

owa3X platform

POWERFUL OPEN M2M PLATFORM SUITABLE FOR THE WIRELESS APPLICATION YOU NEED TO DEVELOP

A NEW GENERATION OF OPEN, FLEXIBLE AND POWERFUL WIRELESS EMBEDDED COMPUTERS, PROVIDING FULLY WIRELESS CAPABILITIES FOR REMOTE MANAGEMENT AND MONITORING.

A UNIQUE PLATFORM TO DEVELOP TELEMETRY AND TELEMATIC APPLICATIONS WITH OPTIONAL ENCLOSURE FOR RUGGED CONDITIONS, INTERNAL ANTENNAS AND A WIDE RANGE OF CONNECTIVITY.

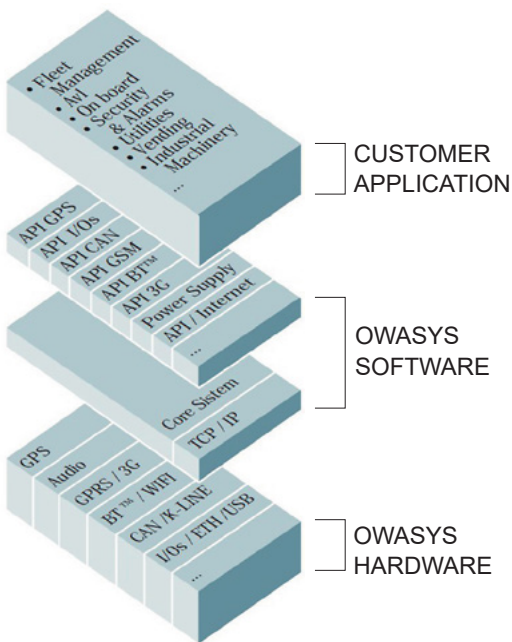
owa3X PLATFORM INTEGRATES:

- GSM/GPRS (optional 3G)
- GPS
- EMBEDDED IP FUNCTIONALITY
- WIDE VARIETY OF INTERFACES
 - ANALOG AND DIGITAL I/O
 - 3 RS232 & 2 RS485
 - 3 CAN, 2 K-Line & iButton
 - AUDIO
 - ETHERNET, MICROSD, etc.
 - USB

OPTIONS:

- BLUETOOTH™
- WiFi
- HSPA / UMTS
- CODEC
- I/Os Expansion Board

Wireless Embedded Computer



ARM



- ARM9 CPU 32bit**
- 400 MIPS
 - 64MB FLASH
 - 32MB / 64MB RAM
 - Industry Standard Architecture
- LINUX and C**
- Open Platform
 - Complex Applications
 - Flexible
- PSU**
- Robust for Automotive
 - Very low power



Advanced Wireless Devices

• Interfaces

- 10 configurable digital input/outputs:
 - 50V max inputs (logic low <3V, high >5V).
 - All inputs function as wake signals for low power modes.
 - All inputs can be used as counters (odometer). 32bit, 3Khz max.
 - 8 open collector outputs (100mA each).
 - 2 high-side switches to Vin for output (1A each).
 - Short-circuit protection for all outputs.
- 4 analog inputs:
 - 10 bit resolution, 1% accuracy.
 - Share 4 of the digital I/O pins (only in owa3x-IP30 models).
 - 0-5.12V (5mV per bit) or 0-30.72V (30mV per bit) configurable by sw.
- Internal ADCs for Vin, Vbat, and temperature.
- Removable cover for SIM; main battery and microSD.
- microSD card holder.
- 3 external RS232 ports. 6 pins configurable by SW as follows:
 - 3 x (TX/RX) or
 - 1 x (TX/RX) & 1 x (TX/RX/CTS/RTS) or
 - 1 x (TX/RX/CTS/RTS/DTR)
- RS485 1Mbps interface.
- Ethernet 10/100 BaseT.*
- Vout 4.5V power output (100 mA max).
- When running from battery backup 3.7V (100mA max).
- GSM / GPRS with FAKRA antenna connector.
- GPS with FAKRA antenna connector.*
- 4 LEDs for status indication (6 with Ethernet).
- Audio for external microphone and speaker.*
- CAN bus supporting full speed 1Mbps CAN 2.0B.*
- K-line bus.*
- Integrated sensors.
 - Programmable 3 axis accelerometer and/or gyroscope.*

* Availability of features marked with (*) depends on model.

• Power Supply

- Nominal range of 7 V to 48 V.
- Typical consumption at 12V:

OFF	0.4mA
Standby	15 mA
RUN	50mA
RUN + GSM voice call	90mA

• Batteries

- Back-up when there is no power supply available.
- Standard backup battery for RTC.
- Optional rechargeable Li-Ion 3.7V.
- Inserted via rear battery cover.

• Temperature

Storage	-40 °C to +85 °C
Operating with GSM off	-40 °C to +85 °C
Operating with GSM on	-30 °C to +80 °C
Operating from Li-Ion Battery	-20 °C to +60 °C
Li-Ion Battery recharge	0 °C to +45 °C

• CPU

- ARM9 at 400MHz clock speed.
- Linux OS 2.6.36.
- FLASH 64Mbyte.
- RAM 32Mbyte / 64Mbyte.
- microSD card holder for additional storage.

• GSM/GPRS

- GSM850 + EGSM900 + GSM1800 + GSM1900.
- Class 4 (2W) for GSM850/EGSM900.
- Class 1 (1W) for GSM1800/GSM1900.
- GPRS Class B, Class 10 (4&2).
- Audio and CSD Data calls.
- SMS (MT/MO).
- Multiplexed communication supported allowing GSM events and SMS during GPRS connection.

• GNSS

- Receiver: GPS L1 frequency, C/A code.
- 56-channel* continuous tracking receiver.
- GALILEO L1 open service and GLONASS ready.*
- SBAS: WAAS, EGNOS, MSAS, GAGAN.
- Update Rate: 4Hz.
- Accuracy: 2.5 meters CEP.
- Signal Acquisition
 - Cold Start: 29 sec.*
 - Warm Start: 28 sec.*
 - Hot Start: < 1 sec.
- Signal Reacquisition: < 1 sec.
- Active Antenna Power Supply: +3.0V @ 30mA.

* Features availability depending on version.

• Mechanical

Aluminium enclosure:

- Environmental protection to IP30 standard. (protection against objects larger than 2.5mm and no protection against water).
- Dimensions: 110 x 85 x 40 mm, excluding connectors and screws.
- Dimensions: 110 x 85 x 26 mm, (COMPACT VERSION).
- Weight: 270g.
- Connectors:
 - GSM & GPS, 24 pin Machine, RJ11 (audio), microSD. slot and SIM slot (optional dual SIM slot) Optional RJ45 (ETH) and Optional USB.
 - Plastic mounting bracket with screw mounting holes. It can also be used for DIN rail mounting. Mounting bracket includes holes to support an optional expansion board.

• Conformity

- 2014/53/EU RED Directive.
- UNECE Regulation R-10 (2004/104/EC Directive).
- 2011/65/UE RoHS II Directive.

• Development Kit

Includes: Developer's board owa3X, power supply cables, cables for interfaces, antennas, web access to: cross compiler, API's, libraries, manuals and application notes.

• Options

See DESI-BOK100 6006 for product variants and options.



Advanced Wireless Devices