RSAE LABS

Whatever, Wherever, Whenever, You'll Know. ®

Device Management Center · Mesh Asset Tags · Fixed Mesh Gateway · INTERNET

Fixed Mesh Gateway

FIXED MESH GATEWAY (FMG-3)

NEXT GENERATION WIRELESS MESH TECHNOLOGY, mist®

Whether operating across the United States or shipping around the world, RSAE Labs will ensure your valuable assets are safe and secure across the entire enterprise through continuous monitoring and near-real time reporting. Our Mesh Asset Tag (MAT) sensors constantly monitor the position, status and security of assets to provide logistics intelligence, intrusion detection, and situational awareness.

RSAE Labs Fixed Mesh Gateway (FMG-3) is the mist® mesh network's primary path to the Internet. It wirelessly communicates with our Mesh Asset Tags using RSAE Labs mesh protocol and forwards secure data from those tags through the Internet to the Device Management Center (DMC), where the data is decrypted and stored indefinitely.

RSAE Labs' FMG-3 is the mist® mesh network's fastest, lowest-cost path to the Internet. The FMG-3 contains a mesh radio and a hardwired 10/100 Ethernet connection to the Internet. These allow the FMG-3 to receive data from Mesh Asset Tags and forward it to the Device Management Center, giving the end-user visibility of the state of the Mesh Tags and the assets they monitor. The FMG-3 is designed for unattended operation; it requires only an Internet connection and power, both provided through its Ethernet cable.

RSAE Labs Inc.

Key Features and Benefits

- Provides RSAE Labs mist® mesh network authorization and security
- Portal for mist® mesh network configuration and management
- Bidirectional data interface between mist® mesh network and DMC
- Back haul via wired or wireless Internet
- Integration into management systems providing on-route and business process information

Physical

- Dimensions .... 200 x 140 x 43 mm
  7.9" x 5.5" x 1.7"
- Weight .... 1.6 kg (55 oz)
- Color .... White (RAL7035)
- Connectors .... Ethernet: RJ45/IP67
  Serial: RJ45/IP67
  Antenna: Rev N Type

Environmental

- Temperature .... 0 C to +50 C
- Humidity .... 100% @ 40 C
- Vibration .... SAE J1455 2006
  6 G RMS all axis
- Shock (survival) .... 1 meter drop 6-sided
- Ingress Protection Rating IP67

Mesh Radio

- Radio Standard .... 802.15.4 Phy only
- Transmit .... 2402 MHz – 2480 MHz
- Receive .... 2402 MHz – 2480 MHz
- EIRP (w/standard antenna) .... 10 mW
- Sensitivity .... -98 dBm
- Modulation .... DSSS
- DSSS Chip Rate .... 2 Mchips/sec
- Data Rate .... 250 kbps
- Channels 16
- Channel Bandwidth .... 3 MHz
- Range
  Device-Device .... 200 m (90° to mount)
  Device-Device .... 100 m (±70°)
  Device-Device .... 20 m (long axis)

Interfaces (Physical)

- Ethernet RJ45 10/100Base-T
- Serial Console .... Cisco console interface

Antenna

- Connector .... Reverse N-Type
- Type .... 6 dBi center-fed dipole
- Polarization .... Vertical

Power (External Only)

- Passive Power Over Ethernet (Not 802.3af)
- 7-18 VDC at 700 mA max

Sensors

- Temperature, on-chip .... -40 C - +85 C ±10

Indicators

- LED .... Red/Green
- Buzzer .... 2.3 kHz

Functional

- RSAE Labs mist®
  mesh network… .... Full routing node
  4 network speeds
- Tag population .... 1,000 to 10,000 tags
- Encryption AES-128/CCM
- Data Storage .... 4 Gbytes
- Reporting .... Timed, events, network
  topology changes
- Position .... Timed or event driven
- Upgrade .... Remotely via Ethernet
- Operating System .... Red Hat Enterprise
  Linux v 5.3

Certifications

- FCC Part 15B and 15C ID: pending
- IC: pending
- IP-67/NEMA-4
- HERO (test complete/pending report)
- HERF (test complete/pending report)
- HERP (test complete/pending report)

Accessories

- 802.3af (POE) adapter .... Ubiquiti Instant 802.3AF