owa3Xplatform

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.
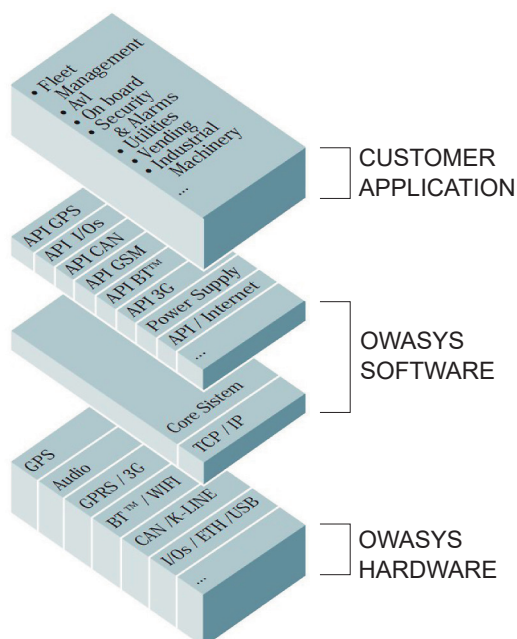
owa3X PLATFORM INTEGRATES:
– GSM/GPRS (optional 3G)
– GPS
– EMBEDDED IP FUNCTIONALITY
– WIDE VARIETY OF INTERFACES
  • ANALOG AND DIGITAL I/O
  • 3 RS232 & 2 RS485
  • 3 CAN, 2 K-Line & iButton
  • AUDIO
  • ETHERNET, MICROSD, etc.
  • USB

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

owasys
Advanced Wireless Devices

owa3X platform

TECHNICAL SPECIFICATIONS

• 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 protecion 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/DCD/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 staturs 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

Safety Purposes Operating Temperature Range without Li-ion Battery	**-40 °C to 80 °C**
Safety Purposes Operating Temperature Range with Li-ion Battery	**-40 °C to 55 °C** /from external power supply **-20 °C to 55 °C** /from Li-ion battery (-40ºC to -20ºC internally limited with battery protection) **0 °C to 45 °C** /Li-ion battery charge (internally controlled)

*Operating (Industrial temp range components)   -40 °C to 85 °C

• 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.

• CPU
– ARM9 at 400MHz clock speed.
– Linux OS 2.6.36.
– FLASH 64Mbyte.
– RAM 32Mbyte / 64Mbyte.
– 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

• 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.

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