

# owa4X



Powerfull Linux IoT Gateway to Process Data coming from Wired and Wireless Sensors, Devices and Peripherals.

## Cortex A8 IoT Open Linux Gateway (IP67)

### owa4X Core:

- LINUX Kernel 4.19.94
- Debian 10 Distribution File System
- ARM Cortex A8 32 bit 800MHz
- 512MB DDR3 (Up to 1 GB)
- 1GB NAND Flash (Up to 2 GB)
- Access to Debian Standard Repositories
- Able to run C/C++, Python, Java, LUA apps

### Key Features:

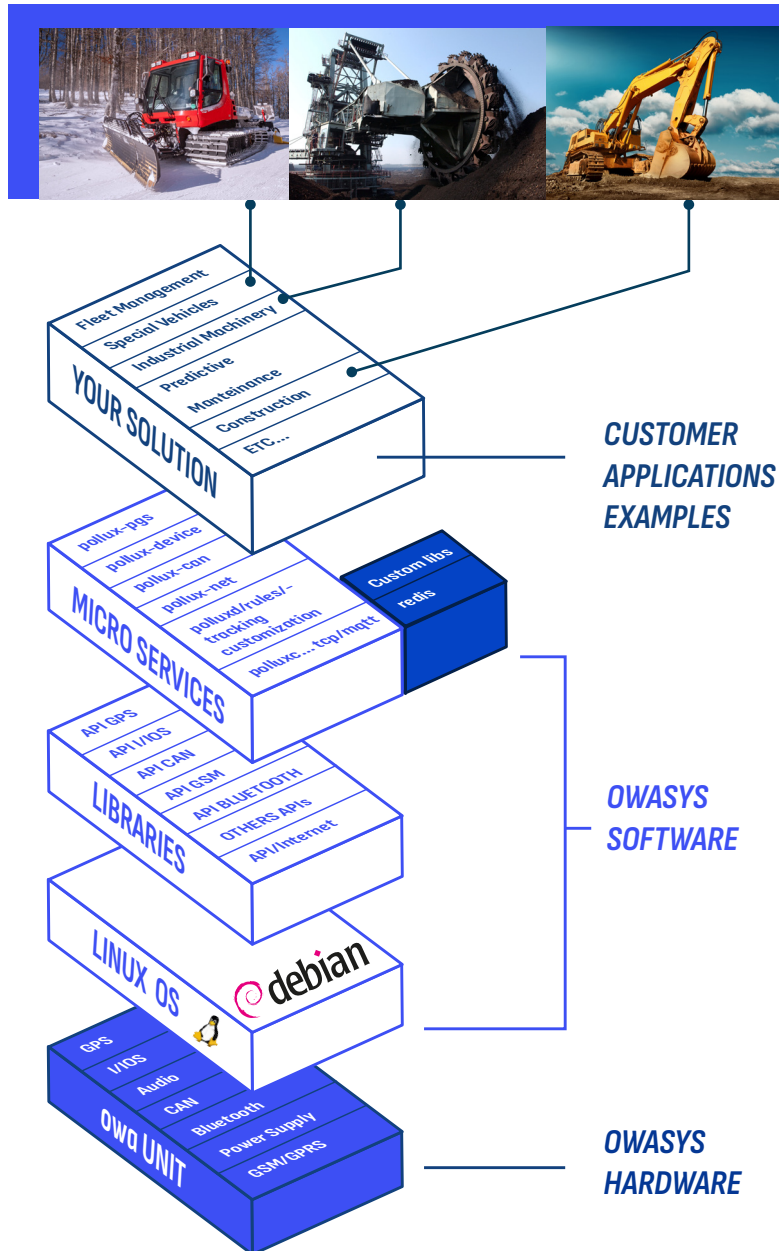
- IP67 Enclosure
- CAN (up to 4 interfaces)
- Kline (up to 2 interfaces)
- Global LTE Cat 4
- TPM 2.0
- Programable 9 Axis sensor: Accelerometer/Gyroscope/Magnetometer
- Dead reckoning (Optional)
- Ethernet 10/100Mbps
- Audio CODEC
- MicroSD
- Micro SIM and MFF2 SIM available

### Wireless Interfaces:

- Concurrent reception of up to 3 GNSS GPS, GLONASS, GALILEO, BeiDou
- Dead Reckoning options
- CELLULAR COMMUNICATIONS
- UMTS/HSPA+
- LTE CAT 4 / 3G / 2G
- WiFi 802.11 a/b/g/n/ac (Internal antenna)
- BT 4.2 (Internal antenna)

### Mechanics

- IP67
- L=149 x W=135 x H=58 mm



CUSTOMER APPLICATIONS EXAMPLES

OWASYS SOFTWARE

OWASYS HARDWARE

[www.owasys.com](http://www.owasys.com)

Time to wireless!!

BOK 100 9000-F\_owa4X Datasheet

**owasys**<sup>®</sup>  
HMS GROUP MEMBER

**CPU**

- ARM Cortex A8 at 800MHz clock speed.
- Linux Kernel 4.19.94
- Debian 10 File System
- NAND FLASH 1GB (Up to 2 GB)
- DDR3 512MB (Up to 1 GB)
- MicroSD card holder for additional storage.

**GNSS**

- Receiver: GPS/GLONASS/QZSS/BeiDou.
- 72-channel\* continuous tracking receiver.
- GALILEO E1B/C ready.\*
- SBAS: WAAS, EGNOS, MSAS, GAGAN.
- Update Rate: 10Hz.
- Accuracy: 2 meters CEP.
- Signal Acquisition:
  - Cold Start: 26 s.
  - Hot Start: < 1.5 s.
- Signal Reacquisition: < 1 s.
- Active Antenna Power Supply: +3.0V @ 34mA.

\* Features availability depending on version.

**Interfaces**

- Up to 4 CAN bus
    - 2 CAN bus supporting full speed 1Mbps CAN 2.0B.
    - 2 CAN FD supporting 8Mbps.
  - Up to 2 K-line bus.
  - Integrated sensors.
    - Programmable 9 axis sensor, accelerometer, gyroscope and magnetometer.
  - TPM 2.0
  - 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 (200mA each).
    - 2 high-side switches to Vin for output (1A each).
    - Short-circuit protection for all outputs.
  - 4 analog inputs:
    - 12 bit resolution, 1% accuracy.
    - 1 Share digital I/O pins and 3 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/DCD/DTR)
  - One RS485 port.
  - Ethernet 10/100Base-TX
  - 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 9V to 36V.
- Typical consumption at 24V:

OFF	0.335 mA
Standby	9.88 mA
RUN	47 mA
RUN + GSM + GPS	73 mA

**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**

Safety Purposes Operating Temperature Range without Li-ion Battery	-40 °C to +65 °C*
Safety Purposes Operating Temperature Range with Li-ion Battery	-40 °C to +55 °C (from external power supply) -20 °C to +55 °C (battery can power the unit) 0 °C to +45 °C (battery will be charged if external power available)

\* Industrial temperature range components -40 °C to 85 °C

**LTE Cat 4 / 3G / 2G (Option)**

- LTE FDD B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28
- LTE TDD B38/B39/B40/B41
- UMTS B1/B2/B4/B5/B6/B8/B19
- GSM 850/900/1800/1900MHz
- LTE-FDD: Max 150Mbps (DL), Max 50Mbps (UL)
- LTE-TDD: Max 130Mbps (DL), Max 30Mbps (UL)

**Rugged enclosure**

- Environmental protection to IP67 standard. (full protection against dust and water).
- Dimension: L=149 x W=135 x H=58 mm
- Weight: 385g
- Material: Glass reinforced polyester.
- 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, APIs, libraries, manuals and application notes.

**Options**

See DESI-BOK 100 9001 for product variants and options.

