

ALCATEL-LUCENT OMNIACCESS ESR WWAN ENABLER

THE ULTIMATE 4G LTE PERIPHERAL FOR ENTERPRISE ROUTERS

Enable your existing enterprise router with 4G connectivity, easily solving coverage problems and minimizing installation costs.



The Alcatel-Lucent OmniAccess® Enterprise Services Router (ESR) Wireless WAN (WWAN) Enabler is an external module that enables the enterprise router with 4G. This cutting-edge peripheral does not require interface card slots, PCMCIA or USB slots in the router. The interface between the WWAN Enabler and the router is standard Ethernet.

The WWAN Enabler is not a router; it is the interface that grants Wireless WAN access to the router. The management of this new 4G interface is seamlessly integrated into the router engine, so the service intelligence offered by the router for the landline WAN service is fully available for the new Wireless WAN service. The standards-based communication on Ethernet between the WWAN Enabler and the router guarantees compatibility with most existing third-party enterprise routers.

This innovative device offers an easy and cost-effective solution for boosting 4G in indoor scenarios. Enterprise routers are hosted in the server room or in data center room, where there is no cellular coverage at all, or it is not strong enough to guarantee broadband speeds at 4G frequency bands. To address this challenge, the WWAN Enabler is placed outside the server room in the spot with the best 4G coverage, where it delivers 4G service to the router over the corporate Ethernet network. With this new approach, there's no need to have expensive coaxial cables or repeaters to boost the 4G coverage, but at the same time, the reception quality is improved.

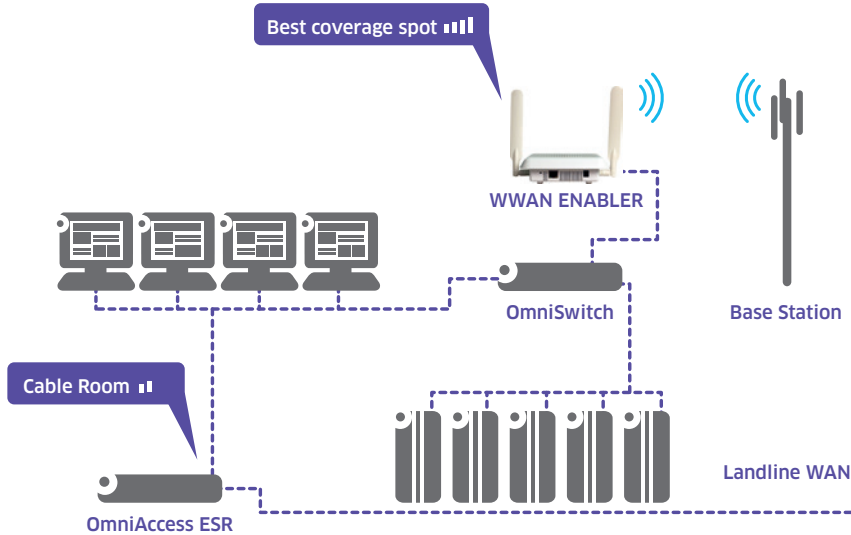
FEATURES

- No expensive coaxial wiring or amplifiers are required to link the enterprise network platform to the 4G antenna, as the existing Ethernet wiring can be used. No need for additional routers or expansion slots.
- The enterprise cellular technology is upgraded by just replacing the WWAN Enabler, not the entire router.
- Compatible with third party enterprise routers. The standards-based communication with the router guarantees compatibility with a large range of third-party enterprise routers.
- The WWAN Enabler is fully configured and monitored from the router. The Alcatel-Lucent Enterprise OmniAccess router can access and act based on the status and quality of the cellular link, which is reported by the WWAN Enabler.
- Flexible traffic flow distribution policies can be implemented in the router to enable efficient use of the router landline WAN and Wireless WAN resources.
- A single router can manage multiple WWAN Enabler devices, which makes it possible for independent Wireless WAN services to coexist in the enterprise for disaster recovery.

BENEFITS

- Cost reduction and easy indoor 4G upgrade
- Easy migration to future cellular technologies
- Compatible with third-party enterprise routers
- Fully managed from the enterprise router
- Ready for converged services
- Best-in-class scalability

Figure 1. Application scenario



In the figure, the corporate office ADSL router is equipped with a WWAN Enabler. When the enterprise router detects a failure in its main link, it forwards the IP traffic to the 4G connection.

A new virtual point-to-point interface is configured into the router. Upon successful attachment of the WWAN Enabler into the WWAN network, the negotiated IP address is assigned to the router's virtual interface. All the WWAN service intelligence (such as IP forwarding, IP link quality supervision, quality of service (QoS), VPN) is centralized in the router engine.

TECHNICAL SPECIFICATIONS

Hardware and mechanical features

Interfaces and connectors

- 1 x 10/100/1000 Gigabit Ethernet interface, POE 802.3af client, RJ-45F
- 1 x 4G LTE interface
- 1 x SIM tray
- 2 x SMA ports for radio antennas (included)

Power supply

- 12 VDC, 1200 mA; 5.5 mm connector jack (2.5 mm internal pin)
- External universal transformer AC 100–240 V; 50/60 Hz

PoE 802.3af client

- POE 802.3af client in RJ45 Fast Ethernet connector
- POE Class 0: 12.95 W maximum

Dimensions and weight

- Length x width x height: 160 x 145 x 45 mm (6.30 x 5.71 x 1.77 in)
- Desktop or wall-mounted form factor
- Approximate weight: 0.263 kg (0.580 lb)

Environmental specifications

- Operating temperature: 0°C to 45°C (32°F to 107°F)
- Relative humidity: 5% to 90%

4G Wireless WAN Interface

- Technologies: Code Division Multiple Access (CDMA), CDMA Evolution Data Optimized (CDMA-EVDO), GSM, GPRS, EDGE, UMTS, HSPA+, LTE
- Speed: 100 (upload) / 50 (download)

Software features

WWAN features

- Automatic handover
- 4G failure detection based on packet tracking and inactivity timers
- Instant bitrate
- Real-time WWAN monitoring: for example, Received Signal Strength Indicator (RSSI) serving and neighbor cells, Universal Terrestrial Radio Access Network (UTRAN) information, module information
- Detailed WWAN information right into the router Command Line Interface (CLI)
- Historical RSSI report for the past hour
- AT CLI

Management

- Zero-configuration
- Trivial File Transfer Protocol (TFTP) firmware upgrade (WWAN Enabler and 4G module)
- Authenticated Dynamic Host Configuration Protocol (DHCP) client
- CLI
- Telnet server for monitoring purposes
- Event Logging System for detailed troubleshooting
- Can use Layer-2 Tunneling Protocol (L2TP) for connection to main router
- Can use Point-over-Point Protocol over Ethernet (PPPoE) for connection to main router

ORDERING INFORMATION

PRODUCT	FEATURE
ESR-WWAN-4V	LTE Enabler Verizon (LTE B13, global fallback to CDMA and HSPA+/UMTS)
ESR-WWAN-4A	LTE Enabler AT&T, NA and others (LTE AWS and B17, global fallback to HSPA+/UMTS)
ESR-WWAN-4G	LTE Enabler for Global (LTE at 800/900/1800/2100/2600 MHz, fallback to HSPA+/UMTS)
ESR-WWAN-H+	3G Enabler (3.7G) for Worldwide (HSPA+ at 850/900/1900/2100 MHz, fallback to EDGE/GPRS)

Warranty

Standard Hardware warranty