QUICK START GUIDE

Thank you for purchasing the OpenRD-Client. The OpenRD-Client uses a Marvell® 88F6281 SoC, which is based on an embedded 1.2 GHz Sheeva™ CPU, equipped with 256 KB L2 cache, 512 MB FLASH and 512 MB DRAM.

The board supports Linux 2.6.22.18 and UBIFS file system and features 2 Gigabit Ethernet ports, 7 USB 2.0 ports, SATA, eSATA, SD Card, UART, SDIO, SMBus, TDM (Optional header), Mini USB and JTAG port for debugging. In addition, the OpenRD-Client extends its capabilities with a 2D-GPU (Graphics Processing Unit) with a VGA Connector and Audio In/Out ports.

Shipping Contents

1. OpenRD- Client Board
2. Power Adapter
3. Cables – USB, Cat5/6
4. CD/DVD (Contains documentation and Installation files)
    - Quick Start Guide
    - User Guide
    - Product Brief
    - openrd-devkit-v1.0

Before You Begin

Before you start, please make sure you have the following items

- OpenRD-Client board, Power Adapter, USB Cable, CAT 5/6 Cable, CD/DVD
- One VGA display/LCD monitor

Installation Steps

1. Please connect cables (Cat 5/6 cable, USB Mini B, Serial – RS232, RS485, VGA Cable etc.) to the board as per your application requirements
2. Connect supplied power adapter to the board
3. Apply power to the board

Successful Power On

Following is a screen snapshot of a successful power on, provided that you have connected the monitor to the board.

If the serial connection is done as per the steps mentioned in user guide, then you should see following screen shot of POST test immediately after power on.

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  ** MARVELL BOARD: OpenRD-Client LE

U-Boot 1.1.4 (Apr 24 2009 - 13:56:42) Marvell version: 3.4.16

U-Boot code: 00600000 -> 0067FFF0  BSS: -> 006CEE80

Soc: 88F6281 A0 (DDR2)
CPU running @ 1200Mhz L2 running @ 400Mhz
SysClock = 400Mhz , TClock = 200Mhz

DRAM CAS Latency = 5 tRP = 5 tRAS = 18 tRCD=6
DRAM CS[0] base 0x00000000   size 256MB
DRAM CS[1] base 0x10000000   size 256MB
DRAM Total size 512MB  16bit width
Flash:  0 kB
Addresses 8M - 0M are saved for the U-Boot usage.
Mem malloc Initialization (8M - 7M): Done
NAND:512 MB

Checking for BootROM Routine Errors

No. of BootROM routine retries: 8
NAND: Nand ECC error

Running POST...

        DDR2 data bus test                                      PASSED

        DDR2 address bus test                                   PASSED

        UART 1 internal loopback test on baudrate   9600 PASSED
        UART 1 internal loopback test on baudrate  19200 PASSED
        UART 1 internal loopback test on baudrate 115200 PASSED

        Device: 0, Size: 512 MB, Page Size: 2 KB, Block Size: 128 KB
        NAND detection test                                     PASSED

        Bad Block: 15820000
        Bad Block: 1b760000
        Bad Block: 1dcc0000
        NAND bad-block detection test                           PASSED

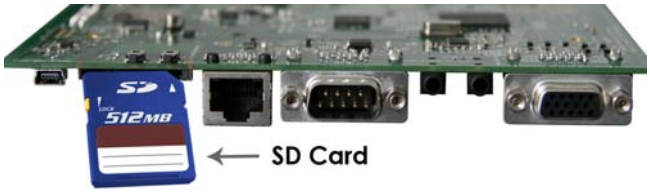
        RTC test                                                PASSED

6/6 tests PASSED
POST completed
```

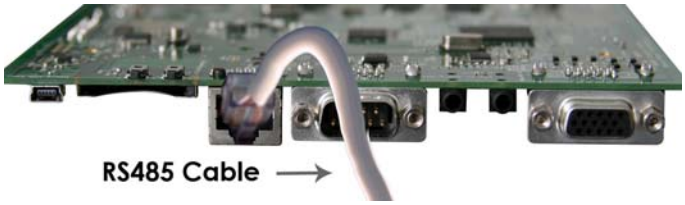
Introduction to IO Ports of OpenRD-Client Board

USB Mini B Connection: Connect mini B end of the 'USB mini B to Type A' cable to the USB mini B connector of the OpenRD-Client

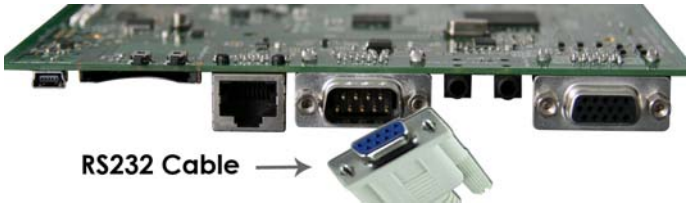
SD Card Connection: Insert the SD Card in the slot. It is possible to run applications from SD Card. It can also be used as local storage of data.



RS485 Connection: Provides RS485 connectivity. Connect RJ45 Cable as shown in picture



RS232 Connection: This connector is UART1 Port, which provides Serial Connectivity. Connect NULL modem Female RS232 cable as shown in figure.

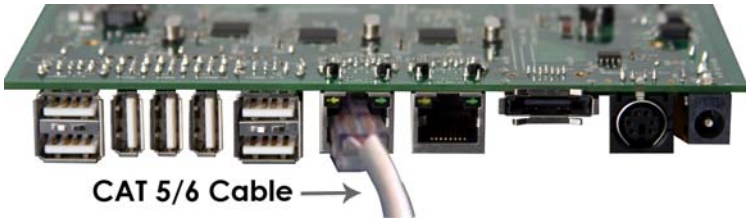


Audio In/Out: Connect Audio Input and Audio Output cable as shown in picture

VGA Connection: Connect one end of Male VGA cable to the connector as shown in picture and another end to VGA display/monitor.

USB Connection: Connect the USB device to the USB port, located on the front panel of the OpenRD-Client board. It is possible to run applications from USB storage device. It can also be used as local storage of data.

Ethernet Connection: Connect CAT5/CAT6 cable to GbE0/GbE1 port of the board.



eSATA Connection: Connect eSATA cable to the eSATA connector

SMBus Connection: Connect SMBus Cable to the SMBus Connector.

Power Connection: Connect the power supply to the DC power input connector located in the front panel of the OpenRD-Client board and connect the other end to your local power outlet.

Additional Information

Please refer to OpenRD-Client User Guide
http://www.marvell.com/ & http://www.einfochips.com/marvell