



SynPaQ OEM GPS Sensors



SynPaQ/III

The SynPaQ/III GPS sensors are ideal for applications that required plug and play GPS timing and position data. Some of the main features are:

- User selectable NMEA and SiRF Binary output messages(M12M/M12M-T)
-OR-
- User selectable NMEA and u-blox LEA series Binary(LEA6H/LEA6T)
- Rugged aluminum housing
- Filtered DB-9 connector for RS-232 communication
- BNC antenna connector (others optional)
- Reverse polarity and over-voltage protection
- LED indicators for status reporting
- On-unit pin-out decal
- Efficient switching regulator

The SynPaQ/III GPS sensor is ideal for in-vehicle navigation, drive test systems, developing timing applications, and new application development. An iLotus M12M or M12M Timing receiver is embedded in the SynPaQ/III as required by the specific application.

The SynPaQ/III sensor includes an industry standard DB-9 connector for RS-232 data I/O. SynPaQ receivers are also available with USB or Ethernet ports. Separate connectors are provided on the front panel for RTCM-104 DGPS input, power input, and 1PPS monitoring. The SynPaQ/III front panel features four LED indicators for 1PPS On, Data receive (RxD), Data transmit (TxD), and DGPS input (DIFF). Also, the SynPaQ/III features an RS-232 level 1PPS signal wired to the DCD line (pin 1) of the DB-9 connector for use in developing network timing applications.

A second buffered TTL 1PPS output signal for monitoring is available on the front panel.

An open-case version of the SynPaQ/III, the SynPaQ/III-QA test fixture, is designed to provide an engineering or production test bed for iLotus' M12M, and Synergy's u-blox based SSR Series of OEM GPS Boards. A version for testing receivers in Synergy's EMI shield cans is also available (SynPaQ/III-QA-S).



SynPaQ/III-QA

The SynPaQ family of products also includes a GPS sensor specifically designed to operate in harsh environments:



SynPaQ/E

This unit offers the same features as the standard SynPaQ/III GPS Sensor in a rugged, IP-65 rated enclosure. All electrical interfaces are made through a weatherproof 8 pin circular connector. In addition, the SynPaQ/E includes a mounting plate with the same hole pattern as the older XT, XTS/II and XTS/III sensors.

SynPaQ receivers are also available with USB or Ethernet ports.



SynPaQ OEM GPS Sensors

GENERAL SPECIFICATIONS

SynPaQ/III and SynPaQ/III-QA

Physical Characteristics

Size: (less connectors) 2.75" W x 5.50" L x 1.15" H
 (70mm x 140mm x 29mm)
 Weight: 10 oz (0.28 kg)
 Housing: Powder Coated Aluminum

Electrical Interface

Power: 2.1mm Coaxial
 Data to Host: DB-9F Connector
 Differential Port: 2.5mm phone jack
 GPS Antenna: BNC (TNC optional)
 1PPS Out: RCA Phono Jack

Environmental Conditions

Operating Temp: -20°C to +55°C*
 Storage Temp: -40°C to +65°C*
 Relative Humidity: 10% to 90%, non-condensing
 *Unit can be stored at temperatures up to 80°C,
 but battery lifetime will be reduced.

Power Requirements

+9 to + 30V_{DC} (70mA max)
 Constant 0.6W max, depending on installed receiver.

**Additional specifications available for either u-Blox LEA Series, or I-Lotus M12M GPS modules.*

Ordering Information:

Product:	Part Number:
SynPaQ/III-M12M, DB-9	17021233
SynPaQ/III-M12M-T, DB-9	17021243
SynPaQ/III-M12M, USB	17022233
SynPaQ/III-M12M-T, USB	17022243
SynPaQ/III-LEA-6Tr, DB-9	17021363
SynPaQ/III-LEA-6Tr, USB	17022363
SynPaQ/III-LEA-6Tf, DB-9	17021283

GENERAL SPECIFICATIONS

SynPaQ/E

Physical Characteristics

Size: 3.22" W x 5.10" L x 1.37" H
 (Less connectors) (82mm x 130mm x 35mm)
 Weight: 12 oz (0.38 kg)
 Housing: Powder Coated Aluminum

Electrical Interface

EN-3 Version:

Power, Data, Differential, 1PPS:
 8 pin Switchcraft EN-3 Bulkhead Connector
 GPS Antenna: TNC Bulkhead jack

DB-9 Version:

Power, Data, Differential, 1PPS: DB-9 male
 GPS Antenna: BNC Bulkhead jack

Environmental Conditions

Operating Temp: -20°C to +55°C*
 Storage Temp: -40°C to +65°C*
 *Unit and be stored at temperatures up to 80°C,
 but battery lifetime will be reduced.

Power Requirements

+9 to + 30V_{DC} (70mA max)
 Constant 0.6W max, depending on installed receiver.

For more information please visit our website:

www.synergy-gps.com