



GNSS RECEIVER

MCAnt-3S



MCAnt-3S receiver is based on our technology implemented in our TRIUMPH3 Chip. 874 GNSS channels of this receiver allow tracking all current and future satellite signals. The high-performance GNSS antenna is integrated together with the receiver in a compact and robust housing. MCAnt-3S can be mounted on flat surfaces with four screws or mounted on standard poles (5/8-11 or 1-14 inches thread).

Communication is provided via CAN 2.0, USB 2.0, and RS-232/RS-422 interface.

DATA SHEET

VERSION 1.1 SEPTEMBER 9, 2021

MCant-3S

Specifications

TRACKING SPECIFICATION

Total 874 All-In-View Channels
GPS C/A, L1C(P+D) including TMBOC(6,1,4/33), P1, P2, L2C (L+M), L5(I+Q)
GLONASS C/A, P1, P2, L2C, L3(I+Q)
Galileo E1(B+C) including CBOC(6,1,1/11), E5A(I+Q), E5B(I+Q), AltBoc, E6(B+C)
QZSS C/A, L1C(P+D) including TMBOC(6,1,4/33), L2C(L+M), L5(I+Q), L6(L61/L62), L1S, L1Sb, L5S
BeiDou B1, B1C(P+D) including TMBOC(6,1,4/33), B2B(I+Q), B2, B2A(I+Q), AltBoc, B3
IRNSS L5
SBAS* L1, L5(P+D)

PERFORMANCE SPECIFICATIONS

Autonomous	< 2m
Static, Fast Static Accuracy	Horizontal: 0.3 cm + 0.1 ppm * base_line_length** Vertical: 0.35 cm + 0.4 ppm * base_line_length
Kinematic Accuracy	Horizontal: 1 cm + 1 ppm * base_line_length Vertical: 1.5 cm + 1 ppm * base_line_length
RTK (OTF) Accuracy	Horizontal: 1 cm + 1 ppm * base_line_length Vertical: 1.5 cm + 1 ppm * base_line_length
DGPS Accuracy	< 0.25 m post processing; < 0.5 m real-time
Cold / Warm start/ Reacquisition	< 35 seconds / < 5 seconds / < 1 second

GNSS ANTENNA SPECIFICATIONS

GNSS Antenna Type	Integrated Microstrip (Zero Centered)
Ground Plane	Antenna on a flat ground plane

I/O

Communication Ports	CAN 2.0 (1Mbps); Serial (RS232/RS422) up to 460.8 kbps ; Built-in USB to RS232 FTDI converter. 460 Mbps USB 2.0 HighSpeed. Up to 12 Mbps RS232 speed
External Power port	1 port (combined with communication port)

MEMORY AND DATA RECORDING

Internal Memory	Up to 16 GB of on-board non-removable memory for data storage
Raw Data Recording	Up to 100 times per second (100Hz)

REAL TIME DATA

Input/Output	JPS, RTCM SC104 v. 2.x and 3.x, CMR
Output	NMEA 0183 v. 2.x and 3.0, BINEX

* US WAAS, European EGNOS, Russian SDCM, Indian GAGAN, Japanese MSAS, and similar future satellite systems

** For good observation conditions and proper length of observation session

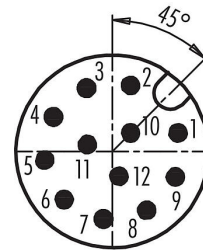
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ELECTRICAL	
Input	+4.5 to +35 Volts
Power consumption	GPS + GLO L1: 1.6-1.7 W GPS + GLO + GAL L1: 1.6-1.8W GPS + GLO + GAL + BDS L1: 1.7-1.9 W GPS + GLO + GAL + BDS L1 + L1C: 1.7-1.9 W GPS+GLO: 1.9-2.1 W All in view: 2.1-2.3 W
ENVIRONMENTAL SPECIFICATIONS	
Enclosure	Aluminum and plastic, waterproof IP67
Mounting	5/8-11 or 1-14 inches mount, or 4 holes M5
Temperature	-40°F to 176°F (-40°C to +80°C) (Operational) -40°F to +185°F (-40°C to +85°C) (Storage)
Humidity	100% condensing
Shock	Survives a 2 m drop onto hard surface
Dimensions	5.51 x 5.51 x 2.44 in (140 x 140 x 62 mm)
Weight	1.016 lbs (0.461 kg)

RS422/RS232/CAN Connector

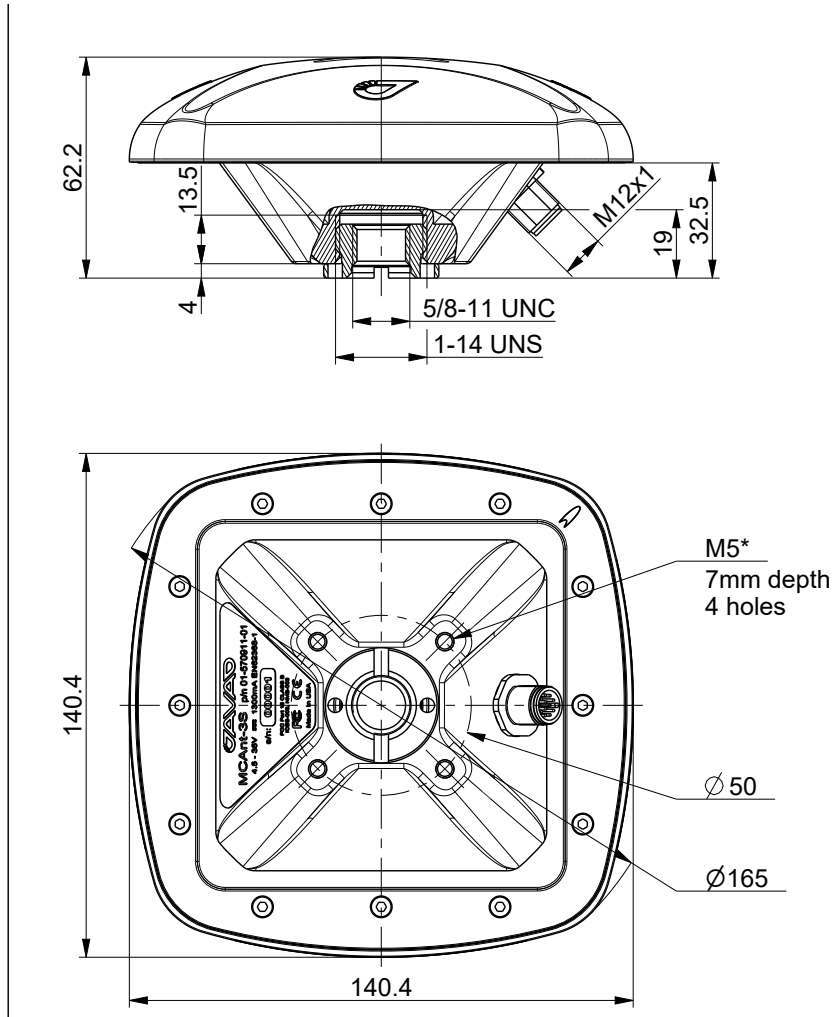
The connector is a sealed M12-A male connector Binder-USA p/n 76 0231 0111 00012-0200.

#	SIGNAL NAME	DIR	DETAILS
1	GND	-	Ground
2	PWR_IN	P	Bus power, + 10 to +35 V DC, 250 mA
3	USB_VBUS	i	USB VBUS
4	USB_GND	-	USB Ground
5	USB_DP	I/O	USB D+ libe
6	USB_DM	I/O	USB D- line
7	CANH	I/O	CAN_H bus line (dominant high)
8	CANL	I/O	I/O CAN_H bus line (dominant low)
9	RS232_RTS/RS422_TXP	O	Port TX+ line/RTS
10	RS232_TXD/RS422_TXM	O	Port TX- line/TX
11	RS232_CTS/RS422_RXP	I	Port RX+ line/CTS
12	RS232_RXD/RS422_RXM	I	Port RX- line/RX



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Dimensions



* All dimensions are mm

Illustrations, descriptions and technical specifications are not binding and may change.



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