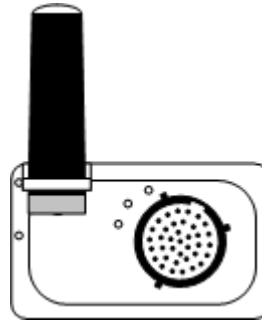


## STAR 5 TRACKER STAR 5 INERTIAL

### HIGH PRECISION DGPS RECEIVERS 100Hz DATA RATE, ULTRA LIGHT CAN, ETHERNET, INERTIAL PLATFORM and BEACON FUNCTIONALITY



#### Introduction

The MAHTechS STAR 5 TRACKER version with DGPS receiver and INERTIAL version with also an inertial platform, are suitable for Your most sophisticated and high precision motorsport, Industrial Research & Development and Performances Testing applications.

The ultra light weight, very compact size, high data rate and precision, are the primary specifications for this TOP QUALITY instrumentation.

Flexible and fully software programmable through a standard Ethernet connection, the device can be equipped with a remote or case-fixed antenna.

If connected to a MAHTechS M5X Data Logger, it is possible to acquire a track map, define virtual lines and references points. The reference points also enable the device to work as a sophisticated Lap Trigger (or Beacon) and Split Trigger for Timing and Testing,

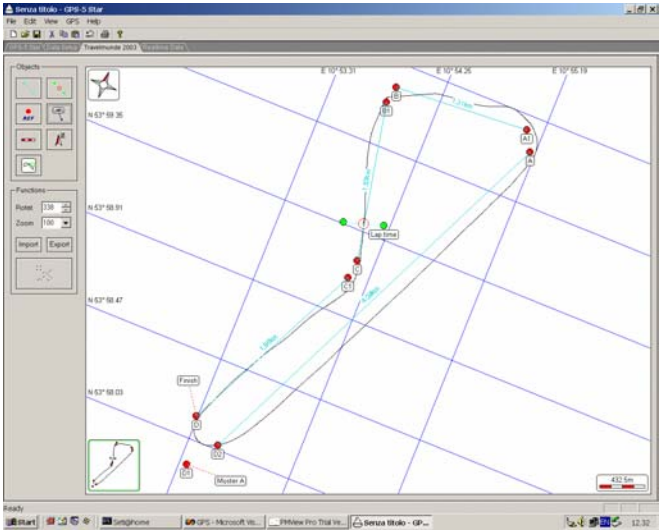
Up to 10 different performances tests can be programmed; the unit is able to offer directly timing, speed and distance and, if used with the MAHTechS K-DASH display, the real time result can be shown.

The technical specifications are as follows:

- Very fast and advanced 14 satellite DGPS receiver
- Remote start/stop switch for precise test distance calculation
- Autonomous horizontal position accuracy of 1.50m CEP (0.4m DGPS)
- Relative position measurement accuracy of 0.4m on 1000m
- 500Km/h max speed
- Speed accuracy of 0.1m/sec
- Internal 3 axis accelerometer
- INERTIAL version with integrated INERTIAL PLATFORM for 3D sophisticated application



- Integrated (only for Motorcycle) or Remoted GPS Antenna Configuration
- Programmable Frequency Speed Output Proportional (tone wheel simulation)
- 0-5Volt DC 16bit precision Analogue Speed Output
- Once per Lap Trigger Digital Output Geographically Programmable (via Latitude & Longitude coordinates)
- Split Trigger Digital Output Geographically Programmable (via Latitude & Longitude coordinates)
- 8 - 32Volt DC power supply
- N°1 CAN Interface port (std. 1Mbit/s part A&B)
- N°1 10/100Mbit/sec Ethernet programming port
- Programming Software can be integrated with the M5X Data Logger MAHT<sup>5-PRO</sup> Analysis Program and running under Microsoft® Windows® NT/2000/XP
- Fully software programmable device via Ethernet Connection
- Autosport/MIL 38999 37pins connector and SMA for Antenna
- Ultralight and compact IP67 anodized aluminium-carbonium case 140.2x67.4x43mm (180.2x67.4x43mm for INERTIAL version)
- -20 ° to 70 °C operating temperature
- Weight 350gr. (420gr. For INERTIAL Version)



### CAN Bus Data

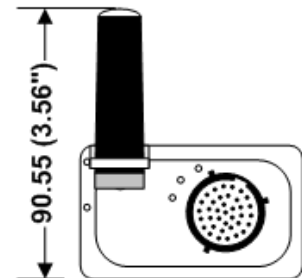
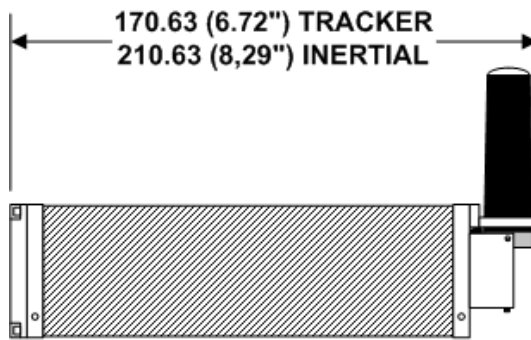
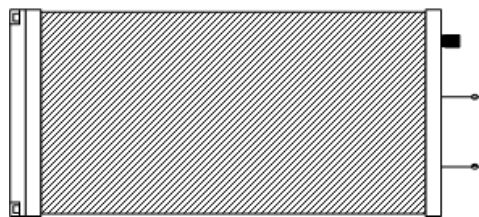
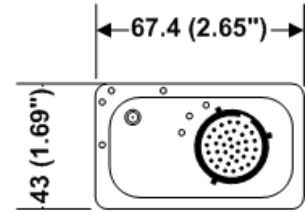
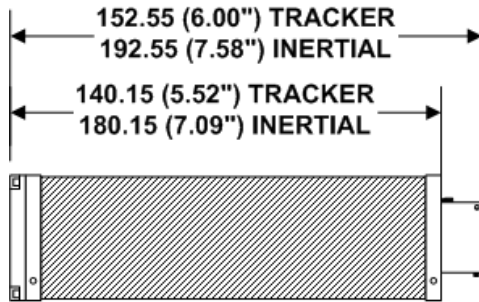
Through the PC software, it is possible to define the parameters to send to others devices connected to the CAN Bus with a similar data rate (software programmable Baud Rate).

The Data available are as followings:

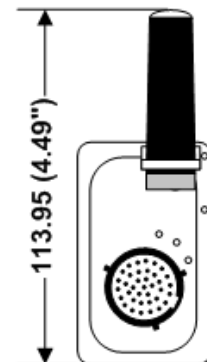
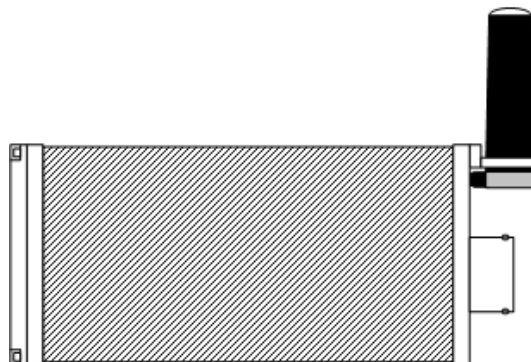
- |                  |                             |
|------------------|-----------------------------|
| • Fast Latitude  | • UTC                       |
| • Fast Longitude | • Satellites                |
| • Fast Altitude  | • Lap Timing                |
| • Fast X Speed   | • Split Timing              |
| • GPS Latitude   | • Fast Y,Z Speed (INERTIAL) |
| • GPS Longitude  | • X,Y,Z Accelerations       |
| • GPS Altitude   | • X, Y, Z, Gyro (INERTIAL)  |
| • GPS X Speed    | • Distance                  |
| • COG True       | • Lap/Split Pulses          |
| • COG Magnetic   |                             |



**Dimensions**



STAR 5 with Motorcycle Antenna - Position 1



STAR 5 with Motorcycle Antenna - Position 2

**Dimensions in millimetres and (inches)**



## Connector Information

**Connector – AS214-35PN**  
**Mating Connector AS614-35SN**

PIN	FUNCTION
1	+ Battery Voltage Input
2	- Battery Voltage Input
14	Switch Input
15	Switch Reference
16	Lap Timing Pulse (LTP) Out
17	LTP GND
18	Split Timing Pulse (STP) Out
19	STP GND
20	Speed Pulses per Meter (SPM) Out
21	SPM GND
22	0 - 5Volt DC Analogue Speed (ASP) Out
23	ASP GND
24	Ethernet TX+
25	Ethernet TX-
26	Ethernet RX+
27	Ethernet RX-
28	CAN H
29	CAN L

Missing pins are reserved

## Specifications

DESCRIPTION	VALUE
Supply Voltage	8 to 32Volt DC
Supply Current:	
STAR 5 TRACKER	300mA@12Volt DC
STAR 5 INERTIAL	410mA@12Volt DC
Operating Temperature Range	- 20 to +70°C (-4 to +158°F)
Storage Temperature Range	- 40 to +85°C (-40 to +185°F)
Weight:	
STAR 5 TRACKER	350 gr. (12.4 ounces)
STAR 5 INERTIAL	420 gr. (14.8 ounces)
Environmental	IP67

## Ordering Information

DESCRIPTION	PART NUMBER
STAR 5 TRACKER 100Hz Kit	K 601 001 001 001
STAR 5 TRACKER 20Hz Kit	K 601 001 002 001
STAR 5 INERTIAL Kit	K 601 002 001 001
Std Motorcycle GPS Antenna Kit	K 702 001 001 001
Std Car GPS Antenna Kit	K 702 002 001 001
HP Boat GPS Antenna Kit	K 702 003 001 001
STAR 5 Test Loom	M 101 001 001 001

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