



RES SMT 360™

Timing Module on Carrier Board

KEY FEATURES

- Multi-Constellation
- Simultaneous GPS / GLONASS or GPS / Beidou tracking
- Ideal for populated urban and indoor environments with limited sky-view
- PPS output synchronized to GNSS / UTC within 15ns (1 sigma)
- Supports 3V and 5V Antennas
- Extended temperature range (-40°C / +85°C)

Multi-GNSS Timing Module

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 precise 1 pulse-per-second (1PPS) and an even second pulse to maximize your network performance and synchronize systems at a global level.



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

Starter Kit Options

The RES SMT 360™ on carrier board 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 hardware firmware, communication protocol, AC/DC power converter, antenna and USB interface cable.

RES SMT 360™ Timing Module on Carrier Board

GENERAL SPECIFICATIONS

Receiving Signal.....GPS, GLONASS, Galileo, Beidou
Supports GNSS incl. QZSS
Positioning System.....SPS, Timing
1 PPS Timing Accuracy15 ns (1 sigma)
Update Rate.....1 Hz
Typical Min Acq Sensitivity.....-148dBm cold start
Typical Min Tracking Sensitivity -160dBm
Time to First Fix.....<46s (50%), <50s (90%) cold start
Typical Time to Re-acquisition..... <2s (90%)

INTERFACE CHARACTERISTICS

Serial Port.....1 serial port
PPS / Even Second.....CMOS-compatible
LVTTTL-level pulse, once per second
Protocols.....TEP, TSIP, NMEA 0183
RF Input Connector.....Right-angle SMB

PINOUT ASSIGNMENTS

ANT	1	5	RXD
VCC	2	6	PPS
TXD	3	7	NC
RSV	4	8	GND

ELECTRICAL CHARACTERISTICS

Supply Voltage Range.....3.3VDC to ±5%
Power Consumption.....0.5W max.
Ripple Noise.....Max 50mV, peak-to-peak 1Hz to 1MHz
Antenna Feed Pin 1.....+3.0 to +5.5v DC 55mA max

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature.....-40°C to +85°C
Operating Humidity.....5%-95% RH non-condensing (+60°C)
Storage Temperature.....-50°C to +105°C

GENERAL INFORMATION & ACCESSORIES

Please go to www.trimble.com/timing for updated ordering information, part numbers and antenna options.

Trimble PN	Description
97779-00	Resolution SMT 360 on Carrier Board (TSIP)
97779-35	Resolution SMT 360 on Carrier Board (TEP)
97779-36	Resolution SMT 360 on Carrier Board (TEP) with Conformal Coat
96960-05	Resolution SMT 360 Starter Kit



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Visit www.trimble.com/timing 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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