Data Sheet



RES SMT 360™ Multi-GNSS Timing Module

KEY FEATURES

- Multi-Constellation
- Simultaneous GPS / GLONASS or GPS / Beidou tracking
- Ideal for populated urban and indoor environments with limited sky-view
- PPS and PP2S outputs, synchronized to GNSS / UTC within 15ns (1 sigma)
- Extended temperature range (-40°C / +85°C)

Miniature Multi-GNSS Timing Module with Super-Sized Features

Ideal for Low Signal Environment

Trimble® designed the RES SMT 360™ Timing Module to work in the most demanding weak signal environments, including femtocells and in-building systems.

With its robust performance in low signal environments, users can save on expensive cabling and externally mounted antennas. In addition, the RES SMT 360™ timing module accepts aiding data for environments requiring the highest levels of enhanced sensitivity.

Timing Signal Outputs

The RES SMT 360™ timing module outputs a precise1 pulse-per-second (1PPS) and an even second pulse to maximize your network performance and synchronize systems at a global level.

Custom frequencies are also available for volume sale.



Standard Timing Features

The RES SMT 360™ timing module includes many of Trimble's standard timing features, including Time-Receiver Autonomous Integrity Monitoring (T-RAIM) algorithm, automatic self-survey, and GNSS disciplining of the oscillator to provide an accurate frequency reference

Carrier Board and Starter Kit Options

The RES SMT 360™ timing module can be loaded directly onto the customer's application board.

The Starter Kit provides everything you need to evaluate the RES SMT 360™ timing module, including the RES SMT 360™ on a carrier board, AC/DC power converter, antenna and USB interface cable.





RES SMT 360™ Multi-GNSS TIMING MODULE

GENERAL SPECIFIATIONS

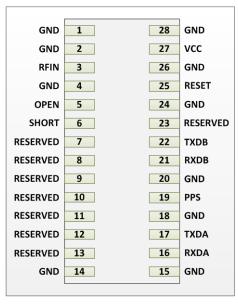
Receiving SignalGPS, GLONA	ASS, Galileo, Beidou
Supports GNSS incl	SBAS, QZSS
Positioning System	SPS, Timing
1 PPS Timing Accuracy	15 ηs (1 sigma)
Update Rate	1 Hz
Typical Min Acq Sensitivity	148dBm cold start
Typical Min Tracking Sensitivity	160dBm
Time to First Fix<46s (50%), <5	50s (90%) cold start
Typical Time to Re-acquisition	<2s (90%)

INTERFACE CHARACTERISTICS

Connections	28 surface-mount edge castellations
Serial Port	2 serial port
PPS / Even Second	CMOS-compatible
	LVTTL-level pulse, once per second
Protocols	TSIP, NMEA 0183

PINOUT ASSIGNMENTS

RES SMT 360 PINOUTS



PHYSICAL CHARACTERISTICS

Enclosure	Metal Shield
Dimensions	19 mm W x 19 mm L x 2.54 mm H
	(0.75" W x 0.75" L x 0.1" H)
Weight1.8	grams (0.06 ounce) including shield

ELECTRICAL CHARACTERISTICS

Supply Voltage Range	3.3VDC to ±5%
Power Consumption	0.5W max.

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	40°C to +85°C
Operating Humidity5%-95% RH no	on-condensing (+60°C)
Storage Temperature	50°C to +105°C

GENERAL INFORMATION & ACCESSORIES

Module.....available in 20 piece trays for evaluation Production quantities on tape on reel (500 pieces)
Reference Board.........GNSS module mounted on a carrier board with I/O and RF connectors, including RF circuitry with the antenna open detection, as well as antenna short detection and protection.

Starter KitIncludes Reference Board mounted on interface motherboard in a durable metal enclosure, AC/DC power converter, Bullet 360 antenna, USB interface cable, TSIP and NMEA protocols

Antenna..... Bullet 360

Visit <u>www.trimble.com/timing</u> for part numbers and information about where to buy.

Parts of the product are patent protected.

Trimble has relied on representations made by its suppliers in certifying this product as RoHS-II compliant.

Specifications subject to change without notice.

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