

# owa22A-ETH

## WIRELESS EMBEDDED COMPUTER FOR ONBOARD NETWORKING

HARDWARE TERMINAL WITH OPEN SOFTWARE FOR THE DEVELOPMENT OF ONBOARD NETWORKING APPLICATIONS REQUIRING LOCATION.

WIRELESS DEVICE THAT MAKES VEHICLE POSITIONING AND COMMUNICATION POSSIBLE.

IT COMBINES LINUX OS, GSM/GPRS WITH IP CONNECTIVITY AND GPS WITH ONBOARD NETWORKING VIA ETHERNET AND A WIDE RANGE OF ACCESSORIES USING USB.

IT ENABLES ADDITION OF LOCAL WIRELESS NETWORKING CAPABILITIES TO A MOBILE APPLICATION BY INTERFACING A WLAN STANDARD DEVICE VIA THE ETHERNET PORT.

- GPRS Class B, Class 8 (4+1), GSM dual band 900/1800.
- GPS integrated.
- TCP/IP stack for transparent Internet Connection.
- Embedded IP routing and firewall capabilities.
- RS232, RS485, CAN, Audio, General Purpose analog and digital I/Os
- Ethernet 10baseT (10 Mbps).
- WLAN connectivity, by interfacing an external WLAN device via the Ethernet port.
- USB 1.1 compliant host.
- Back-up for Real Time Clock and GPS.
- Small Size.
- Application software upgradeable over the air.

*Your reference partner for on board wireless communication nodes!*



168 mm. (W)

35 mm. (H)

55,25 mm. (L)

**owasys**

Advanced Wireless Devices

# TECHNICAL SPECIFICATIONS

## GENERAL SPECIFICATIONS

- Power Supply:
  - Nominal Voltage Range: 12 to 36 Vdc.
- Interfaces:
  - Power Supply.
  - 7 Digital Inputs, 5 Digital Outputs, 2 Analog Inputs.
  - Audio IN/OUT (2,5 W).
  - RS-232 Serial Port. RS-485 and CAN Ports.
  - Odometer Input.
  - GSM and GPS antenna connector .
  - Ethernet 10baseT connector.
  - USB 1.1 host connector.
- Approvals
  - CE Marking.
  - e-marking.
- Power Consumption-Typical Average @24V

Off	0,2 mA
Deep Sleep	13 mA
Run (GSM voice call + GPS)	115 mA
Ethernet connected ( $\Delta$ )	7 mA
USB active ( $\Delta$ )	2 mA
Battery Recharge (1)	55 mA

(1) Only for owa22A/b-ETH

- Temperature:

Operating	-25°C to +55°C
Operating but not fully GSM compliant	-25°C to +70°C
Storage	-40°C to +70°C
Operation with battery back up (1)	-20°C to +55°C

(1) Only for owa22A/b-ETH

## FIRMWARE SPECIFICATIONS

- 32 bits RISC ARM7 core up to 60 MIPS (Dhrystone 2.1) at 70 Mhz.
- Linux OS (Kernel v.2.4.18).
- TCP/IP Stack
- Memory:
  - 8 Mbyte FLASH (4 Mbyte available for SW application).
  - 16 Mbyte RAM.
- Application Programming Interface for:
  - Owa22A control.
  - Power management.
  - GSM/GPRS.
  - Internet connection.
  - Controlling all the interfaces: I/Os.
  - GPS.

## GSM/GPRS SPECIFICATIONS

- EGSM 900 / GSM1800.
- Power Output at 900 MHz: 2W.
- Power Output at 1800 MHz: 1W.
- GPRS Class B, Class 8 (4+1).
- Audio and CSD calls.
- SMS (MT/MO).

## GPS SPECIFICATIONS-Support for WAAS and EGNOS

- Receiver: L1 frequency, 16 Channels.
- Update Rate:  $\geq$  4Hz.
- Accuracy: 2,5 m CEP (Circular Error Probability).
- Signal Acquisition:
  - Cold Start: 45 sec.
  - Warm Start: 38 sec.
  - Hot Start: < 8 sec.
- Signal Reacquisition: < 1 sec.
- 3,3 Volt power supply for active antenna.

## MECHANICAL SPECIFICATIONS

- Dimension: 168 (W) x 35 (H) x 55,25 (L).
- Weight: < 360 gr.
- Material: Aluminium anodized.
- Connectors:
  - 2 SMA.
  - Molex 24 pins P/N 90130-3124.
  - RJ45 for audio and secondary UART.
  - RS-232 DB-9 (Female).
  - Molex Mini-fit 6 pins P/N 39-30-1060.
  - Standard RJ45 Ethernet 10baseT connector.
  - USB type A receptacle connector.

## UNIVERSAL DEVELOPMENT KIT

A development kit is available, including:

- GSM/GPRS, GPS and Bluetooth antennas.
- Developer's board.
- Power supply cables.
- Cables for interfaces.
- CD with: Cross compiler, API's library, manuals and applications notes.

## RELATED PRODUCTS

- owa22A/b-ETH: with battery back-up.
- owa22I-ETH: without GPS.
- owa22I /22A.
- CD with: owa22I/22A-BT: 100 meters Bluetooth™ and USB 1.1.

## OWASYS

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