- 4G LTE/HSPA+ Broadband Router
- Business Continuity
- Designed for Large Enterprises and SMBs
- Broadband Wireless

EN-4000™

Mission Critical Communications with 4G LTE/HSPA+ Wireless Protection

Integrated Network Diversity and Increased Network Reliability

Encore Networks' EN-4000™ 4G LTE/HSPA+ Broadband Routers can be configured with limitless WAN connection options including; dual 4G/3G Cellular radios, Ethernet based WAN connected services for MPLS, Fiber, Microwave and Satellite. The EN-4000™ supports any or all of these WAN connections simultaneously while utilizing Quality of Service/Class of Service (QoS/CoS.) and advanced routing protocols. Should any WAN connection fail, traffic is automatically re-routed over the remaining WAN connection(s) with minimal data loss, and falls back automatically when services are restored
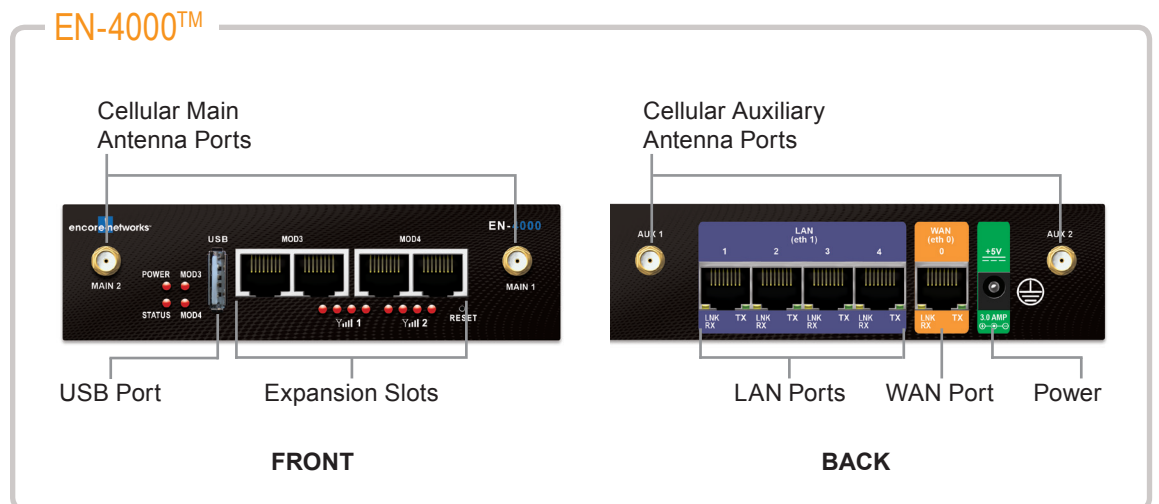
Existing Site Challenges

When an enterprise site requires a reliable network connection to meet diverse route requirements or diverse network routing design, the best choice is the EN-4000™ which uses a high speed wireless 4G LTE/HSPA+ service providing the ability to protect and reroute up to 20Mbs+ WAN connections for fiber like speeds.

Existing Site Design Solution

Since the EN-4000™ is standards IP based, it can easily be integrated into operations with any standards based third party router providing a 4G LTE/HSPA+ WAN connection for optimal infrastructure diversification at a minimal cost. Designing with the EN-4000™ with a 4G LTE/HSPA+ WAN connection and a third party router that already has an existing terrestrial WAN connection requires the implementation of Virtual Router Redundancy Protocol (VRRP) RFC 5798 standard. Invoking VRRP increases reliability at the site by creating a "virtual" router with the third party router and EN-4000™. These routers now act as master and backup routers residing on the same subnet. Only the "master" router is actively transmitting data across its hosted WAN VPN link. If the master VPN connection fails, an automatic switchover occurs between the third party router and the EN-4000™ with all traffic being routed across the backup VPN connection without any human intervention. Once the primary route is restored, all data is routed back through the primary WAN VPN connection.

New Site Design Solution

Designing with the EN-4000™ for enterprises and SMBs for optimal infrastructure diversification, two parallel WAN VPN links are used to maintain data integrity with automatic fail-over and fail-back with a 4G LTE WAN connection. Since the VPN connections are maintained within the EN-4000™, any data that would be lost over the failed link is re-transmitted over the backup link, providing minimized loss of data.

EN-4000™

Cellular Main Antenna Ports

Cellular Auxiliary Antenna Ports

USB Port   Expansion Slots

LAN Ports   WAN Port   Power

FRONT   **BACK**

ENCORE NETWORKS

Physical Features *Standard*	EN-4000 Front Panel	4 LEDs for module, system status, and power indication	
		One USB host port	
		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 HSPA+
			802.11b,g,n,ac
			Bluetooth
		One 10/100 Mbit/s Ethernet RJ-45 (WAN); draws PoE with optional PSU	
		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	
	Dual Optical Ethernet (Small Form-factor Pluggable, SFP) interface for fiber, 100 Mbit/s
	Single Optical Ethernet (SFP) interface for fiber, 1 Gig/s
	Single T-1/E-1 CSU; channelized/unchannelized/fractional
	10/100/1000 Mbit/s Switched Ethernet over copper
	4-Wire E&M (Types 1, 5)
	Dual high-speed serial ports (RS-232, RS-485, RS-422)
	Single V.35 serial port
	V.90/92 modem, FXS port, PPP support (PAP/CHAP)
	One each of FXS and FXO analog ports
	Dual FXS Port
	Digital Signal Processor (DSP)
	Cellular (3G or 4G LTE); CDMA (1xRTT), EVDO, GSM, GPRS, EDGE, UMTS, HSPA+
	Wi-Fi
	Commercial miniPCI modules such as the latest Wi-Fi
	Hardware Encryption (over 1000 sessions, for central site VPN terminations)
	Four alarm voltage sensor inputs plus three contact closure outputs

Management	
	SNMP v3
	Craft Interface
	GUI Web Management
	Telnet
	SSH (secure shell)
	Syslog

Power Supply Options	
	Redundancy between AC input and any DC or PoE source
	DC: 12, 24, 48, or 130 V DC; 13 Watts maximum
	AC: 100-240 V AC Auto ranging adapter, 50-60 Hz
	Power over Ethernet (Class 3 PoE)

Environmental (Temperature)	
	Operating: -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	
	Firewall (Layer 4)	
	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

Part Number	
	EN 60950-1

Consult your area sales representative for available features and optional modules.

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