Acutime™ 360 Multi-GNSS Smart Antenna

Multi-GNSS Smart Antenna

Whatever the environment, the Protempis Acutime 360 smart antenna will perform, year after year. The antenna provides a perfect solution for manufacturers who need a fixed-site, rooftop GNSS antenna. This antenna is also a high-quality solution for adding GNSS RF signals for marine GNSS navigation systems.

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.

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.

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)

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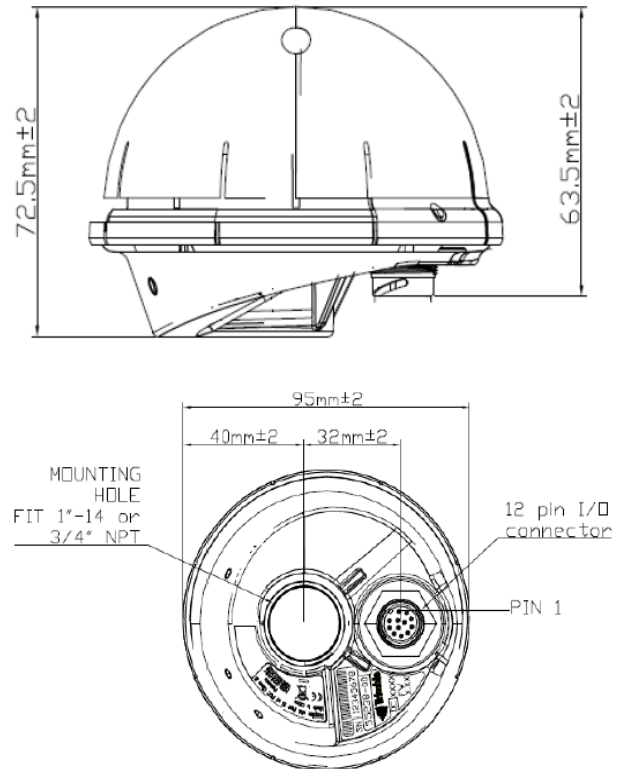
1 Reduced cable length @+7VDC to +12VDC

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 ¾" pipe thread

Mechanical Drawing

Please go to www.protempis.com for the latest
documentation and tools, part numbers and
ordering information.

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