**Data Sheet**

LPC-COM-Board

Contents

1   Scope

This data sheet is for the LPC-COM-Board which can be used together with the LPC-Stick debugger system. It contains architecture- and device-specific information and all technical data of the system.

The LPC-Stick is a specific debugger system being able to emulate the integrated LPC2468 microcontroller with on-chip debug support. It provides a USB communication port for connecting the LPC-Stick to a PC.

For operation, the overall system requires the LPC-Stick.

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2   Connections and Controls

The LPC-COM-Board has the connectors and pads as shown in the following figure:
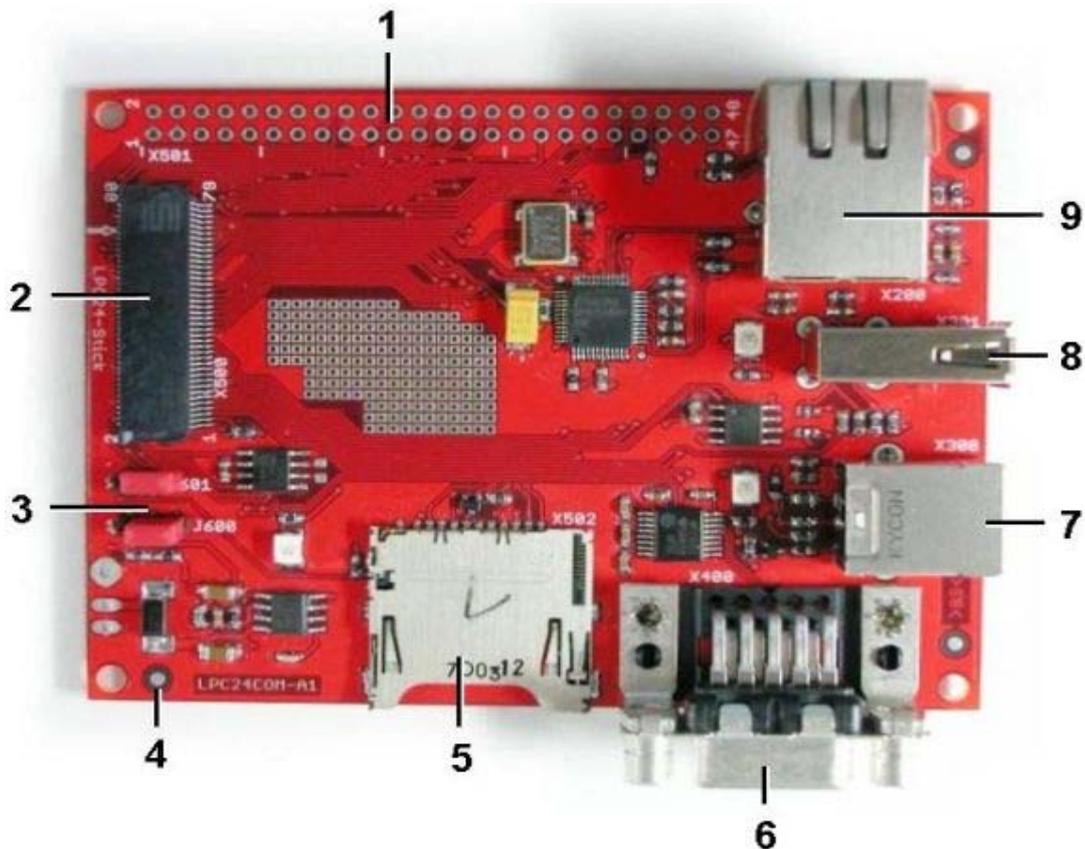
1	IO-Connector pads (X501) (also see table below)
2	Stick-IO-Connector (X500)
3	Pads for - external power connection +5V/GND (JP500) - external power enable (JP601) - external power enable via USB-B/VBUS (JP600)
4	External power connector (JP501)
5	MiniSD card (X502)
6	RS232 Connector (X200)
7	USB-A connector (X300)
8	USB-B connector (X3001)
9	LAN Connector (X200)

The pads X501 can be used to supply an external stabilized power +5V to the board and the stick when used in standalone operation without the PC host. This requires that the jumper JP601 is set to enable the internal +3.3V power supply.

Instead using the pads X501 the external power can be supplied via the USB connector X300. For this the jumpers X601 and X600 has to be set. Direct external power can be applied to pads JP501

The following table shows the allowed alternatives:

Mode	Operation	Power source	JP600	JP601
PC host powered via LPC-Stick	LPC-Stick View, HiTOP5	LPC-Stick	open	open
external power via X501	stand alone	+5V DC	1-2	closed
external power via X300	stand alone	USB VBUS	2-3	closed
external power via JP501	stand alone	+9V DC	open	closed

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3   Interfaces

Pin	Port	Pin	Port
1	GND	2	CAN BM
3	GND	4	CAN BP
5	+9V	6	P2.11
7	+9V	8	P2.12
9	+5V	10	P2.13
11	+5V	12	P2.9
13	+3.3V	14	P2.8
15	+3.3V	16	P2.5
17	GND	18	P2.4
19	GND	20	P2.3
21	P0.26	22	P2.2
23	P0.25	24	P2.1
25	P0.24	26	P2.0
27	P0.23	28	P0.5
29	P0.20	30	P0.4
31	P0.19	32	P0.22
33	P0.18	34	P0.21
35	P0.17	36	P1.12
37	P0.16	38	P1.11
39	P0.15	40	P1.7
41	P1.20	42	P1.21
43	GND	44	Power_enable *)
45	GND	46	Reset *)
46	n.c	48	n.c

*)   Reset and Power_enable have a 47 kOhm pull-up to +3.3V and can be set by jumpers: 43-44 and 45-46

Note that CAN_BM and CAN_BP are the CAN bus signals without termination.

4 Connecting the Board to the LPC-Stick

The LPC-COM-Board is connected to the LPC-Stick via an 80-pin PCB connector. See the following schematics and figure:
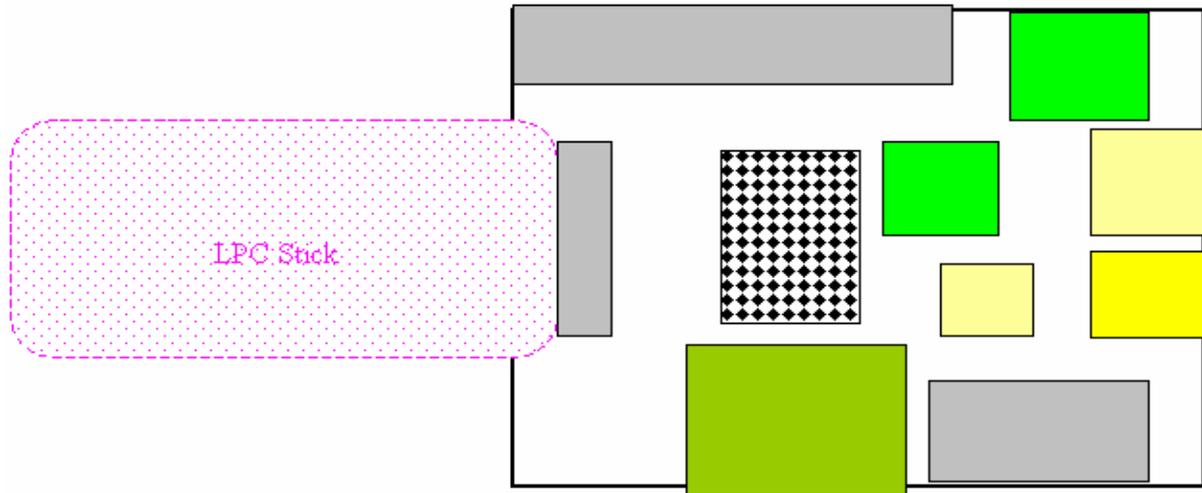
For the connection of the LPC-Stick to the PC you can use the included USB extension cable.

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Caution

Connect the board and the stick only when not powered from the PC or external and in the orientation as shown in the figure above.

Please avoid any short-cuts by metallic parts touching the LPC-Stick or the LPC-COM-Board.

Do not supply external power to the LPC-COM-Board via the pads or the USB-B connector while the stick is connected to the PC. This may cause serious damage to your PC.

Modifications of the LPC-COM-Board or supplying of external power via the LPC-COM-Board is at your own risk.

Hitex is not reliable for any damages caused by wrong handling.

5 Technical Data

The features of the LPC-COM-Board are summarized as follows:

- 2x40-pin 0.635mm pitch PCB extension Stick-I/O-connector for the LPC-Stick

- 2x24-pin IO connector pads with reset and IRQ capability

- USB-B connector with ESD protection IP4220CZ6 (NXP)

- USB-A connector with Power-Controller LM3526M-L (National)

- RS232 driver chip MAX3232ECDB (TI)

- Ethernet Phy with RMII interface DP83848CVV (National)

- CAN physical driver chip TJA1050T (NXP)

- USB-powered via stick or from external USB-B or IO- connector with jumper selection

- Dimensions: appr. 70 x 95mm

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