

owa450

TAKE COMPLETE CONTROL OF REMOTE DATA COLLECTION AND PROCESSING
THE owa450 IS THE PERFECT PLATFORM FOR CONTROLLING AND MONITORING
YOUR INDUSTRIAL MACHINES AND VEHICLES

owa4X Core:

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



Key Features:

- IP40 Enclosure
- CAN (up to 4 interfaces)
- Kline (up to 2 interfaces)
- RS485 (up to 2 interfaces)
- Programmable 3 Axis Accelerometer
- TPM 2.0
- 8 digital output open drain 200mA.
- 2 digital output high side 1A.
- 10 digital input 0 to 50V.
- 3 additional optional digital input.
- 4 analog input, 0 to 5,12V or 0 to 30,72V
- 5V voltage output
- 3 RS232 (TX, RX) interface
- Ethernet 100Mbps
 - RJ45 or M12 connector
- MicroSD
- Micro SIM
- USB 2.0
- Programmable 9 Axis sensor (optional)
Accelerometer/Gyroscope/Magnetometer.

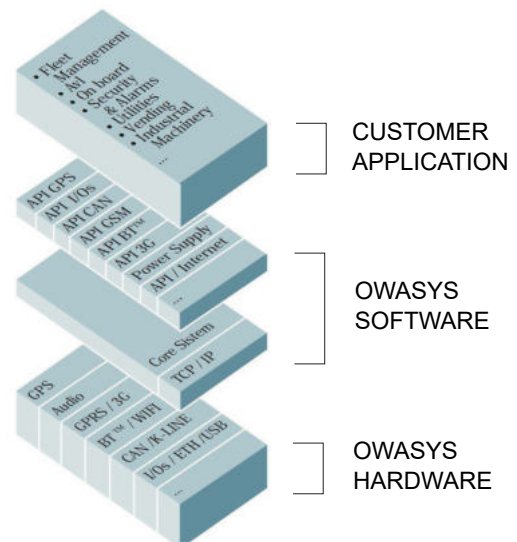
Wireless Interfaces:

- GNSS (GPS + GLONASS)
- CELLULAR COMMUNICATIONS
 - LTE Cat 1 with 3G and 2G fallback
 - Region: Global (Worldwide)
- WiFi 802.11 a/b/g/n/ac
- BT 4.2

Mechanics

- IP40
- 150mm x 94mm x 32mm

Wireless Embedded Computer



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TECHNICAL SPECIFICATIONS

• CPU

- ARM Cortex A8 at 800MHz clock speed.
- Linux Kernel 4.19.94
- Debian 10 File System
- NAND FLASH 1GByte.
- DDR3 512MBytes.
- MicroSD card holder for additional storage.

• GNSS

- Receiver: GPS/GLONASS/GALILEO/QZSS/BeiDou.
- 72-channel continuous tracking receiver.
- SBAS: WAAS, EGNOS, MSAS, GAGAN.
- Update Rate: up to 10Hz.
- Accuracy: 2 meters CEP.
- Signal Acquisition:
 - Cold Start: 26 s.
 - Hot Start: < 1.5 s.
- Signal Reacquisition: < 1 s.
- Active Antenna Power Supply: +3.3V

• LTE Cat 1 with UMTS/HSPA and GSM fallback

- LTE Cat 1 Twelve band, 700 (Bd12 <MFBI Bd17>, Bd28) 800 (Bd18, Bd19, Bd20) 850 (Bd5) / 900 (Bd8) / AWS (Bd4) / 1800 (Bd3) / 1900 (Bd2) / 2100 (Bd1) / 2600 (Bd7)
- UMTS/HSPA+: Seven band, 800 (BdXIX) / 850 (BdV) / 900 (BdVIII) / AWS (BdIV) / 1800 (BdIX) / 1900 (BdII) / 2100MHz (BdI)
- GSM/GPRS/EDGE: Quad band 850/900/1800/1900MHz
- DL 10.2Mbps, UL 5.2Mbps
- GPRS Class B, Class 12 (4&4).
- No standard voice calls support, calls must be done using a SIP client.

• 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 (100mA each).
 - 2 high-side switches to Vin for output (1A each).
 - Short-circuit protection for all outputs.
- Optional 3 extra digital inputs in expansion connector.
- 4 analog inputs:
 - 12 bit resolution, 1% accuracy.
 - Multiplexed with digital I/O pins.
 - 0-5.12V (5mV per bit) or 0-30.72V (30mV per bit) configurable by sw.
- Maxim 1-Wire.
- 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)
- Up to two RS485 port.
- Ethernet 10/100 BaseT.
- Vout 5V power output (500mA 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 48V.
- 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 75 °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

• Rugged enclosure

- Environmental protection to IP40 standard. (protection against dust).
- Dimension: L=150 x W=94 x H=32 mm)
- Weight: 254g
- Material: PC+ABS.
- System connectors: Molex Microfit 24 way 43045-2400
- MicroSIM
- MicroSD
- Ethernet RJ45 or M12

• Development Kit (POP 100 9100#90)

Includes: Developer's board owa450, power supply cables, cables for interfaces, speaker, microphone, antennas, web access to: cross compiler, API, libraries, manuals and application notes.

• Options

See DESI-BOK 100 9108 for product variants and options.



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