

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.

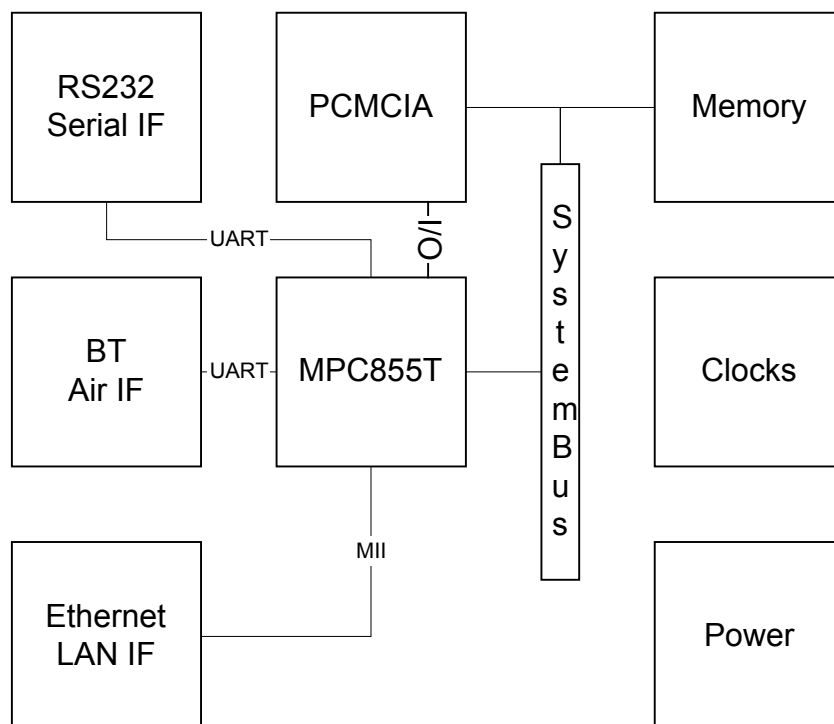


Figure 1: Architecture Overview

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 integrated 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 .