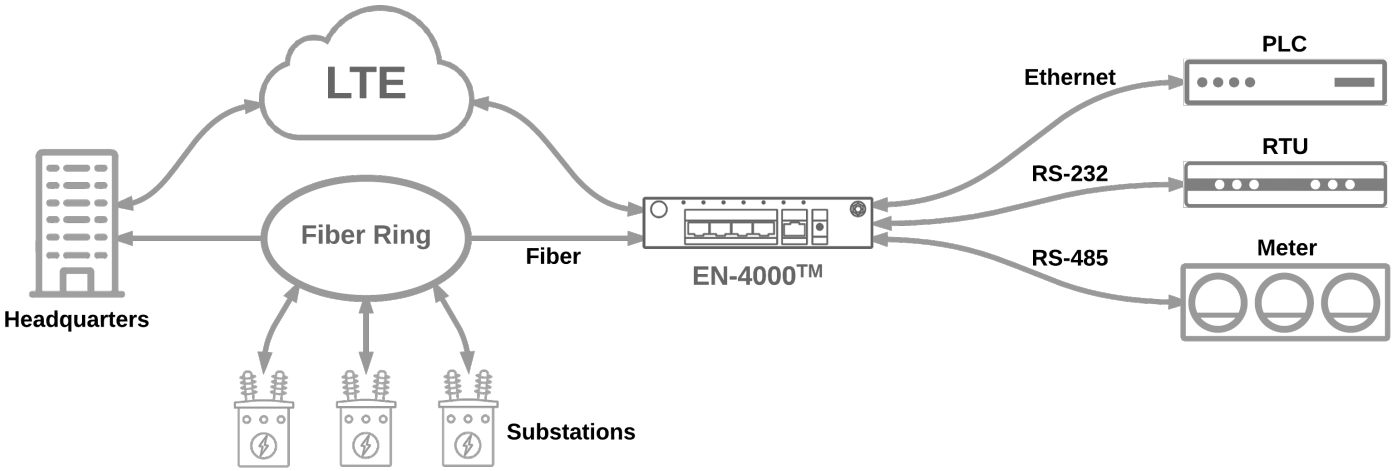
Enterprise SMB



Hot Spot



Industrial SCADA - M2M



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