TITAN III WIRELESS CELLULAR 4G GATEWAY for LIFENET®

Scene
Audio

Cellular Network

LIFENET® System

Cellular

WiFi
a/b/g/n/ac

WiFi Access Point

Internet
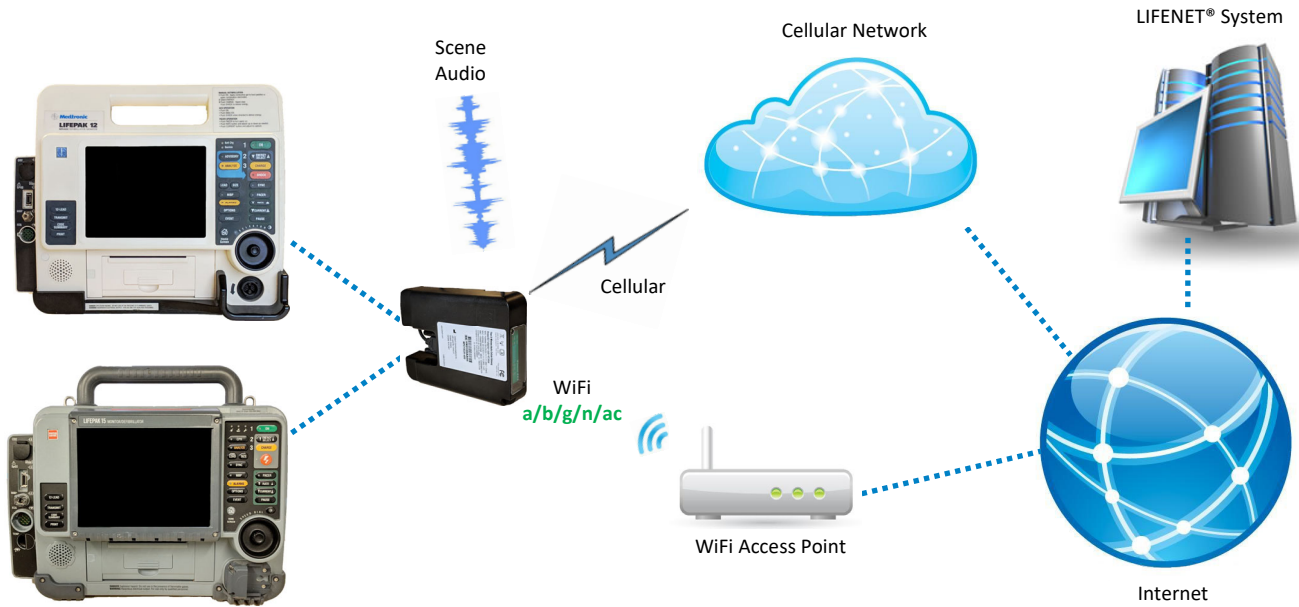
The TITAN III Wireless 4G LTE Cellular Gateway (TITAN) is a portable wireless data communication modem for the LIFEPAK® 12 or LIFEPAK® 15 monitor/defibrillators. It provides secure patient data transmission to the LIFENET® system using a Cellular or WiFi connection to the Internet. It can be configured to provide recording of scene audio and simultaneous transmission of audio and patient data securely to the LIFENET system. The scene audio recording starts automatically within 5 seconds of the TITAN being turned ON. The TITAN fits conveniently and securely in its dedicated side pouch of the LIFEPAK® carrying case. Its operation is transparent to the user. It also, provides audible tones, to signal the success or failure of data reception by the LIFENET system.

The TITAN WiFi Client can be pre-configured to connect to the LIFENET system via a number of authorized WiFi access points or a cellular connection. The resulting connection is determined by many factors such as the configured connection priority scheme, authorized access points in range and available cellular coverage.

Each patient data transmission request from the attached LIFEPAK triggers establishment of an optimum data connection at the time, following the configured connection priority scheme. An audible indication is provided whenever audio data is being transferred to the LIFENET system. The TITAN can store up to 1080 minutes (12 incidents of 90 minutes each) of audio data for recorded incidents. Further recordings are made possible by overwriting the oldest incident in memory.

In EMS applications, the TITAN can connect wirelessly to a WiFi hotspot enabled Cellular Gateway installed in the ambulance to send data securely to the LIFENET system. This allows for enhanced connectivity to transfer data to the LIFENET system from inside the ambulance. When the TITAN is located away from the ambulance or any of its pre-configured access points, it can communicate with the LIFENET system by taking advantage of its cellular radio.

The TITAN uses advanced cellular technology which enables it to be configured in the field for operation on LTE cellular networks with fallback to UMTS/GSM where applicable. This simplifies logistics and inventory requirements as a single model of the TITAN is compatible with different cellular networks deployed. The TITAN offers unparalleled flexibility, feature set and connectivity to the attached LIFEPAK user.

The TITAN's small size and light weight makes it an ideal companion for the LIFEPAK in EMS/pre-hospital applications. TITAN's design and use of low power technology makes it perfectly suited for battery operated mobile host devices like the LIFEPAK monitor/defibrillator.

Compatibility
LIFEPAK® 12, LIFEPAK® 15, LIFENET® System

External Interfaces
Serial RS232, USB Device

4G LTE Cellular
Technology
- LTE
- UMTS/HSPA
- GSM/GPRS/EDGE

Maximum Data Rate:

4G: LTE Cat. 3:	DL/UL – 100/50 Mbps
3G: HSPA+:	DL/UL – 42/5.7 Mbps
2G: EDGE:	DL/UL – 237/237 kbps
2G: GPRS:	DL/UL – 85.6/85.6 kbps

Antenna: <= 3dBi, Monopole, Omni directional

Wireless LAN – 802.11
Dual Band Compatibility

2.4 GHz: 802.11 b/g/n;

5 GHz: 802.11 a/n/ac

Support for Regulatory Domains

Security: WEP, WPA-PSK, WPA2-PSK,

WPA-ENT or WPA2-ENT (Client mode)

Encryption: TKIP, AES (64/128 bit)

Antenna: <= 3dBi, Monopole, Omni directional

Audio Recording
Mic. Type:	Omnidirectional
Mic. Sensitivity:	-35 ± -4dB
Mic. S/N ratio:	62dB
Mic. Location:	Inside the Enclosure
Freq. Response:	20 – 16,000 Hz
Audio Encoding:	8 bit µLAW PCM
Sample rates:	8, 11.025, 16 ksps
Recording Length:	1080 minutes @ 11.025 ksps

With a 4G LTE cellular connection a 90 minutes audio file will upload to LIFENET system in less than 30 seconds. With 3G connection it would take 3 minutes to send the audio file from the LIFEPAK device.

LED Indicators
Serial Interface (TD, RD, TR, CD), WiFi (WF)
Power (PWR), System Status (RUN), Cellular (CELL)

Power Source
DC 12V, +/- 10%

Environmental
Operating: 32˚F ~ 122˚F (0˚C ~ +50˚C)
Storage: -4˚F ~ 158˚F (-20˚C ~ +70˚C)
Relative Humidity: Up to 95% non-condensing

Sound Buzzer
Audible tones for operator feedback indicating success, failure of data transmission to the LIFENET® system

Regulatory Compliance
Countries
- Canada, United States

System
- FCC Part 15 Subpart B Class B
- IC ICES-003 Class B

Wireless LAN
- FCC Part 15 Subpart C, E
- IC RSS-210, -GEN

Cellular
- FCC Part 15, 22H, 24E
- IC RSS-102,-132,-133,-GEN

Cellular Industry
PTCRB

Cellular Operator
AT&T, Verizon, Rogers, Bell

Enclosure
Fits snugly into a standard LIFEPAK® carrying case
Material: ABS Plastic, Black
Size: 5.35" (W) x 7.20" (L) x 1.42" (H)
136mm (W) x 183mm (L) x 36mm (H)
Contents: TITAN III, Antennas, cabling
Connections: Right-angle LIFEPAK® mating System Connector cable
USB Type B device receptacle

Configuration Software
- On-board web based configuration accessed via Internet Explorer (IE 7 or higher) under Windows® platform.
- Configuration data can be exported / imported to allow the user to backup / restore the configuration data.
- Exported configuration data can be used for rapid configuration of multiple TITAN III Wireless Cellular Gateways.