



EI Labs India Pvt. Ltd.

Embedded Devices



Intelligent Network Adapter

Product Technical Information

Doc Name : Intelligent Network Adapter version 1.0

Dated: March 2008

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NOTE

The LinSeed series of SoftChips is a tight system integration of third party semiconductor devices. EILABS India has tried to provide accurate information to the best of its knowledge. However, no responsibility is assumed for its use and such information is provided “as is” without any warranty of any kind, implied or otherwise. The device specification is subject to change as per the continuous improvement policy of EILABS India.

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1. Overview

LinSeedV2 is a state of the art, 60 pin Integrated SoftChip and is the second in a series of LinSeed modules. The SoftChip concept encapsulates the hardware completely from a user perspective and provides them with a very high level software API for configuration, control and data processing. The LinSeedV2 is a 32 bit processing module with standard Linux API for the user. The hardware details are required only to the extent of the external interfaces on the user board for the purposes of further system development. Traditional SoC programming information like internal registers, peripherals etc are not required for the system designer of LinSeedV2. All peripherals are accessed through appropriate Linux drivers. This fundamentally is a big value proposition of the offering. Please refer the LinSeedV2 product technical information for more information.

The Session Initiation Protocol(SIP) is a signalling protocol used for establishing sessions in an IP network. A session could be a simple two-way telephone call or it could be a collaborative multi-media conference session.

The SIP adaptor will emulate a modem on the user side and provide a serial synchronous interface. On the network side the device will provide an Ethernet interface for driving an IP network using the SIP protocol. adapter will therefore, incorporate a bridging function between the serial synchronous interface and the Ethernet interface. The serial device will communicate with the SIP adaptor using the AT command set.

SIP is a request-response protocol that closely resembles two other Internet protocols, HTTP and SMTP (the protocols that power the world wide web and email); consequently, SIP sits comfortably alongside Internet applications. Using SIP, telephony becomes another web application and integrates easily into other Internet services. SIP is a simple toolkit that service providers can use to build converged voice and multimedia services.

The Intelligent Network Adapter is built around LinSeed V2. This adapter supports the following: peripherals.

- | | | |
|----|--|---|
| a. | Ethernet port at 100 Mbits/sec | 1 |
| b. | Half function UART Port(With Flow Control) | 1 |
| c. | Debug UART Port | 1 |
| d. | UART Port (Without flow control) | 1 |

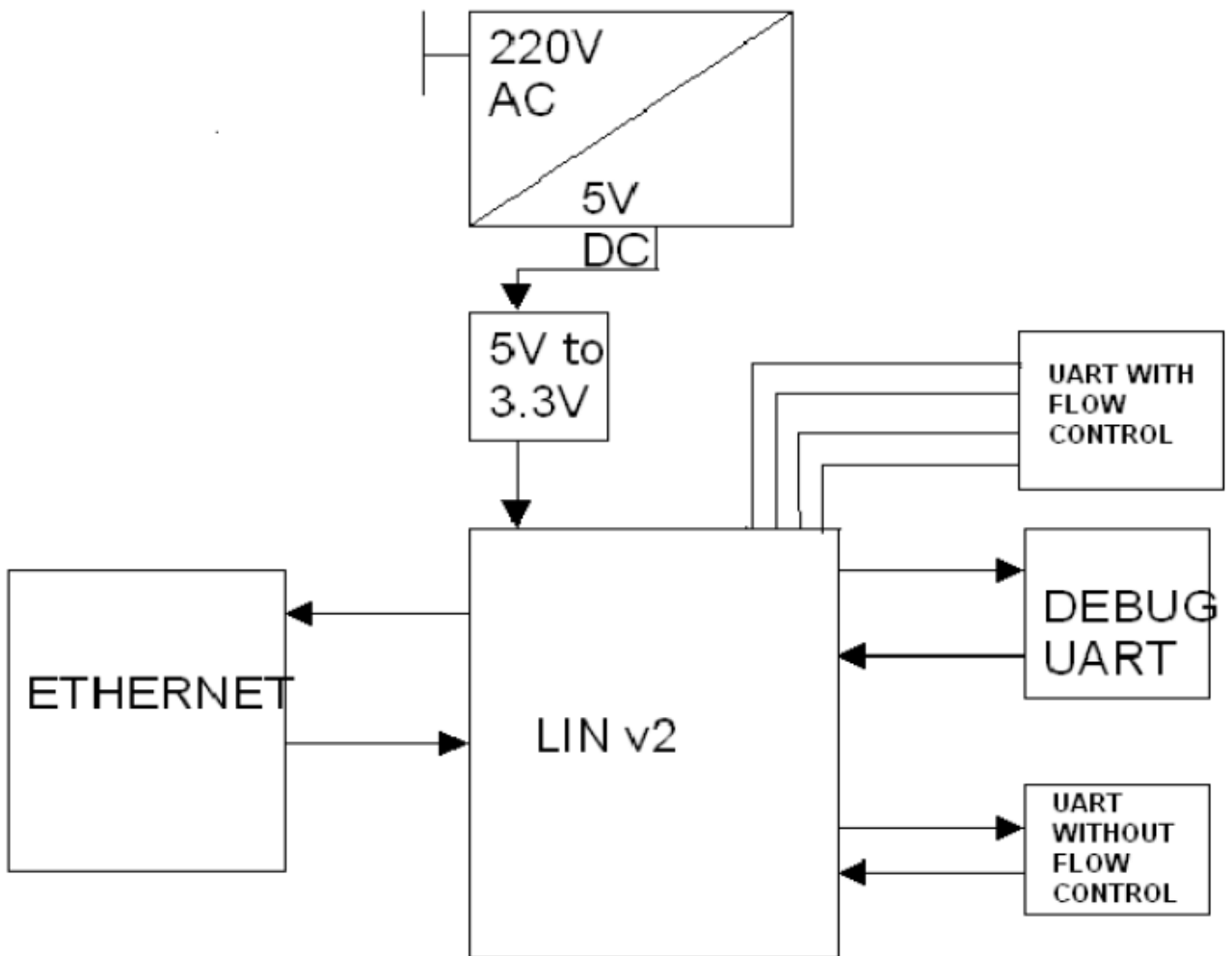


Fig.1 Block Diagram of Intelligent Network Adapter.

2. Functional Connector Pin Out

J100 –Power Connector.

1	VCC_%	5V Supply
2	Gnd	Ground

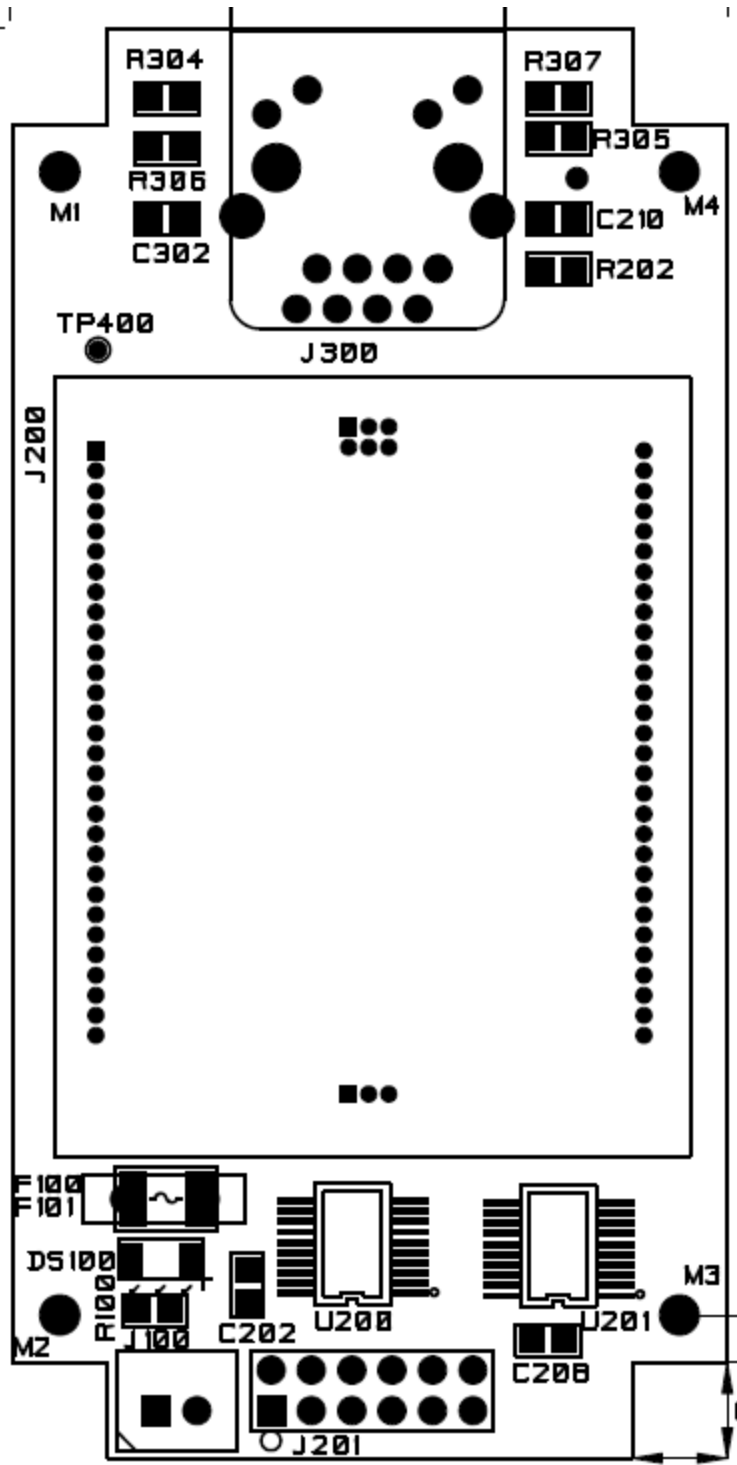
J201- Serial Port Connector Pinout

1	DBGU TXD	Debug Transmit Data
3	DBGU RXD	Debug Receive Data
2	HF TX0	Transmit Data with Flow Control
4	HF RX0	Receive Data with Flow Control
6	RTS	RTS for HF TX0/HF RX0
8	CTS	CTS for HF TX0/HF RX0
7	FF TDX	Transmit data w/o flow control
9	FF RDX	Receive data w/o flow control
5	GND	Ground
10	GND	Ground
11	GND	Ground
12	GND	Ground

J300 --Ethernet Interface:

1	TD+	Ethernet TD+
2	TD-	Ethernet TD-
3	RD+	Ethernet RD+
4	VCC33	3.3V Supply
5	VCC33	3.3V Supply
6	RD-	Ethernet RD-
7	NC	No Connection
8	Earth	Earth
9	Supply for LED	Supply for Link LED
10	LED Link	Link LED
11	LED Act	Activity LED
12	Supply for LED	Supply for Activity LED
13	Earth	Earth
14	Earth	Earth

3. Placement and Layout.



Placement and Layout

4. Environmental

Operating Temperature: **0 Degrees Celsius to + 50 Degrees Celsius**

5. Schematic

[Available on purchase of the board.](#)