

## Ailonet 100 product description

### 1 Product overview

Ailonet is an intelligent access point and a unique application platform that provides three major mobile IP interfaces:Bluetooth, 802.11b and GSM/GPRS. Ailonet's local connectivity is provided with Bluetooth, 802.11b, Ethernet and/or RS-232 serial. Remote mobile connectivity is made possible with GSM/GPRS.

### 2 Architecture

The following picture shows the different blocks the system is consisting of.

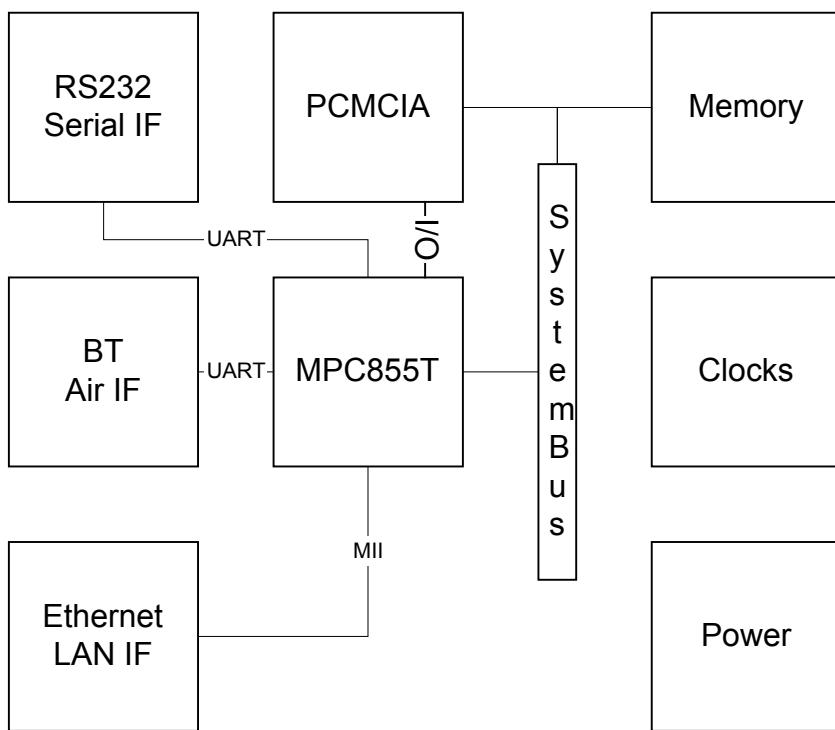


Figure 1: Architecture Overview

### 3 External interfaces

Ailonet has these four external interfaces:

1. Ethernet LAN IF
2. PCMCIA IF
3. BT Air IF
4. RS-232 Serial IF

### **3.1 Ethernet LAN IF**

This block provides the system a 10/100 MB LAN connection. The ethernet functionality itself is integrated into the processor, only transceiver, transformer and a RJ-45 connector are required to implement this interface. The transceiver is connected to the processor via MII interface.

A 25MHz crystal is connected to the transceiver from which the transceiver produces the MII interface clocks.

### **3.2 PCMCIA IF**

This block consists of a PCMCIA card holder for a 16-bit PC card. Ailonet supports Orinoco Silver/Gold 802.11b cards.

### **3.3 Bluetooth Air IF**

Ailonet's Bluetooth interface is Bluetooth 1.1 Class 3 (0 dbm) compliant using Ericsson Point-to- Multipoint Bluetooth technology. The interface has an antenna (PIFA) which is intergrated into the PCB.

### **3.4 RS232 Serial IF**

The RS232 serial interface consists of an UART, transceiver and a RJ-45 connector. This block provides the system true RS-232 port with modem control signals. All devices communicating with up to 115 kbps are supported, such as X10 home automation systems, PSTN modems, GSM modems, GPRS modems , PC with RS-232 connection.

## **4 Internal blocks**

### **4.1 Processor**

Ailonet CPU is an embedded Motorola 855T PowerPC communication processor running with CPU clock 80 MHz and bus clock 40 MHz.

### **4.2 Memory**

Ailonet includes 64 MB of RAM (possible to downgrade to 32 MB) and 8 MB of Flash (possible to upgrade to 16MB).

### **4.3 Power**

Power input is 12 VDC and the nominal power consumption without a PC card is 2.5 W. Ailonet includes integrated UPS for power outage situations, capable of keeping Ailonet online for 10 seconds+shutdown time.

The internal voltages are: +3V3, +5V and 12 V .