



ppm

PRECISE POSITIONING MANAGEMENT

ppm 30xx GNSS Sensor



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HARDWARE SPECIFICATIONS

Interfaces

COM Ports	2 x RS232/485/422 selectable, up to 1 Mbps
USB	1 x USB Client / Mass Storage Device selectable (USB 2.0)
Ethernet	Ethernet 1 x 10BaseT/100BaseT; TCP/IP; UDP; POE Standard 802.3af/at B, passive, max. 60 V
CAN Bus	2 x 10 kbps – 1.000 kbps (Optional with CAN-DBC data base)
Bluetooth	Bluetooth Low Energie (BLE) 5.0, Class 2.0

Digitale I/Os

Event in	3 x Level TTL, 5 V tolerant
Event out	3 x Level TTL @ 3 mA
Wheel Sensor	4 x Level TTL, 5 V tolerant
PPS out	1 x Level TTL, @ 3 mA

Physical and Electrical

Dimensions	160 x 90 x 55 mm
Weight	300 g
Input Voltage	+6 to +60 VDC, isolated 500 VDC
Power Consumption	< 3 W
Antenna LNA Power Outputs	1 or 2, with 5 VDC and 50 mA each

Connectors

Antenna	2 x TNC female
USB Client	USB-C (USB 2.0)
Serial, CAN, Event I/Os	SUB-D-HD26, male
Ethernet	RJ45
Power	Binder, M9, 3-Pin female
Status LEDs	4 x programmable LEDs (red, green, yellow, blue)

GNSS SPECIFICATIONS AND PERFORMANCE

Primary Antenna

Channels	184
Signal Tracking	GPS L1 C/A, L2 C; GLN L1 OF, L2OF; GAL E1-B/C, E5b; BEI B1I, B2I; QZSS L1C/A L1S L2C; SBAS L1C/A

Secondary Antenna

Channels	184
Signal Tracking	GPS L1 C/A, L2 C; GLN L1 OF, L2OF; GAL E1-B/C, E5b; BEI B1I, B2I; QZSS L1C/A L1S L2C; SBAS L1C/A
Position accuracy ¹	0.01 m + 1 ppm CEP
stand alone	1.5 m CEP
SBAS	1.0 m CEP
RTK	0.01 m + 1 ppm CEP
Heading accuracy ¹	0.4° CEP @ 1 m
Position Update Rate ²	up to 10 Hz
Raw Data Update Rate	up to 15 Hz

ENVIRONMENTAL

Operating Temperature (°C)	-40 to +75
Storage Temperature (°C)	-55 to +85
Vibration	ISO 16750-3
Shock	ISO 16750-3
Ingress Protection Rating	IP67

ADDITIONAL FEATURES

Standard 16 GB internal storage
Event Based Management
Time Based Management
Ntrip Client
Built-in Bluetooth support
Web Status Interface
POE: Power over Ethernet

IMU OPTIONS

Name	STMicro LSM9DS1TR	Epson G320N	Epson G370N	LITEF μIMU-IC	LITEF ISA-100C
Type	MEMS	MEMS	MEMS	MEMS	FOG
Arrangement	intergrated	intergrated	intergrated	external	external
IMU Raw Data Rate (Hz)	200	125	200	200	200
Gyro Input Range (°/sec)	± 500	± 150	± 450	± 499	± 495
Azimuth RTK (°)	1.000	0.090	0.070	0.030	0.010
Roll RTK (°)	0.500	0.020	0.013	0.010	0.007
Pitch RTK (°)	0.500	0.020	0.013	0.010	0.007

- ¹ Depends on atmospheric conditions, baseline length, GNSS antenna, multipath conditions, satellite visibility, and satellite geometry
- ² The highest update rate can limit the number of supported constellations