



Safe Environment Engineering

Life•line Gateway



The Lifeline Gateway bridges the data acquired from a meter's medium distance Wi-Fi radio (Dongle) 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 is also a local "Hot Spot" for wireless Wi-Fi equipped computers to gain access to the Internet for research or other library information.

Specifications

802.11b/g Access Point

Frequency Band: 2.4–2.484GHz

Media Access Protocol:

Carrier Sense Multiple Access with Collision Avoidance CSMA/CA

Radio Type: Direct Sequence Spread Spectrum (DSSS)

Operation Channels: 11 for North America

RF Output Power (Typical):

25 +/- 2dBm @ 1,2,5.5 & 11Mbps

23 +/- 2dBm @ 6,9,12 & 18Mbps

22 +/- 2dBm @ 24 & 36Mbps

21 +/- 2dBm @ 48 & 54Mbps

Antenna Connector: TNC Type *Female Reverse*

Receive Sensitivity (Typical):

-94dBm @ 1Mbps -92dBm @ 2Mbps

-89dBm @ 5.5Mbps -86dBm @ 11Mbps

-92dBm @ 6Mbps -90dBm @ 9Mbps

-88dBm @ 12Mbps -86dBm @ 18Mbps

-83dBm @ 24Mbps -79dBm @ 36Mbps

-74dBm @ 48Mbps -72dBm @ 54Mbps

Modulation *OFDM:

DBPSK @ 1Mbps DQPSK @ 2Mbps

CCK @ 5.5&11Mbps BPSK @ 6&9Mbps

QPSK @ 12&18Mbps 16-QAM @ 24&36Mbps

64-QAM @ 48&54Mbps

Network Topology: Ad-Hoc, Infrastructure

Range:

150 feet/45 Meters Max indoor

300 feet/90 Meters Max outdoors

Security:

IEEE802.1x Authenticator/RADIUS Client EAP-D5/TLS/TTLS

WPA/Pre-share Key(PSK)/TKIP

MAC Address Filtering

Hide SSID in beacons

Layer 2 isolation

Data Rates: 1,2,5,5,6,9,11,12,18,24,36,48,54Mbps

Standards: IEEE802.11b, IEEE802.1x, IEEE802.3,

IEEE802.3u, IEEE802.11g, IEEE802.11b/g

Power Requirements: Power Supply 110VAC

Status LEDs: WLAN- Link

Regulation Certifications: FCC Part 15/UL,

SI300/328/CE

Temperature Range:

Operating: -10°C to +60°C

Storage: -40°C to 70°C

Cellular Modem

Packet Data Features:

CDMA2000 1xRTT, UMTS, HSDPA, GSM, GPRS, EDGE

Circuit Switched Data/Fax Features:

IS-95A, IS-95B up to 14.4K bps

SMS Features:

ASCII Text & UCS-2, Point-to-Point, cell broadcast

Carriers:

AT&T, Sprint, Verizon

Internet Protocols Supported:

Dial-in PPP, DNS, FTP, HTTP, ICMP, IP, IPCP, LCP, POP3, PPP, SMTP, SNMP, SNTP, TCP, Telnet, TFTP, & UDP protocols

Antenna Connector:

RF Antenna: 50 ohm SMA (Female connector)

Power Requirements:

5V to 32VDC

Operating Environment:

-30° to +70° C

Certifications:

EMC: FCC Part 2, 15, 22, 24, EN 55022, EN 55024

Safety: cUL, UL 60950, EN 60950 Network: CDG 1 & 2

MESH RADIO

Radio Characteristics

Output Power: 24 dBm

Receiver Sensitivity: -85 dB

RF Modulation: QDMA

Operating Frequency (GHz): 4.940-4.990

Total Spectrum Used: 20MHz

Antenna Type (std.): Omni, 8dBi

Antenna Connector: 50 ohm SMA (Female connector)

Power Requirement: 5 – 15 VDC

Current Drain: 1.5 amps

Power Consumption: 10W Max

Temperature Range: -35 to 60C

Humidity: 0 to 100%

Certification: FCC Part 15, UL, CE Mark, CSA

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