

# LocationAssurance Device®

## iDEN™ Version

### About LocationAssurance Manager® (LAM)

LAM is a service quality management and reporting platform for wireless location networks enabling carriers to achieve and maintain peak operating performance of their location infrastructure and services. LAM proactively monitors the end-to-end location system, identifies trouble spots and analyzes the Quality of Service (QoS) experienced by the subscriber. This allows wireless operators to reduce operating costs, mitigate business and regulatory risks and deliver superior levels of service. A location and air interface neutral solution, LAM has the ability to assess the performance of any commercially deployed location network (AGPS, GPS, TDOA, UTDOA, RFS) including CDMA, GSM and iDEN™.

### About LAM LocationAssurance Device® (LAD)

LAM LocationAssurance Device test probes are a combination of hardware and software that automates in-field test call processes associated with testing, verifying, calibrating and evaluating the performance of location networks.

LADs behave like standard wireless handsets in the network and may be configured for mobile, or fixed operating modes. LADs autonomously generate test events based on their operating mode and localized environmental triggers. LADs are programmed over-the-air and utilize the wireless data network to deliver test event data to the LAM Network Server.

LADs are location-enabled to match the technology of the location network used by the carrier. Mobile and stationary LADs are equipped with a standalone GPS receiver (with support for multiple DGPS/SBAS systems including WAAS, EGNOS and MSAS) used to measure ground truth reference data for each test event. Fixed LADs are pre-programmed with a surveyed ground truth reference. Each LAD is equipped with a micro-controller (CPU) and associated scripts for call initiation, termination and test personalities.

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## iDEN<sup>™</sup> Version

### INDEPENDENT LOCATION TECHNOLOGY

16-Channel GPS (DGPS and SBAS support)  
3 meter CEP (with SA off)

Positioning technology  
provided by 

### COMMUNICATION MODES

iDEN packet data  
DTMF signaling

### INTEGRATED COMMUNICATION MODULE

iDEN (Motorola i0270)  
GPS (standalone and assisted modes)



### VOICE GENERATION

Up to 15 minutes digitally recorded/stored voice

### TEST EVENT MODES

Location Quality of Service

- Mobile-originated voice (911/411)
- Network-initiated (Control Plane and User Plane)
- Mobile-originated (User Plane)

### SIZE

6.35" x 3.5" x 1.5" (16.1 cm x 8.9 cm x 3.8 cm)

### WEIGHT

14 ounces (0.4 kg)

### POWER SOURCE

9 – 36 VDC  
AC/DC power adapter option (wall plug module)

### POWER CONSUMPTION

Less than 500 mA at 12V (active)  
Less than 25 mA (sleep mode)

### ENVIRONMENTAL

Operating Temperature: -20° C to 60° C  
Storage Temperature: -40° C to 85° C  
Humidity: 95% RH @ 50° C non-condensing

### SHOCK & VIBRATION

U.S. Military Standard 202G and 810F, SAE  
J1455

### EMC/EMI

SAE J1113

### MOUNTING

Flanges for tie wraps or screws

### STATUS INDICATORS

2 built-in LEDs for modem and GPS status  
Over-the-air status messaging

### CONNECTORS

BNC (iDEN antenna)  
SMA (reference GPS antenna, 3.3v)  
SMB (passive GPS antenna)  
6 pin Molex (power, ignition, I/O)  
16 pin Molex (serial, expansion adapter)

### CONFIGURATION / PROGRAMMING

#### Provisioning

- Serial RS-232 (via provisioning cable)

#### Firmware Updates

- Over-the-air via data network

#### Script/Parameter Changes

- Over-the-air via data network

### ACCESSORIES

#### Mobile Kit

- Active GPS antenna (through hole or magnetic mount)
- LAD antenna (combined iDEN, passive GPS)
- 3-wire vehicle harness

#### Indoor Kit

- LAD antenna (combined iDEN, passive GPS)
- AC/DC power adapter
- 3-wire fixed harness

#### Outdoor Kit

- Active GPS antenna (through hole or magnetic mount)
- LAD antenna (combined iDEN, passive GPS)
- AC/DC power adapter
- 3-wire fixed harness

Provisioning cable (RS-232)

### Contact Us:

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