



# Safe Environment Engineering Life-line Gateway



The Lifeline Gateway bridges the data acquired from a meter's medium distance Life-line Interoperable Network Communicator (LINC) through cellular or MESH to any computer having Internet access.

The Lifeline Gateway is sealed and operates on fully charged batteries for at least 8 hours.

The Lifeline Gateway also creates a local "Hot Spot" for wireless Wi-Fi equipped computers to gain access to the Internet.

Through the Gateway's MESH wireless architecture Gateway-to-Gateway data relaying is possible.

## Specifications

### General

**Size:** 9.87" x 7.00" x 6.12" (25.1 x 17.8 x 15.5 cm)  
**Weight:** 7lbs  
**Antenna:** Omni Directional, 2.4GHz, 5dBi, N Male  
**Antenna Connector:** Type N  
**Power:**  
 AC 100-240V 50/60Hz 0.8A  
 DC 14V 2.0A  
**Lights:** Power, MESH, CELL  
**Connector:**  
 Sealed Ethernet LAN  
 Two USB Cellular

### MESH RADIO / Access Point

**Radio Characteristics**  
**Radio:** IEEE 802.11b/g, 2.4 GHz  
**Antenna Connector:** Type N  
**Frequency:** 2.402-2.472 GHz / U.S. (varies with country)  
**Modulation:**  
 DSSS: DBPSK @ 1 Mbps, DQPSK @ 2 Mbps, CCK @ 5.5 and 11 Mbps OFDM @ 6, 12, 24, 36, 48 and 54 Mbps  
**Max. RF Transmit Power:** 25 dBm +/- 1 dB  
**Receiver Sensitivity:**  
 1 Mbps: -97 dBm +/- 1 dB    6 Mbps: -94 dBm +/- 1 dB    24 Mbps: -86 dBm +/- 1 dB  
 2 Mbps: -96 dBm +/- 1 dB    9 Mbps: -93 dBm +/- 1 dB    36 Mbps: -83 dBm +/- 1 dB  
 5.5 Mbps: -95 dBm +/- 1 dB    12 Mbps: -91 dBm +/- 1 dB    48 Mbps: -77 dBm +/- 1 dB  
 11 Mbps: -92 dBm +/- 1 dB    18 Mbps: -90 dBm +/- 1 dB    54 Mbps: -74 dBm +/- 1 dB

### Network:

VLAN and QoS Support; Access Point; Bridge; Gateway; DHCP; NAT and Port Forwarding; Automatic Protocol Tunneling (APT).

### Security:

Supports IEEE 802.11i: AES-CCMP and TKIP encryption, WPA-Personal/Enterprise, WPA2-Personal/Enterprise, 802.1x; 64/128-bit WEP; AES-256 encryption and HMAC-SHA1 authentication between Gateways; Access Control Lists; Compatible with Layer-2 and Layer-3 client/server and peer-to-peer security solutions; Compatible with Harris SecNet 54@ encryption.

**Certification:** FCC Part 15 (USA), ICES-003 and RSS-210 (Canada)

### Power:

Input Voltage: 10.5-25 VDC  
 Power: 3 W @ 24 VDC typical (4.5 W @ 24 VDC peak)

**Temperature:** Operating -20 °C to 70 °C (-4 °F to 158 °F)

**Humidity:** 5-95% (condensing)



### Wireless Broadband Router Ports

Two USB 2.0 for 4G/3G modems  
 One 10/100/1000 Ethernet LAN port

### WAN Connection Types:

Static IP, DHCP, PPOE, Cellular Modem PPP Authentication, Sprint MPLS

### WAN Redundancy and Load Balancing

Failover/Failback (4G/3G/Ethernet)  
 Load Balancing  
 WAN failure Detection via Ping Ethernet)

### WAN Security:

NAT, SPI, ALG, Inbound Filtering of IP Addresses, Port Blocking, Service Filtering (FTP, SMTP, HTTP, RPL, SNMP, DNS, ICMP, NNTP, POP3, SSH) & Protocol Filtering

### Intelligent Routing

UPnP, DMZ, Virtual Server/Port Forwarding, Routing Rules, Route Management, Content Filtering, Website Filtering, Local DHCP Server, DHCP Client, DNS, DNS Proxy, ALGs: PPTP, L2TP, PPPoE pass-through, IPSec pass-through, FTP (passive), FTP (active), MAC Address Filtering  
 Dynamic DNS

### Supported Devices:

AT&T	Sprint	T-Mobile	Verizon
Huawei E1815	CradlePoint MC100E	Huawei E1691	CradlePoint MC100E
Huawei E181	CradlePoint MC100W	Huawei E18	LG VL600
LG Turbo LUU-2100TI	Franklin Wireless U300	Huawei E1831	Novatel Wireless Ovation MC760
LG AD600	Franklin Wireless U301	Huawei E366	Novatel Wireless Ovation MC551
Novatel Wireless Ovation MC930D	Franklin Wireless U600	ZTE MF691	Novatel Wireless Ovation MC720
Novatel Wireless Ovation MC950D	Franklin Wireless CDU-680	<b>Comcast</b>	Novatel Wireless Ovation MC727
Option iCON 322	Novatel Wireless Ovation MC720	Franklin Wireless U300	Pantech UM150
Option iCON 461	Novatel Wireless Ovation MC727	Franklin Wireless U30	Pantech UM175
Sierra Wireless AirCard 881U	Novatel Wireless Ovation MC760	Novatel Wireless Ovation MC760	Pantech UMW190VZ
Sierra Wireless Compass 885	Sierra Wireless AirCard 595U	Ubee PXU1903	Pantech UMW190NCD
Sierra Wireless AirCard USB 305	Sierra Wireless Compass 597U	ZTE TU25	Pantech UML290
Sierra Wireless Compass 888	Sierra Wireless AirCard USB 598	<b>Clear</b>	Sierra Wireless AirCard 595U
Sierra Wireless AirCard USB 306	Sierra Wireless 250U	Franklin Wireless U300	<b>Virgin Mobile</b>
Sierra Wireless AirCard USB 308	Ubee PXU1901	Motorola USBw 100	Novatel Wireless Ovation MC760
Sierra Wireless AirCard 875U		Sierra Wireless 250U	

For a complete world-wide list go to [www.safeenv.com/Supported\\_Cell\\_Modems.pdf](http://www.safeenv.com/Supported_Cell_Modems.pdf)

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