

owa4X platform

POWERFUL LINUX IoT GATEWAY TO PROCESS DATA COMING FROM WIRED AND WIRELESS SENSORS/DEVICES/PERIPHERALS.

owa4X Core:

- LINUX Kernel 4.4.19
- Debian Distribution File System
- ARM Cortex A8 32 bit 800MHz
- 512MB DDR3
- 1GB NAND Flash
- Access to Debian Standard Repositories
- Able to run C, C++, Java, LUA applications



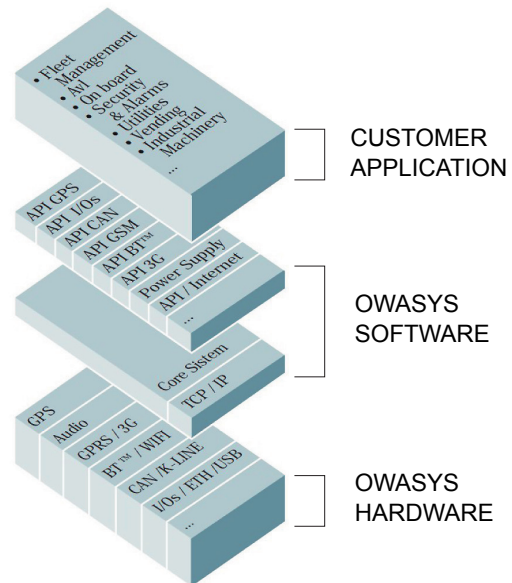
Key Features:

- IP67 Enclosure
- Internal antennas
- CAN (up to 4 interfaces)
- Kline (up to 2 interfaces)
- Programmable 9 Axis sensor:
Accelerometer/Gyroscope/Magnetometer
- Dead reckoning
- Ethernet 100Mbps
- Audio CODEC
- MicroSD
- Micro SIM and Chip SIM available

Wireless Interfaces:

- GNSS (GPS + GLONASS)
- CELULAR COMMUNICATIONS
 - GSM/GPRS, UMTS OR LTE
- WiFi 802.11 b/g/n
- BT 4.2

Wireless Embedded Computer



owa4X platform

TECHNICAL SPECIFICATIONS

• CPU

- ARM Cortex A8 at 800MHz clock speed.
- Linux Kernel 4.4.19
- Debian File System
- NAND FLASH 1GByte.
- DDR3 512MBytes.
- MicroSD card holder for additional storage.

• 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.

• GSM/GPRS (UMTS and LTE options available)

- 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.

• Interfaces

- Up to 4 CAN bus supporting full speed 1Mbps CAN 2.0B.
- Up to 2 K-line bus.
- Integrated sensors.
 - Programmable 9 axis sensor, accelerometer, gyroscope and magnetometer.
- 10 configurable digital input/outputs:
 - 50V max inputs (logic low <1.5V, high >3V).
 - 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.
 - 2 Share digital I/O pins and 2 dedicated pins.
 - 0-5.12V (5mV per bit) or 0-30.72V (30mV per bit) configurable by sw.
- Maxim 1wire
- microSD card holder.
- USB Host 2.0.
- 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/DCCD/DTR)
- One RS485 port.
- Ethernet 10/100 BaseT.
- Vout 5V power output (500 mA max).
- FAKRA antenna connectors.
- 4 LEDs for status indication.
- Audio CODEC for external microphone and speaker.
- Availability of features depends on models.

• POWER SUPPLY

- Nominal range of 7 V to 48 V.
- Typical consumption at 24V:

OFF	
Standby	
RUN	
RUN + GSM voice call	

• Batteries

- Back-up when there is no power supply available.
- Standard backup battery for RTC. Duration 10 years.
- Optional rechargeable Li-Ion 3.7V.
 - Inserted via rear battery cover.

• Temperature

Storage	-40 °C to +85 °C
Operating	-40 °C to +85 °C
Operating from Li-Ion Battery	-20 °C to +60 °C
Li-Ion Battery recharge	0 °C to +45 °C

• Rugged enclosure

- Environmental protection to IP67 standard.
 - (full protection against dust and water).
- Dimension: L=149 x W=135 x H=58 mm
- Weight: TBD (aprox 400g)
- Material: Glass reinforced plastic.
- System connectors: TE 776163-1 (35 pins)
- MicroSIM
- MicroSD

• Development Kit

Includes: Developer's board owa4X, power supply cables, cables for interfaces, antennas, web access to: cross compiler, API's, libraries, manuals and application notes.

• Options

See DESI-BOKxxx xxxx for product variants and options.



owasys

Advanced Wireless Devices

DESI-BOK 100 9000 PA6 Subject to change without prior notice Printed January 2017