

# K10 plus

- 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,....**



*Tracking Unit K10 plus*

**U**nit K10 plus is the KNOSOS designed high performance 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.

### Versatile Unit

K10 plus 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.

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 K10 plus unit communicates with equipment TETRA, TETRAPOL, INMARSAT through a port RS-232. The GPRS modem is inclose in the unit.

The unit K10 plus 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 K10 plus unit allows the connection of peripheral (printing, terminal of data, weighers, etc.) when arranging ports series to the connection of such. In 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 K10 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 K10 plus, obtaining the wished functionality and adapting of the best form to the communication channel and system GIS of the client

### Highest functionality

K10 unit allows to be reprogrammed in remote from the base. 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 bottom. 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 by 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:

- 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 Plataform or opened to specific applications
- Excellent behavior in cities
- Ideal for high efficiency and secure systems.

## SPECIFICATIONS

<b>Modem GPRS</b>	Quadband: 850/900/1800/1900 MHz GSM release 99 GPRS Multislot class 12
<b>Power supply</b>	De 6 a 30 V DC
<b>Consumption</b>	0,7A @ 12 V Low power control by rele Backup : 0,5 mA @ 12,4 V Supercap 1F
<b>Back-up battery</b>	Supercap 1F
<b>Operating temp</b>	-10°C a -> 70°C
<b>Video</b>	VGA female DB15
<b>Serial port</b>	2 male DB9
<b>USB</b>	3 USB 2.0 HOST/1.1
<b>Ethernet port</b>	1 ( RJ45)
<b>Input/Output</b>	10 input/ Output
<b>Power connector</b>	Minifit Jr. 12
<b>Processor</b>	AMD LX800 a 500MHz
<b>Chipset</b>	AMD Geode CS5536
<b>Memory</b>	Cache: 128 KB L2, COMP FLASH: 2 GB ( amp 8 GB), RAM: 256 SO-DIMM ( amp 1GB)
<b>Programming</b>	By Flash memory using external connector Remote firmware reprogramming (by GPRS)
<b>State Control</b>	4 LED's
<b>Slot ampliación</b>	PC104+
<b>Directive</b>	CE y automotive ( "e" mark)

## PHYSICAL CHARACTERISTICS

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



## OPTIONAL HARDWARE

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

## PERIPHERAL OPTIONS

<b>MDTK8</b>	Touch panel display for Terminal data connection with k8+ unit video display
<b>development</b>	KNOSOS offers its experience for integration of K10 plus in external systems, as well as for connection of data terminals, hand-held terminals, PDA's