

# MT-40

Series

## IP67-rated, rugged and “roadworthy” MicroTracker

Maestro’s MT-40 series of IP67 microtrackers is especially designed to match the environmental, mechanical and electrical requirements of the vehicle tracking market with a special focus on light and electrical vehicles.

## MT-40 Series

- ✓ Automotive grade, IP67 casing
- ✓ Concurrent GPS & GLONASS
- ✓ 9VDC ~ 60VDC “roadworthy”<sup>1</sup> power section
- ✓ Dual SIM
- ✓ Ignition sensing
- ✓ Two versatile<sup>2</sup> I/Os
- ✓ 1-Wire interface
- ✓ RS-232

### Target Markets

- ✓ Motorbike / vehicle tracking
- ✓ Electric vehicles
- ✓ Car / bike sharing

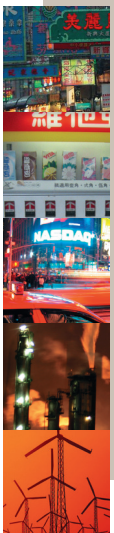
### Easy Configuration

To help its customers to build quickly the link from the tracking unit to their application server, Maestro Wireless Solutions provides an embedded application featuring tracking, monitoring and geofencing capabilities.



<sup>1</sup> i.e. ISO21848-certified (the infamous «Pulse 5»)

<sup>2</sup> i.e. user-configurable as analogue input or digital output



## Technical specifications

CELLULAR		
MT-41	MT-44 (available Q2 2016)	MT-45
4-band GSM/GPRS: 850/900/1800/1900MHz	2-band LTE cat.1 - Bands 4 & 13	5-band HSPA: 850/900/1800/1900/2100MHz 4-band GSM/GPRS: 850/900/1800/1900MHz
Internet: TCP/UDP/SMS		
Dual SIM, dual standby	Dual SIM, single standby	Dual SIM, single standby
Internal antenna	Internal antenna	Internal antenna
CE / E1	FCC / Verizon Wireless	CE / E1 / FCC / PTCRB / IC

### PHYSICAL CHARACTERISTICS

Casing: Automotive graded, UV resistant, non-flammable fibreglass-reinforced IP67 certified casing
Dimensions (LxWxH): 70 x 52.5 x 20.6mm
Weight: 100g
Wire harness: 1m

### ELECTRICAL CHARACTERISTICS

Power: 9VDC ~ 60VDC
Li-ion 3.15Wh backup battery
ISO 7637-2:2011 certified - Road vehicles - Electrical disturbances from conduction and coupling (Pulse 1, 2a, 2b, 3a, 3b)
ISO 16750-2:2003 certified - Road vehicles - Environmental conditions and testing for electrical and electronic equipment - Part 2 (Pulse 4a, 4b)
ISO 21848:2005 Road vehicles - Electrical and electronic equipment for a supply voltage of 42 V - Electrical loads (Pulse 5)

### INTERFACES

Internal cellular and GNSS antennas
I/O, user-configurable as analogue input or digital output x 2 - Analogue input - maximum 24VDC - Digital output - open collector
Digital input (ignition sensing)
RS-232 V.24 level on 2 wires
1-Wire bus Interface - 3.3VDC for temperature/humidity sensor or driver ID
LED GSM and GNSS x 2
Internal 3-axis accelerometer

### AVERAGE POWER CONSUMPTION

3G normal operation: 1.2W
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### FUNCTION AND FEATURES

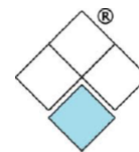
Device generated alert: Wired or virtual ignition ON/OFF Direction change Speed Mileage Low battery - battery disconnect HeartBeat / Power-up Tow
Programmable alert for usage outside specified time / area
Disable / Enable ignition - engine
Configurable alert messages for overspeed, geofence, ignition, etc.
Device generated rectangular / polygonal / circular geofences
Software / Firmware upgrade over the air
Device diagnostic status
GPS engine status
Power saving mode
Initialise / set odometer
I/O read - open / close - threshold alert set
Embedded profile to connect to D2Sphere remote management services

### GNSS

Multi channel GNSS (GPS/GLONASS) receiver A-GPS Protocols: NMEA
<b>Accuracy</b> Position: 2.5m GPS / 4,0m GLONASS SBAS: 2m GPS / n.a. GLONASS
<b>Acquisition</b> Cold Start: 35s GPS / n.a. GLONASS Tracking: -162dBm GPS / -157dBm GLONASS
<b>Sensitivity</b> Cold starts: -148dBm (GPS) / -140dBm (GLONASS)
<b>Limits</b> Velocity: 500m/s (972 knots) Altitude: 50,000m Update rate: 1Hz

### TEMPERATURE RANGE

Storage without battery: -40°C ~ 85°C
Operating without battery: -40° ~ 85°C
Battery discharging temp.: -20°C ~ 60°C
Battery charging: 0° ~ 45°C



**SARTELCO® SISTEMI SRL**

Via Torri Bianche, 1  
20871 Vimercate (MB)

Tel. +39- 039- 62905.1 Fax. +39- 039- 62905.99  
e-mail [sistemi@sartelco.it](mailto:sistemi@sartelco.it) Web [www.sartelco.it](http://www.sartelco.it)

