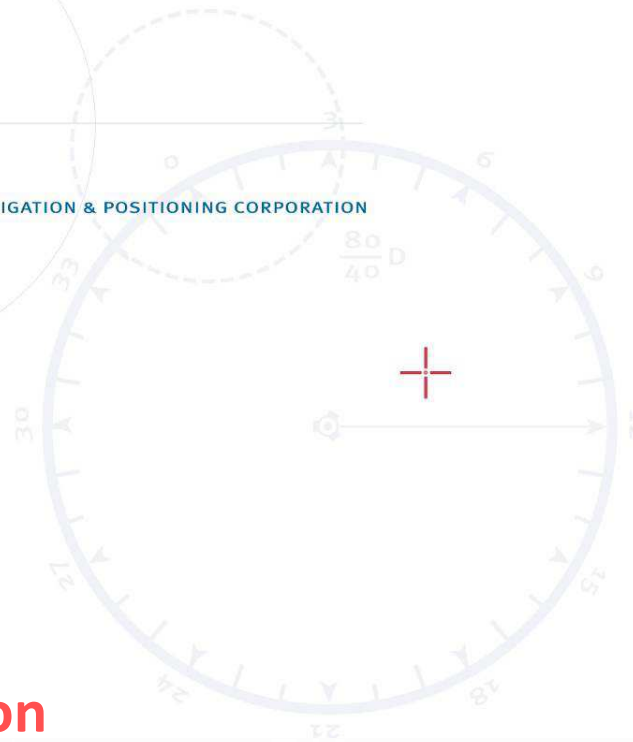


ADVANCED NAVIGATION & POSITIONING CORPORATION



## Wide Area Multilateration (WAM) from ANPC



## Wide Area Multilateration is designed to reduce aircraft separation requirements and bring airspace under direct ATC control.

### [ Introducing WAM ]

Quickly deployable, rugged and reliable.

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

#### **100m Installment / 60 NM Range**

With compact sensors and small 100 meter installment of the system itself, the tracking range extends beyond 60 NM with equivalent accuracy to a Secondary Surveillance Radar.

#### **Accuracy with Low Cost**

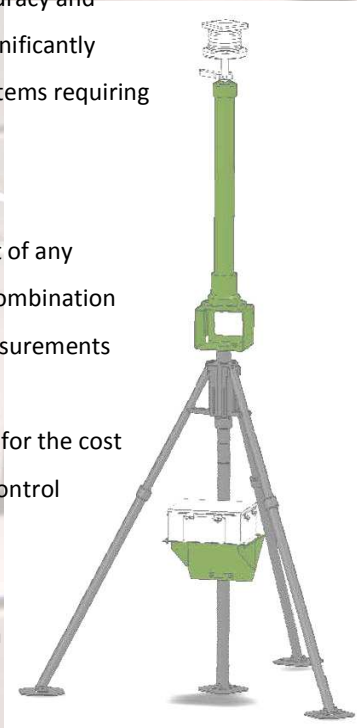
WAM surveillance provides positional accuracy and update rates never before achieved, at significantly lower cost than SRR or multilateration systems requiring widely dispersed sensor units.

#### **Small Installment**

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

The ANPC WAM 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



### [ WAM applications ]

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

- 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 ANPC WAM is a highly mobile, rugged, and quickly deployable ATC solution for expeditionary forces during contingency operations.





**WAM uses ground-based sensors to determine the aircraft's three dimensional position from signals transmitted by the aircraft's transponder**

### [ WAM Setup and Operation ]

The ANPC WAM 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. The system's placement in the vicinity of the airfield is flexible and is easily customized to mission requirements. WAM can be uninstalled and packed for shipment in less than 1 hour by 2 personnel.



### [ Key product features ]

- Area surveillance using transponder multilateration
- 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 Base Station shelter
- Maintenance technician workstation and tool storage
- Rugged cables and connectors
- Transportable by single C-130 or equivalent, Chinook helicopter, or railcar

**ANPC is the world's only supplier of a Transportable Wide Area Multilateration system**



## [ WAM components ]

The ANPC WAM is comprised of the following equipment:

Base Station Electronics Rack including:

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

Sensor Assembly (three total)

Calibration and Built-in-Test Equipment (CAL/BIT) Assembly

Controller Console

Power and fiber Ethernet network fiber-optic cabling

Interrogation antenna

Antenna support structures

SURVEILLANCE TECHNICAL CHARACTERSTICS			
multilateration surveillance		Mode A / C / S	
Aircraft Capacity		Max 300	
Probability of Detection		>98%	
False Targets		<0.1%	
Service Volume	Range	60 NM	
Accuracy	100 meter footprint	2 deg azimuth	
Altitude		Mode C	
Frequency		1030 MHz Interrogation / 1090 MHz Transponder	
Environmental conditions			
	Indoor	Outdoor	
Ambient temperature	-10 C to 55 C	-50 C to 70 C	
Relative humidity	Max 90%	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	