

MSP500 General description

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MSP500 is a special tracking terminal with GNSS/GSM/Bluetooth connectivity, which is able to collect device coordinates and transfer them via GSM network to server. Sevice contains integrated buzzer and relay for a speed limiting functionality based on a fuel pump power supply switching. Device have internal GNSS/GSM antennas, RS232 interface for ESC/POS printer support and internal Ni-Mh battery This device is perfectly suitable for applications, which need location acquirement of remote objects, fuel pump control from overpseeding.

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Package contents

The MSP500 device is supplied to the customer in a cardboard box containing all the equipment that is necessary for operation. The package contains:

- Already implemented MSP500 device;
- Top and bottom device cover parts;
- Ni-Mh battery.

Basic characteristics

GSM / GPRS / GNSS features:

- Teltonika TM2500 multi-band module (GSM 850 / 900 / 1800 / 1900 MHz);
- GPRS class 12;
- SMS (text, data);
- Integrated GNSS receiver;
- Up to -165 dBm GNSS receiver sensitivity.

Hardware features:

- Built-in relay;
- Built-in buzzer;
- Built-in movement sensor;
- Built-in Bluetooth 4.0;

- Internal High Gain GNSS antenna;
- Internal High Gain GSM antenna;
- 128MB internal flash memory;
- 400 mAh rechargeable 7.2 V Ni-MH battery.

Interface features:

- Power supply: 10 ÷ 30 V;
- USB B-TYPE port;
- 2 LEDs indicating device status.

Special features:

- Integrated Relay terminal for Speed limiting based on a fuel pump power supply switching;
- Integrated buzzer;
- RS232 interface for ESC/POS printer support;
- Fast position fix;
- High Quality track even in high density urban canyon;
- High gain internal GNSS and GSM antennas;
- 2 LED status indication;
- Real-time tracking;
- Smart data acquisition based on:
 - Time;
 - Angle;
 - Distance;
 - Ignition or any other I/O event.
- Sending acquired data via GPRS;
- GPRS and SMS I/O events;
- Virtual odometer;
- Jamming detection;
- Configurable using Secured SMS Commands;
- Overvoltage protection.

Description	Voltage	Duration
Normal operation	+10 ... +30 V	Unlimited
Protection turns on, device turns off	34 V	Unlimited
Maximum voltage	<70 V	Unlimited
Maximum voltage impulse	90 V	5 ms

Technical features

Part name	Physical specification
Navigation indication	LED

Modem indication	LED
USB	USB TYPE-B socket
GNSS	Internal GNSS antenna
GSM	Internal GSM antenna

Technical details

	GPRS: average 6.5 mA
	Nominal: average 26.6 mA,
	GNSS sleep: average 8.6 mA
2 W max.	
Current consumption at 12 V (Power supply 10...30 V DC)	Deep Sleep: average 3.8 mA
	Online Deep Sleep: average 4.1 mA
	Ultra Deep Sleep: average 1.4 mA
Battery charge current	Average 200 mA
Rated current	250 mA
Operating temperature (without battery)	-40..+85 °C
Storage temperature (without battery)	-40..+85 °C
Storage relative humidity	5..95% (no condensation)
Device + case + battery weight	350 g


Technical information about internal battery

Internal back-up battery	Battery voltage (V)	Nominal capacity (mAh)	Power (Wh)	Charging temperature (°C)
Ni-MH Battery	6.8~7.2	400	2.82 – 2.88	0 – 45

Batteries are covered by 6 month [warranty](#) support.

-  CAUTION: RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

Battery should not be disposed of into general household waste.

-  Bring damaged or worn-out batteries to your local recycling center or dispose them into a battery recycle bin commonly found in supermarkets.

Electrical characteristics

Characteristic description	Value			
	Min.	Typ.	Max.	Unit
Supply Voltage:				

Supply Voltage (Recommended Operating Conditions)	+10	+30	V
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Absolute maximum ratings

Characteristic description	Value			Unit
	Min.	Typ.	Max.	
Supply Voltage (Absolute Maximum Ratings)	-30		+30	V