

The **GlobalEyes+ Asset Monitoring Unit with Active RFID** provides worldwide asset tracking and cargo condition monitoring. Through GSM cellular quad-band network and worldwide satellite communication, GlobalEyes+ allows users to track, monitor, and manage their assets around the world.



Standalone Unit w/out Antenna

### **Product Design:**

The GlobalEyes+ Asset Monitoring Unit was designed for reliable operation in harsh environments with no need for new infrastructure. The use of 2-way communication over Quad-Band GSM cellular and ORBCOMM low-earth orbit satellite allows and ability to connect to a wide variety of wired and wireless sensors, allows users to track and monitor assets anywhere in the world in near real time. A number of mounting and antenna options allow for almost any GlobalEyes+ installation scenario, including: permanent, temporary, or Quick-Mount situations. Its ability to use a variety of wired and wireless sensors, active RFID, and its vast configuration and installation options make GlobalEyes+ the premier worldwide monitoring solution.

### **Integrated Active RFID from Wavetrend:**

GlobalEyes+ is equipped with an on-board active RFID reader. This reader allows the AMU to periodically report nearby active RFID tags. Possible use case scenarios are: reporting of pallets/items added/removed from the cargo area (virtual warehousing), personnel reporting (driver, loading, etc), and many more.

### **Compatibility/Expandability**

GlobalEyes + also has open interfaces for adding additional wired sensors as required and communication modes including satellite modems and RFID. All data is sent to the GlobalEyes Information Management Bureau where it is displayed, analyzed, and transmitted to other client systems as necessary (See GlobalEyes Information Management Bureau datasheet for more).

### **Operational Benefits:**

- Global location and condition monitoring
- Active RFID for pallet/item level tracking in-transit
- No infrastructure required
- Configurable with expandability options
- Various mounting and antenna options



Information Management Bureau  
Web Interface

### On-board sensors:

- Temperature  
-40C to +85C, ± 2C
- External wired door sensor (Optional)
- Internal mount sensor  
Magnetic reed switch, 5cm (2") range
- Ambient light Sensor
- Acoustic level sensor

### Satellite Communications:

- ORBCOMM Rx: 137 – 138 MHz, 4800 bps
- ORBCOMM Tx: 148 – 150 MHz, 2400 bps
- Minimum Detectable Signal: -120dBm
- Transmit Power: 5 Watts
- ORBCOMM & FCC Approved

### Cellular Communications:

- Quad-Band cellular operation for worldwide coverage
- 2-way communications
- GPRS and SMS with least cost routing

### GPS Receiver

- 12 channel GPS receiver
- Cold Start: <52 seconds TTFF (90%)
- <11 meter accuracy

### Active RFID

- Frequency: 433.92 MHz
- Modulation: ASK
- Stability: 20ppm over -10C to +60C
- Sensitivity: -80 dBm (preliminary)
- RF Input: 50 Ohm BNC
- Read Range:
  - Stub Antenna: 1 – 30 meters
  - Whip Antenna: 3-35 meters
  - Patch Antenna: 3-100 meters

### ZigBee Wireless LAN:

- Communicates with all GlobalEyes Wireless Sensors (ex. RSN, E-Seal)
- Mesh networking Available
- 2.4 GHz ZigBee Wireless
- 250m outside LOS range
- Tx power: up to 5dBm
- Rx sensitivity: -95dBm

### Interfaces/expandability:

- 20 pin Conxall connector
- RS232 Port
- Up to 2 external digital inputs
- 1 external analog input with hardware selectable range control
- External charging power 9 –18VDC
- 3VDC output

### Power:

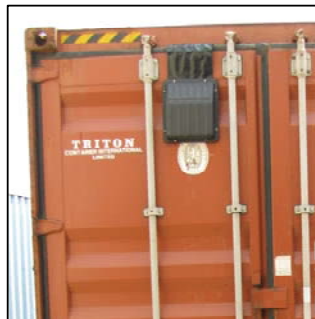
- 6.6 Ah Li-Ion rechargeable battery
- Solar charging option
- Battery life dependent on report interval
- Extended life battery available

### Mechanical:

- Environmentally sealed
- Marine Environment Certified
- Meets SAE J1455 specifications
- Operating Temperature: -40C to +85C
- Dimensions dependent on enclosure selection

### Other Features:

- Reporting interval can change automatically with digital input
- Logging capability (comms outage)
- Low power listen mode for remote polling and messaging
- Optional Active RFID integration



GlobalEyes+ Over Door  
- Electronics on inside, antenna on outside (Remote Sensor Node not required for internal sensors)



GlobalEyes+ Wedge – Integrated Electronics and Antenna  
(Remote Sensor Node required for internal sensors)