Local Area Multilateration System
LAMS
Airport surface tracking and area surveillance
Introducing LAMS

Quickly deployable, rugged and reliable.

Multilateration surveillance is the step beyond the high initial and annual costs of Secondary Surveillance Radar (SSR) and LAMS is the next step in multilateration.

100m Installment / 100 NM Range

Dubbed a “local area” system to highlight the compact receivers and small 100 meter footprint of the system itself, the tracking range extends to 100 NM with equivalent accuracy to a Secondary Surveillance Radar.

Accuracy with Low Cost

LAMS surveillance provides positional accuracy and update rates never before achieved, at significantly lower cost than SRR or multilateration systems requiring widely dispersed sensor units.

Small Installment

LAMS has the smallest footprint of any multilateration system because LAMS uses a combination of time-of-arrival and angle-of-arrival measurements for each aircraft transponder.

LAMS provides the best benefit for the cost to bring any airspace under positive ATC control

- Minimized number of sites
- Minimized maintenance logistics
- All equipment in one secure area
- Optimal accuracy and coverage

LAMS applications

Terminal area surveillance for ATC to monitor the approach and provide radar control services

- Ground surveillance to monitor aircraft movements
- Tactical ATC solution for expeditionary forces
- Quickly deployable for disaster recovery and emergency services
- Parallel runway monitoring
- Runway anti-incursion

In a transportable configuration, the LAMS is a highly mobile, rugged, and quickly deployable ATC solution for expeditionary forces during contingency operations.

ANPC is the world’s only supplier of the Local Area Multilateration System (LAMS)
The LAMS uses ground-based sensors to determine the aircraft’s three-dimensional position from signals transmitted by the aircraft’s transponder

| LAMS Setup and Operation |
The LAMS can be deployed and made operational in less than 2 hours with 2 trained personnel, certainly the fastest deployment possible of any available transponder multilateration system. Fixed-base system option can be installed permanently on concrete pads. The system’s placement next to the runway is flexible and is easily customized to mission requirements.

| Key product features |
Airport surface surveillance using transponder multilateration
Area surveillance
Remote Status and Control Unit
ASTERIX data out
High-resolution graphical display
Fully ICAO compliant
Multilateration update rate provides superior aircraft positioning accuracy to a traditional radar
No moving parts

| Transportable–ruggedized |
Quickly deployable antenna structures
Environmentally controlled telecom electronics shelter
Maintenance technician workstation and tool storage
Rugged cables and connectors
Transportable by single C-130 or equivalent, Chinook helicopter, or railcar

LAMS tracks surface movements at the airport
The LAMS provides multilateration surveillance:

**Mode A / C / S**

- Aircraft Capacity: Max 300
- Probability of Detection: >99%
- False Targets: <0.01%
- Service Volume Range: 100 NM
- Accuracy: 100 meter footprint / 5 meters / 1 deg azimuth
- Altitude: Mode C
- Frequency: 1030 MHz Interrogation / 1090 MHz CAL/BIT

**Environmental conditions**

- **Indoor**: Temperature: -10 C to 55 C, Relative humidity: Max 90%
- **Outdoor**: Temperature: -50 C to 70 C, Relative humidity: Max 100%
- Wind: 200 km/h, Ice: Up to 1.25 cm

**Power supply**

- Input voltage: 85-265 VAC 47 to 63 Hz
- Power consumption: 1.5 KW
- Battery voltage: 24 V

The LAMS is comprised of the following equipment:

**Base Station Electronics Rack including:**

- Interface console
- Interrogation transmitter
- Uninterruptable Power Supply (UPS)
- Backup batteries
- A hot spare electronics rack is optional

**Sensor Assemblies**

- Calibration and Built-in-Test Equipment (CAL/BIT) Assembly
- Controller Console
- Power and fiber Ethernet network fiber-optic cabling
- Interrogation antenna
- Antenna support structures
- Remote ATC display and secure wireless Ethernet link