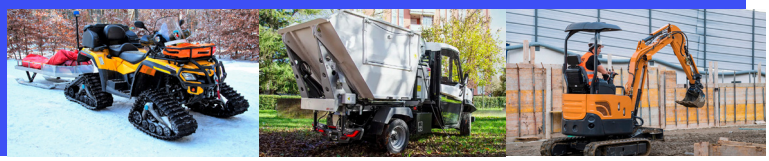
owa347A

Rugged IoT Embedded Linux Platform



owa347A Core:

– ARM Cortex A7 32 bit 792 MHz
– Secure Boot
– 512MB DDR3
– 512MB NAND Flash
– Optional eMMC for additional storage
– Yocto Project Fyle System

Key Features:

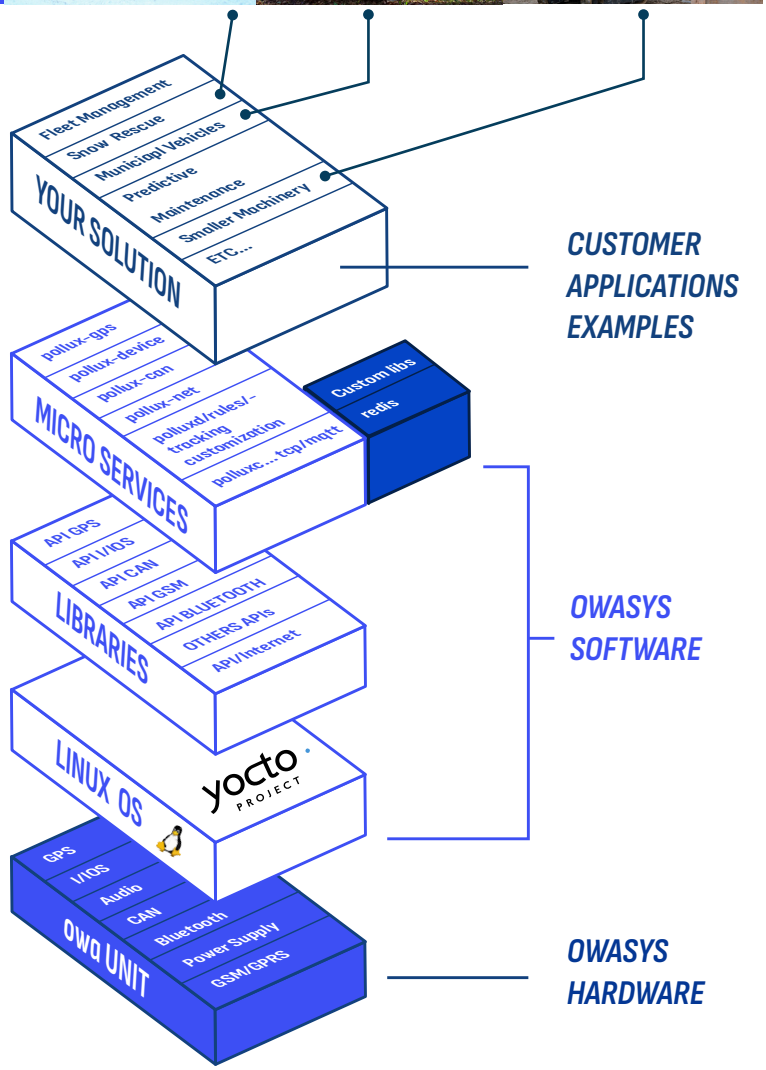
– CAN (up to 3 interfaces)
– TPM 2.0
– USB 2.0 (Operation & Maintenance)
– Programable 3 Axis Accelerometer
– 4 multipurpose DIOs:
  - 4 Digital output open drain 200 mA
  - 4 Digital input 0 to 50 V
  - 3 Analog input 0 to 30 V
– Nano SIM/MFF2
– Low Power Modes
– Battery backup (optional)
– Ethernet 10/100Mbps (M12 D code) (optional)
– IP67 Enclosure

Wireless Interfaces:

– GNSS (GPS+GLONASS+GALILEO+BDS+QZSS)
– Cellular Communications:
  LTE Cat 1 bis 3GPP Release 14
– External Antennas (Fakra)
– Optional WiFi&Bluetooth:
  - WiFi 6- 802.11 a/b/g/n/ac/ax
  – BT 5.4
– Optional Internal Antennas

Mechanics

– IP67
– 118,8mm x 37,5mm x 112,8mm



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TECHNICAL SPECIFICATIONS

CPU

– ARM Cortex A7 at 792MHz clock speed.
– Yocto Project File System*
– DDR3 512MB RAM
– NAND FLASH 512MB
– TPM 2.0
– Optional eMMC for additional storage

** For more information about OS and kernel, visit our Developers' zone or contact your Owasys Account Manager.*

GNSS

– Receiver: GPS/GLONASS/GALILEO/QZSS/BDS
– SBAS: WAAS, EGNOS, MSAS, GAGAN
– Update Rate: up to 10Hz.
– Accuracy: <2.5 meters CEP.
– Signal Acquisition:
Cold Start: 33 s.
Hot Start: < 1 s.
– Sensitivity:
-161dbm tracking,
-156dBm adquisition
– Active Antenna Power Supply: +1.8 ~ 3.3V

LTE Cat 1 bis 3GPP Release 14

– LTE-FDD bands: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28/B66
– LTE-TDD bands: B34/B38/B39/B40/B41
– DL 10M bps, UL 5 Mbps

Interfaces

– Up to 3 CAN bus
  – 2 CAN bus supporting full speed 1Mbps CAN 2.0B
  – 1 CAN FD supporting 5 Mbps
– K-line bus
– Optional Ethernet 10/100Base-TX
– Maxim 1-Wire
– USB Host 2.0
– 1 external RS232 ports. 2 pins:
  - 1 x (TX/RX) CONSOLE
– Up to 1 RS485 port
– Integrated sensors
  - Programmable 3 axis sensor, accelerometer
  - Optional Programmable 6 axis sensor, accelerometer & gyroscope
– Configurable digital input/outputs:
  - 4 INPUTS:
    - 50V max inputs (logic low <1.5V, high >3V)
    - 4 inputs function as wake signals for low power modes
  - All inputs can be used as counters (odometer). 32bit, 3Khz max.
  - 4 open collector outputs (200mA each)
  - Short-circuit protection for all outputs
– 3 analog inputs:
  - 12 bit resolution, 1% accuracy
  - Multiplexed with digital I/O pins
  - 0-30V range
– FAKRA antenna connectors or internal antennas
– 4 LEDs for status indication

** Availability of features depends on models*

Power Supply:

– Nominal range of 9V to 48V.
– Typical consumption at 24V:

OFF	TBD
Standby	TBD
RUN	TBD
RUN + GSM + GPS	TBD

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 +73 °C*
Safety Purposes Operating Temperature Range with Li-ion Battery	-40 °C to +53 °C (from external power supply) -20 °C to +53 °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*

*** (-40 °C to -20 °C internally limited with battery protecton during discharge)*

Enclosure

– Environmental protection to IP67 standard.
– Dimension: L=112,8 x W=118,8 x H=37,5 mm.
– Weight: TBD
– Material: PBT GF
– System connectors: AT13M-12 [12 way]
– NanoSIM
– Optional Ethernet M12

Development Kit

Includes: Developer's board owa347, power supply cables, cables for interfaces, antennas, web access to developers area: cross compiler, API, libraries, manuals and application notes.