



Navigil TD230 OEM Tracker

Fast time to market with ultra low power TD230 OEM tracker featuring intelligent customer programmable embedded firmware and rebrandable enclosure



- Ultra low power sleep modes
- Configurable using system parameters and signal scripts
- Rebrandable membrane / enclosure
- Industry benchmark geofence functionality
- Over the air (OTA) parameter and firmware updates
- Implement own application software and server protocol using TG2 SDK
- Integrate with other devices and sensors using TG2 SDK

The TD230 is a fully functional tracking application platform with GPS receiver, GSM/GPRS modem, integrated antennas and onboard sensors. Unique features include ultra low power consumption, industry benchmark geofence functionality and SDK for firmware development for customer specific communication protocols, I/O control and application logic implementations.

Fast time to market

Get to the market in a matter of weeks using standard TD230 TG2 firmware and a rebranded user interface membrane with three push buttons and three LEDs. The print layer of the membrane can easily be customized for very low-cost rebranding. Navigil offers several different button and led layouts for the membrane. Extensive firmware libraries enable fast development of server protocol, I/O control and application logic implementation.

Intelligent software

The TD230 OEM devices come with a production ready, versatile firmware with support for several commonly used features like geofences, vehicle state monitoring, server reporting and power saving logic. Firmware in addition to all parameters and configuration files are over-the-air upgradable. SDK gives further options for customization.

Long battery life

Due to low-power sleep modes of the hardware and intelligent power management of the firmware, a TD230 OEM device can survive long periods without external power while still maintaining periodic communication with a back-end server. Wakeup from a power saving mode can be triggered by a scheduled event, mechanical motion or an external input.

Please turn to see reverse side!

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Industry benchmark programmability and customization

GPS	Receiver type	Fastrax IT500
	Number of channels	22 tracking + 66 acquisition
	Navigation sensitivity	-165 dBm
	A-GPS	EPO (Extended Prediction Orbit)
GSM / GPRS	Modem type	Cinterion BGS2-W
	Frequencies	850 MHz, 900 MHz, 1800 MHz, 1900 MHz
	Communication	SMS, FTP, HTTP, TCP, UDP
MCU	Processor	ARM Cortex-M3
	Code Memory	512 (total code memory) - optionally up to 1024 KB
	RAM	64 (total RAM) - optionally up to 96 KB
	Data flash	8 MB (total data flash) - optionally up to 32 MB
Connectivity	Main power supply	USB, optionally dual 8 - 32V input
	Comm extensions	RS-232, TTL UART, optionally CAN 2.0B (in Full version only)
	IO	2 analog inputs, 4 digital IO ports
	Other	High current load switch, 3V power output
Antennas	GPS	Internal GPS, optional MMCX for external antenna
	GSM	Internal quad band antenna or optionally an U.FL connector for off-board antenna
Sensors	Onboard	3D accelerometer, temperature
		Optionally 3-axis gyro (in Full version)
Power consumption	Sleep current	80 - 90 uA @ 3.7V DC, depending on configuration
	Active mode typical	Typical 70 mA @ 3.7V DC, may vary depending on configuration
Software features	Server communication	GPRS, SMS with queue buffering on data flash
	Over-the-air updates	Configuration, parameters, signal scripts, firmware including application
	Geofences	Simultaneously up to 200 complex polygon or 5000 circular geofences
	Vehicle state algorithms	Movement, heading change, mechanical motion, trip reports
	SDK	Customer usable for easy customization (check availability)
Temperature range	PCB / Li-ion battery Optional battery warmer	-40 – +85 C, Li-ion discharge -20 – +60 C, Li-ion charge 0 – +45 C -40 – +85 C, Li-ion discharge -30 – +60 C, Li-ion charge -30 – +45 C
Certifications		RoHS, CE 99/05/EC
Available versions		PCB only or enclosed unit, variants of optional hardware features
Dimensions	PCB only	84 x 50 x 14 mm
	Enclosed unit	92 x 57 x 24 mm (with 1150 mAh internal battery)



Key features are:

- GPS receiver
- Quad band GSM/GPRS modem
- Automotive and USB power options
- OTA parameter, system signal and firmware updates
- Ultra low power consumption
- Industry benchmark 5-dimensional geofence functionality
- SDK for embedding custom communication protocols, application logic and I/O control into firmware