



# Acutime™ 360 Multi-GNSS Smart Antenna

## Multi-GNSS Smart Antenna

Whatever the environment, the Protempis Bullet™ III GPS antenna will perform, year after year. The Bullet III antenna provides a perfect solution for manufacturers who need a fixed-site, rooftop GPS antenna. This antenna is also a high-quality solution for adding GPS RF signals for marine GPS navigation systems.

## Demonstrated Performance

The Acutime™360 design continues the Protempis line of GNSS smart antennas, which have been in production since 1991. The Acutime™360 is optimized for precise timing and network synchronization needs, including broadband wireless applications. It provides a cost effective and independent timing source (within the firewall) for any application, such as fault detection systems and synchronization of wireless networks.

## Power Efficiency & Performance

The Acutime™ 360 multi-GNSS smart antenna requires less than 1 Watt to operate. Once power is applied, the Acutime™360 smart antenna automatically tracks satellites and surveys its position to within meters. It then switches to overdetermined time mode and generates a pulse-per-second (PPS) output synchronized to UTC within 15 nanoseconds (one sigma), outputting a time tag for each pulse.

## Acutime™ 360 Starter Kit Option

The Acutime™360 Starter Kit makes it easy to evaluate the exceptional performance of this multi-GNSS smart antenna and integrate advanced technology into your system.



### Key Features

- Multi-Constellation
- Simultaneous GPS / GLONASS or GPS / Beidou tracking
- Superior sensitivity  
Tracking -160dBm  
Acquisition-148dBm (cold)
- Weatherproof and corrosion resistant housing
- Extended temperature range (-40°C / +85°C)

#### Disclaimer

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## Specification

Receiving Signal.....GPS, GLONASS, Galileo1, Beidou  
 Positioning System.....SPS, Timing  
 1 PPS Timing Accuracy .....15 ns (1 sigma)  
 Update Rate.....1 Hz  
 Typical Min Acq Sensitivity.....-148dBm cold start  
 Typical Min Tracking Sensitivity ..... -160dBm  
 Time to First Fix2.....<46s (50%), <50s (90%) cold start  
 Typical Time to Re-acquisition..... <2s (90%)  
 Accuracy Horizontal Position.....<6m (50%), <9m (90%)  
 Accuracy Vertical Position.....<11m (50%), <18m (90%)

*1 Hardware ready; a firmware update is required to enable the Galileo constellation.*

*2 The performance criteria and times given for TTFF & reacquisition are with GPS satellites in the constellation set.*

## Interface Characteristics

Serial Port.....2 serial port  
 Protocols.....TSIP, NMEA 0183

*All ports support baud rates 4.8-115.2kbps; 8 data bits; E, O or no parity*

## Electrical Characteristics

Power..... +7VDC to +36VDC, reverse polarity protection  
 Power Consumption.....<1.0Watt

*1 Reduced cable length @+7VDC to +12VDC*

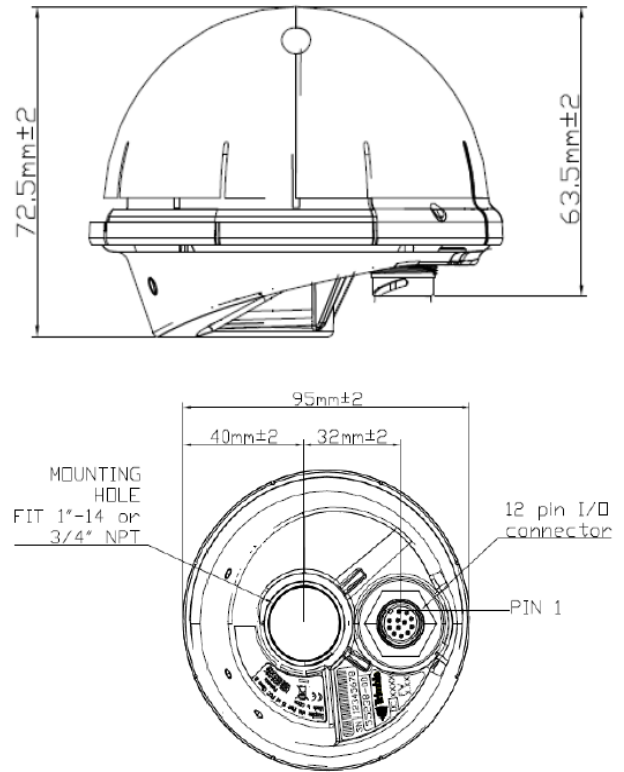
## Environmental Specifications

Operating Temperature.....-40°C to +85°C  
 Operating Humidity.....5%-95% RH non-condensing (+60°C)  
 Storage Temperature..... -55°C to +105°C  
 Ingress Protection..... IP67  
 EMC..... CE, FCC Class B

## Physical Characteristics

Dimensions .....95mm x 72.5mm  
 (3.74”D x 2.85” H)  
 Weight.....5.4oz (154grams)  
 Connector.....12-pin round, waterproof  
 Mounting 1”-14 straight thread or 3/4” pipe thread

## Mechanical Drawing



Please go to [www.protempis.com](http://www.protempis.com) for the latest documentation and tools, part numbers and ordering information.

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