



KEY FEATURES

SGE-41 24 Channel SAASM GPS Engine

ARINC 429 Interface

Precise Time and GPS Data Outputs

TSO-C129a Certified

RAIM / FDE per DO-229

SPS / PPS Firewall and Switch

Available GPS Prediction Kit for Oceanic and Remote Navigation

NMEA-0183 Output



TA-24 Certified SAASM GPS Sensor

The TA-24 SAASM GPS receiver provides aircraft integrators with a clear path to adding military PPS-GPS capability to an existing commercial Flight Management System. Trimble has been supplying its TA series GPS receiver since 1995.

The TA-24 meets or exceeds all RTCA/DO-178B Level C requirements and is fully qualified to the latest RTCA/DO-160F environmental standards. For special applications, an extended temperature variant is also available. Both configurations hold FAA TSO-C129a Class B1/C1 approval. The TA-24 requires minimal integration and provides flexibility, reliability and TSO-approved precise GPS navigation capabilities.

The TA-24 has been designed to meet all the requirements of FAA Notice 8110.60 for primary means, oceanic and continental en-route navigation, Non-Precision Approach, and RNP-RNAV.

The TA-24 supports 3 ARINC 429 transmit and 8 input channels, providing interface capability to dual FMS/IRS and Air Data installations using the ARINC 743 characteristic. Other interfaces include NMEA-0183 messages to support mapping applications like FalconView™ and data transfer capability to support the initialization of other GPS devices. The TA-24 also provides discrete 1PPS and HAVEQUICK precise time signals.

The Trimble TA-24 GPS Receiver has been granted Security Approval by the GPS Directorate

FEATURES

Receiver:	24-channel, L1/L2 frequency, P(Y) code (PPS)
Antenna:	5 VDC Active with 34 to 40dB (max) gain
Time to first fix (TTFF):	60 seconds (typical)
Position update:	Once per second
Timing:	HAVE QUICK, 1PPS, Time Mark
FAA Certification:	TSO-C129a Class B1/C1 BRNAV / RNP-5 with optional FDE Prediction Kit
Timing:	HAVE QUICK, 1PPS, Time Mark

PHYSICAL CHARACTERISTICS

Size:	5.0" x 9.5" x 2.1" (127 x 241 x 53 mm)
Weight:	3.3 lbs. (1.5 kg)
Power:	Less than 15.0 Watts, 20-32 VDC

PERFORMANCE

Hor. Accuracy:	15 meters, C/A Code
Altitude Accuracy:	20 meters, C/A Code
Velocity Accuracy:	0.1 meters / second
UTC Time:	Less than 100 ns, RMS

INTERFACE

RF:	SMA
Data:	Cannon KJG6T16F35 8 ARINC 429 Input and 3 ARINC 429 Output channels 2 RS-422, 1 RS-232 Timing signal
Power:	MIL-C-38999, Series II, 8-98 Configuration
Keyfill:	MIL-C-551167/10A Compatible with all approved keying devices

Environment

Temperature:	-20 C to +55 C
Extended Temp. Version:	-40 C to +55C
Altitude:	51,000 feet
Humidity:	DO-160F Category A
Shock:	DO-160F Category B
Vibration:	DO-160F Category R (B, B1)
Explosion:	DO-160F Category E, H MIL-STD-810G Method 511.5
Magnetic Effects:	DO-160F Category Z
Power Input:	DO-160F Category AX
Voltage Spike Conducted:	DO-160F Category A
Conducted Susceptibility:	DO-160F Category Z
Signal Susceptibility:	DO-160F Category ZC
RF Susceptibility:	DO-160F Category TT
RF Emission:	DO-160F Category L
Lightening Transient:	DO-160F Category A3JZZ
Electrostatic Discharge:	DO-160F Category A

Part Numbers

TA-24 GPS Sensor	24835-41-U12G
TA-24 Connector Kit	33868-00
Low Profile Antenna	35094
Ruggedized Antenna	22433-40
GPS Prediction Kit	83976-01

Available Documentation:

Specifications	TMAS-GPS-TA24
ICD	ICD-TMAS-TA24
Installation/User Manual	24835-41-IM

Note: U.S. Government policy restricts the sale of Precise Positioning Service (PPS) equipment to those authorized by the U.S. Department of Defense. Non-U.S. authorized users must purchase PPS equipment through the Foreign Military Sales (FMS) process. Specifications subject to change without notice.

Approved for public release under case# 12-162.

Please visit our website at www.trimble.com/defense for sales information.

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