

# owa21I-ZB

UTILITIES, DOMOTICS AND SECURITY APPLICATIONS THROUGH ZIGBEE COMPATIBLE NETWORK



A NEW AND POWERFULL CONCEPT, A UNIQUE AND COMPLETE SOLUTION FOR UTILITIES; WATER, GAS, ELECTRICITY, DOMOTICS AND SECURITY APPLICATIONS. ALL THE DEVICES YOU NEED TO HAVE YOUR ZIGBEE COMPATIBLE NETWORK AVAILABLE.

## owa21- ZB Coordinator: owa21I – GPRS- ETH-ZB

The coordinator sends information to the server via GPRS with future upgrade to UMTS. It routes the information to other type of networks via Ethernet, WiFi or GSM/GPRS network.

- Zigbee compatible Coordinator.
- Same architecture as the owa21 I -ETH including APIs for the management and configuration of the Zigbee compatible network.
- 1 Serial Port RS232.
- Optional Ethernet port.

## owa21I- ZB Router: owa21I – ZB-Router

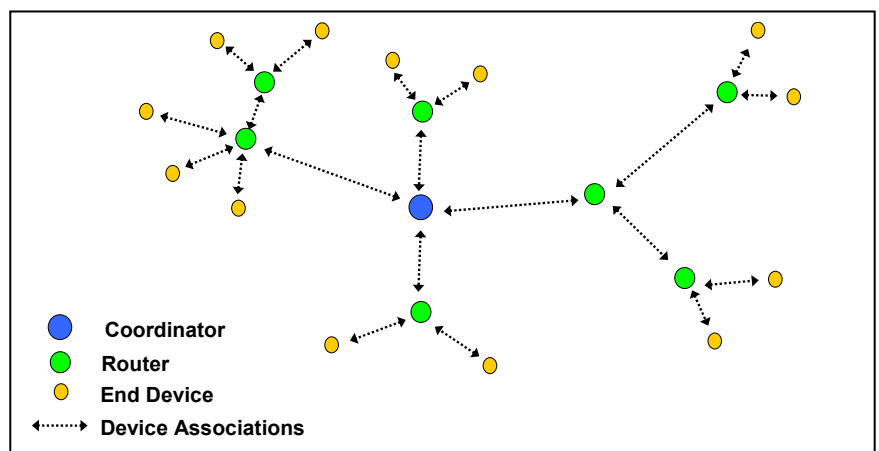
The router sends the information from the sensor to the coordinator.

- Zigbee compatible Router.
- Closed device providing routing for range extension in the Zigbee compatible network.
- Powered by DC.
- Optional Battery back up.

## Owa21I-ZB End Device: The sensor

- Zigbee compatible End Device
- Very low power consumption. Up to 12 years autonomy (Depending on Customers usage)
- Pulses counter interface
- 2 analog inputs, 2 digital inputs, 2 digital outputs, 1 movement sensor, 1 temperature sensor.

## *Mesh Networking!*



# TECHNICAL SPECIFICATIONS

## Coordinator: owa21I – GPRS- ETH-ZB

- GPRS Class B, Class 10 (4+2), Quad Band, 850MHz, 900MHz, 1800MHz and 1900MHz.
- TCP/IP stack for transparent Internet Connection.
- Ethernet 10baseT (10 Mbps).
- Software upgradeable over the air (controlled by the customer application)
- 2.4GHz Zigbee compatible Transceiver

## GENERAL SPECIFICATIONS

- Power Supply:
  - Nominal Voltage Range: 6 to 36 Vdc.
- Interfaces:
  - Power Supply.
  - 4 Digital Inputs, 3 Digital Outputs, 1 Power Output.
  - Power ON/OFF input signal.
  - 2 Analog inputs.
  - RS-232 serial port.
  - RS-485 port (RS-232 serial port available as an option).
  - 1 Odometer(1) input.
  - GSM antenna connector.
  - Zigbee Antenna connector

(1) Multiplexed with one of the digital inputs.

- Approvals
  - CE Marking.
- Power Consumption-Typical Average @ 12V

Zero Power Mode	4 uA
Low power mode	2 mA
Sleep(2)	6 mA
Run(3)	125 mA

(2) CPU in deep sleep.

(3) GSM transmitting at maximum power.

- External LEDs for status information.
- RTC with dedicated battery, 1 month autonomy at 25°C.
- Temperature Ranges:

Operating (Fully GSM compliant)	-30°C to +75°C
Operating with GSM OFF	40°C to +85°C
Storage	40°C to +85°C
With internal battery back up accessory. (4)	20°C to +60°C

(4) Operating from Battery.

## FIRMWARE SPECIFICATIONS

- 32 bits RISC ARM7 core up to 60 MIPS (Dhrystone 2.1) at 70 Mhz.
- Linux OS (Kernel v.2.4.18).
- TCP/IP Stack
- Memory:
  - 8 Mbyte FLASH
  - 16 Mbyte RAM
- Application Programming Interface for:
  - Owa21 control.
  - Power management.
  - GSM/GPRS.
  - Internet connection.
  - Controlling all the interfaces: I/Os.
- Multiplexed communication supported with GSM-GPRS modem to allow **GSM events and SMS during GPRS connection.**

## GSM/GPRS SPECIFICATIONS

- GSM850 + EGSM900 + DCS1800 + PCS1900.
- Power Output Class 4 (2W) for GSM850/EGSM900.
- Power Output Class 1 (1W) for DCS1800/PCS1900.
- GPRS Class B, Class 10 (4+2).
- Audio and CSD Data calls.
- SMS (MT/MO).

## MECHANICAL SPECIFICATIONS

- Dimension (mm): 106 (W) x 27 (H) x 55 (L).
- Material: Aluminium anodized.
- Weight ← 200gr (plain device with no accessories).
- Connectors:
  - GSM: SMA
  - Zigbee: SMA
  - AMP Micro Mate-N lock 14 pins.
  - RS-232 DB-9 (Female).
  - Molex Mini-fit 6 pins.
  - SIM card holder.

## DEVELOPMENT KIT

A development kit is available, including:

- owa21- ZB Coordinator: owa21I – GPRS- ETH-ZB (1 unit)
- owa21I- ZB Router: owa21I – ZB-Router ( 2 units)
- owa21I-ZB End Device: The sensor (4 units)
- Developer's board.
- Power supply cables.
- Cables for interfaces.
- CD with: Cross compiler, API's library, manuals, and applications notes.
- Wall-plug to supply the owa21X and Development Board.