

- 50 channel GPS receiver
- Extra Low Power consumption
- Digital I/O integrated
- Remote configuration of functionality and firmware code.
- Data Terminal option Windows CE 6.0® and /or LINUX or Windows Embedded.
- 16 bits Microcontroller to 22 MHz
- Communications system GSM/GPRS, TETRA, TETRAPOL e INMARSAT

Extension Options: Digital and analogics I/O, BUS CAN,....

Unit K8+ GPS is the KNOSOS designed high performance GPS positioning unit designed in 2007. That incorporates a great capacity of process, associated with a great number of peripheral. It is specially designed to work in vehicles, and to expire with the requirements of hardness associated with this environment. Integrates an industrial PC, allowing GPS positioning of a vehicle and transmission to a control center optimizing the GPRS/GSM communications channels or of the networks TETRA/TETRAPOL or INMARSAT, using the most suitable carrier service of each network based on the cover.

Versatile Unit

K8+ GPS has been designed for use with SAIR Platform of Knosos, or any other GIS based software. In TETRAPOL mode, it uses short datagrams and polling of network to send the data in real time. In GPRS mode, the standard TCP/IP protocol and in TETRA mode, SDS messages and services of short dates INMARSAT.

K8 + unit sends so much the GPS frame (position, instantaneous speed, course and hour), as data frame generated by a connected external device to the equipment (sensorization modul, terminal of data or terminal PDA), with the navigation software and the SAIR Mobile missions management

The equipment integrate digitals I/O that can be extended with additional digitals/analogics I/O, with the purpose of making telemetering, sensorization and telecontrol in the vehicles.

The K8+ unit communicates with equipment TETRA, TETRAPOL, INMARSAT through a port RS-232. The GPRS modem is inclose in the unit.

The unit K8 + has a feeding source specially designed for its used in vehicles, protected against sobretensiones and beaks(peaks).

The unit has a few manners of extinguished temporized, that guarantee that the equipment will not unload the battery of the vehicle.

The K8+ unit allows the connection of peripheral (printing, terminal of data, weighers, etc.) when arranging ports series to the connection of such. In



Tracking Unit K8+ GPS

the same way it is possible to be programmed to work with WIFI/Bluetooth communications

Adaptable to any vehicle

Thanks to its small size and its compact and solid structure, the K8 unit can be used in the most demanding applications. It combined last generation technology along with an enormous facility of installation.

KNOSOS can personalize, to the measure of the application, the firmware of the unit K8+ GPS, obtaining the wished functionality and adapting of the best form to the communication channel and system GIS of the client

Highest functionality

K8 unit allows to be reprogrammed in remote from the base, so that it allows to send GPS positions by whole range, passed time or a mixture of both. Also it allows the memorization and overturned of routes by the communication channel and the generation of warnings towards the control center when the vehicle arrives at the predefined crossing sites, alarm pulser. Additionally it allows the configuration and management of the different channels of communication.

It offers like standard option the connection to application SAIR of data mediante optionals data terminals with this functionalities:

It offers as standard option the connection to the application SAIR of information by means of optional terminals of information with the functionalities of:

- GPS Navigation
- Remote database (ID Card,)
- Receipt and missions management of control center.
- Operative Status.
- Free and predefined Messages

FEATURES

- Power supply between 6 and 30 V controlled directly by the terminal TETRA/TETRAPOL.
- Resistant and adaptable to any vehicle.
- Firmware to choose based on the communication system..
- Directly usable with SAIR, MPS Platform or opened to specific applications
- Excellent behavior in cities
- Ideal for high efficiency and secure systems.

SPECIFICATIONS

General	GPS receiver in L1 frequency, GALILEO open service C/A codes of 50 channels in continuous tracking. 1Hz positioning.
Frequency	Max. 4 pos/s, depending on the Communication system.
Accuracy	Position: 2,5 m (CEP) without S/A Speed: 0.1 m/s without S/A
Sensibilidad	Time: 1µs synchronized to GPS time <-160dBm Adquisición, seguimiento, navegacio <-145dbm adquisición de efemerides
Adquisition Rate	Cold start: 29 s Warm start: 29 s Hot start: 1 s
Readquisition	0,1 s
Altitude	18.000 m
Speed	500m/s
Acceleration	4g (39m/s)
Jerk	20 m/s3
Differential GPS	external conexion RTCM SC104
GPS Connector	Female SMA . CC and CA Protection
Assisted GPS	Compatible
Modem GPRS	Quadband: 850/900/1800/1900 MHz GSM release 99 GPRS Multislot class 12
Power suply	De 6 a 30 V DC
Consumption	0,7A @ 12 V Low power control by rele Backup : 0,5 mA @ 12,4 V
Back-up battery	Supercap 1F
Operating temp	-10°C a -> 70°C
Video	VGA female DB15
Serial port	2 male DB9
USB	3 USB 2.0 HOST/1.1
Ethernet port	1 (RJ45)
Input/Output	10 input/ Output
Power connector	Minifit Jr. 12
Processor	AMD LX800 a 500MHz
Chipset	AMD Geode CS5536
Memory	Cache: 128 KB L2, COMP FLASH: 2 GB (amp 8 GB), RAM: 256 SO-DIMM (amp 1GB)
Programming	By Flash memory using external connector Remote firmware reprogramming (by GPRS)
State Control	4 LED's
Slot ampliación	PC104+
Directive	CE y automotive ("e" mark)

PHYSICAL CHARACTERISTICS

Size	89 x 50 x 160 mm sin conectores
Weight	470 g
Connectors	RF: female SMA. I/O: male DB9 , male DB15 y female DB15.
Box	Aluminium.
Case	Mat green anodised
Serigrafía	White
Mecánica internal	2 layer: Mother board + interchangeable expansion board.
Installation	By using 4 metric screws and lock washers grower and nut
GPS antenna	To consult diverse options and facilities



OPTIONAL HARDWARE

Communications	Communications WIFI or Bluetooth.
Input/Output	Input/output digitals/analogics expandable, BUS CAN PC 104+
Serial port	Optional serial port configurable RS232, RS485 o 1 wire. PC104+

PROGRAMMING OPTIONS

MDTK8	Touch panel display for Terminal data connection with k8+ unit video display
development	KNOSOS offers its experience for integration of K8+ GPS in external systems, as well as for connection of data terminals, hand-held terminals, PDA's