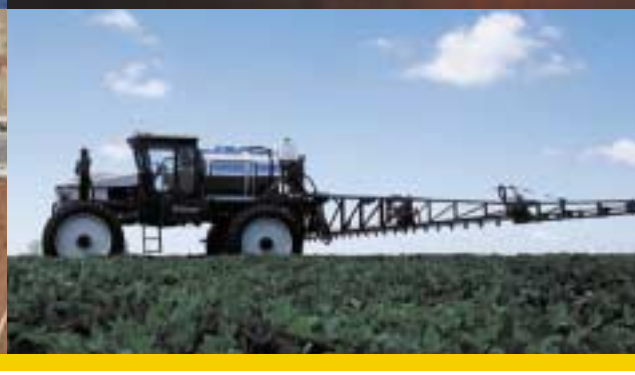
MiniMAX

Feature-packed sub-meter GPS positioning



MiniMAX

- Feature-packed Sub-meter DGPS Positioning
- Provides reception of GPS, SBAS, and Coast Guard beacon
- Automatic dual channel SBAS and beacon tracking for more reliable signal reception
- Delivers sub-meter positioning at rates of up to 5 Hz
- Raw measurement data available for post-processing applications
- COAST™ technology uses old differential corrections for up to 40 minutes, or more, without significant performance loss
- Small and lightweight form-factor
- Front-panel LED indicators make it easy to monitor receiver status
- Compatible with CSI Wireless' optional e-Dif autonomous differential technology

PocketMAX

ESRI Technology
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MiniMAX

Feature-packed sub-meter GPS positioning

GPS Sensor Specifications

Receiver Type:	L1, C/A code, with carrier phase smoothing
Channels:	12-channel, parallel tracking (10-channel when tracking SBAS)
WAAS Tracking:	2-channel, parallel tracking
Update Rate:	1 Hz default, 5 Hz max
Horizontal Accuracy:	<1 m 95% confidence (DGPS*) <5 m 95% confidence** (autonomous, no SA)
Cold Start:	1 min typical
Antenna Input Impedance:	50 Ω

Beacon Sensor Specifications

Channels:	2-channel, parallel tracking
Frequency Range:	283.5 to 325 kHz
Channel Spacing:	500 Hz
MSK Bit Rates:	50, 100, and 200 bps
Operating Modes:	Manual, automatic, semi-automatic
Cold Start Time:	< 1 minute typical
Reacquisition Time:	< 2 seconds typical
Demodulation:	Minimum shift keying (MSK)
Sensitivity:	2.5 µV for 6 dB SNR @ 200 bps
Dynamic Range:	100 dB
Frequency Offset:	± 8 Hz (~ 27 ppm)
Adjacent Channel Rejection:	61 dB ± 1 dB @ f_o ± 400 Hz

Communications

Serial ports:	2 full duplex
Interface Level:	RS-232C
Baud Rates:	4800, 9600, 19200
Correction Input / Output Protocol:	RTCM SC-104
Data Input / Output Protocol:	NMEA 0183
Raw Measurement Data:	Proprietary binary (RINEX utility available)
Timing Output:	1 PPS (HCMOS, active high, rising edge sync, 10 kΩ, 10 pF load)

Environmental

Operating Temperature:	-32°C to +74°C
Storage Temperature:	-40°C to +85°C
Humidity:	95% non-condensing
EMC:	FCC Part 15, Subpart B, Class B CISPR 22

Power

Input Voltage Range:	9 to 32 VDC
Reverse Polarity Protection:	Yes
Power Consumption:	3W
Current Consumption:	< 250 mA @ 12 VDC
Antenna Voltage Output:	5.3 VDC
Antenna Short Circuit Protection:	Yes

Mechanical

Enclosure:	Powder-coated aluminum
Dimensions:	134.9 mm L x 114 mm W x 37.1 mm H (5.31" L x 4.49" W x 1.46" H)
Weight:	0.80 kg (1.76 lb)
LED Indicators	Power, GPS lock, differential lock and DGPS position
Power Connector:	2-pin miniature
Data Connector:	DB9-socket
Antenna Connector:	TNC-socket

Pin-out

Pin 2	Transmit data (TXD)
Pin 3	Receive data (RXD)
Pin 5	Signal ground
Pin 6	Aux transmit data (TXD)
Pin 8	Aux receive data (RXD)
Pin 9	1 PPS output

MGL-3 Antenna

GPS frequency:	1.575GHz(L1)
GPS LNA Gain:	28 dB
Beacon frequency range:	283.5 kHz - 325.0 kHz
Beacon LNA Gain:	34 dB
Dimensions:	128 mmL x 128 mmW x 84 mmH (5.06"L x 5.06"W x 3.33"H)
Weight:	450 g (1.0 lb)
Antenna Connector:	TNC-socket
Enclosure:	PVC
Mounting Thread:	1-14-UNS-2B
Input Voltage:	4.9 to 13 VDC supplied by receiver
Input Current:	50 to 60 mA
Operating Temp.:	-30°C to +70°C
Storage Temp.:	-40°C to +80°C
Relative Humidity:	100% condensing

* SVs > 5, HDOP < 2, RTCM SC-104 correction data from a dual frequency reference station, short baseline, and low multipath environment.

** Dependent upon ionospheric activity and multipath

CSI Wireless Dealer

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