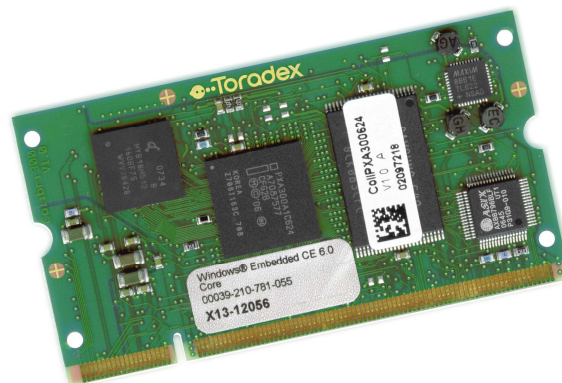


Colibri XScale® PXA300

Colibri XScale® PXA310

Datasheet





Revision history

Date	Doc. Rev.	Colibri PXA300/310 Version	Changes
22-Oct-07	Rev. 1.0	V1.1	Initial Release
24-Dec-07	Rev. 1.1	V1.1	Changed some pin names (MD to DATA, MA to ADDRESS)
23-Apr-08	Rev. 1.2	V1.1	Operation currents added
31-Dec-08	Rev. 1.3	V1.1 / V1.2 and higher	Added note 11 for SODIMM pins 88, 90, 92 Moved CPLD description to separate document (Colibri PXA CPLD Description) Do not connect SODIMM pin 184 Colibri PXA310 description added
26-Feb-09	Rev. 1.4	V1.1 / V1.2 and higher	Added PXA310 Temperature Range
03-Jun-09	Rev. 1.5	V1.1 / V1.2 and higher	Added Tolerance value for PCB outline. Added slew rate and some current consumption values Added new Marvell datasheet link (without NDA)
07-Jul-09	Rev. 1.6	V1.1 / V1.2 and higher	Adjusted temperature range for PXA300 (0-70°C)
24-Sep-09	Rev. 1.7	V1.1 / V1.2 and higher	Added temperature range description. Added note 17 and 18 for SODIMM pin assignment (SODIMM Pin 88,90,92)
22-Jan-10	Rev. 1.8	V1.1 / V1.2 and higher	GPIO97 and GPIO98 have pull-up and pull-down description (Note 19 SODIMM list)
10-Jun-10	Rev. 1.9	V1.1 / V1.2 and higher	Added description for AVDD_AUDIO and AVSS_AUDIO Added chap. 4.8
23-Nov-11	Rev. 2.0	V1.1 / V1.2 and higher	Changed Disclaimer Clarified nBATT_FAULT description
12-Jun-12	Rev. 2.1	V1.1 / V1.2 and higher	Added restriction about PXA310 SODIMM pin 47 (GPIO7). Do not use this pin with alternate function GPIO.



Contents

1. Introduction	4
1.1 Hardware.....	4
1.2 Software	4
1.3 Features.....	4
1.4 Reference Documents.....	5
2. Architecture Overview	6
2.1 Block Diagram	6
3. Colibri PXA300/310 Connectors	7
3.1 Physical Locations.....	7
3.2 Assignment	7
4. Signal description	15
4.1 nBATT_FAULT (formerly BATT_SENSE)	15
4.2 External Chip Selects	15
4.3 MEM Ctrl Signals.....	15
4.4 EXT_WAKEUP0	15
4.5 GPIO	15
4.6 VCC_BATT.....	16
4.7 AVDD_AUDIO, AVSS_AUDIO	16
4.8 Analog Inputs AD[3:0].....	16
5. Compatibility to Colibri PXAxxx and Trizeps III/IV	17
5.1 Alternate Function Mapping	17
5.2 USB Channels	17
6. Technical Specifications	18
6.1 Electrical Characteristics	18
6.2 Mechanical Characteristics	18
6.3 Temperature Range.....	19
6.4 RoHS Compliance	19



1. Introduction

This datasheet describes both, the Colibri PXA300 and the Colibri PXA310 module. All general descriptions are for both modules unless there is a special note.

1.1 Hardware

Colibri XScale® PXA300/310 is a SODIMM sized computer module based on the new Marvell XScale® PXA300 or PXA310 processor. Colibri PXA300 runs at up to 208 MHz and Colibri PXA310 runs up to 624MHz. The module delivers state of the art technology, targeting low power systems that still require high CPU performance.

It also offers all the interfaces needed in a modern embedded device: beside the internal Flash memory, SDCard is also available. The module provides glueless connectivity to passive and active LCDs with resolutions of up to 1024x768. Colibri PXA300/310 can directly connect to a CMOS/CCD camera sensor.

In addition Colibri PXA300/310 offers a 100 MBit Ethernet as well as USB host and USB device functionality.

The Colibri PXA310 module also provides audio and touch-screen functionality.

The 16 bit wide demultiplexed system bus (DFI) is available for custom extensions, such as special interfaces for high bandwidth applications.

1.2 Software

The module is shipped with a preinstalled WinCE image with WinCE Core license. Other OS like Embedded Linux and QNX are available from third-party.

1.2.1 Windows CE

Colibri PXA300/310 modules are shipped with a valid Windows CE 6.0 core license. Toradex provides a WinCE5.0 image and a WinCE6.0.

All WinCE images contain drivers for the most common interfaces and are easily customizable by registry settings to adapt to specific hardware.

1.3 Features

CPU:

Marvell PXA300 208 MHz

Marvell PXA310 624 MHz

Memory:

Colibri PXA300:

64 MByte of DDR SDRAM (16 Bit)

128 MByte of NAND FLASH (8 Bit)

Colibri PXA310:

128 MByte of DDR SDRAM (16 Bit)

512 MByte of NAND FLASH (8 Bit)

Interfaces:

16 Bit demultiplexed DFI bus

LCD (up to 1024x768)

CMOS/CCD image sensor interface

I2C



SPI
2x SDCard (SDIO, MMC)
Up to 120 GPIOs
100 MBit Ethernet
One-Wire
Keypad
Consumer Infrared
USIM
USB host / device

Colibri PXA300 only:

- USB 2.0 device (requires external UTMI chip)

Colibri PXA310 only:

- Built-In USB 2.0 device transceiver
- Audio in-/output; Mic-in
- 4 Analog input
- 4-Wire resistive touch-screen interface

Supported operating systems:

WinCE 5.0
WinCE 6.0

1.4 Reference Documents

For detailed technical information about the Colibri PXA300/310 components, please refer to the documents listed below.

Marvell PXA3xx Processor Based on Intel XScale Technology

The datasheets and other technical documents about the PXA3xx processor are available on the Marvell web page.

<http://www.marvell.com> (http://www.marvell.com/products/cellular/application/PXA3xx_series.jsp)

AX88796B Ethernet Controller

<http://www.asix.com.tw>

Xilinx XC2C64A CPLD

<http://www.xilinx.com/>

Power Management IC

Colibri PXA300 up to V1.1: Maxim MAX866x

<http://www.maxim-ic.com/>

Colibri PXA300/310 V1.2 and higher: National LP397

<http://www.national.com/analog>

1.4.1 Colibri PXA310 only:

Wolfson WM9715L Audio-Codec

<http://www.wolfsonmicro.com/>

SMSC ULPI Transceiver USB3329

<http://www.smsc.com/>

Fairchild USB Transceiver USB1T1105

<http://www.fairchildsemi.com/>



2. Architecture Overview

2.1 Block Diagram

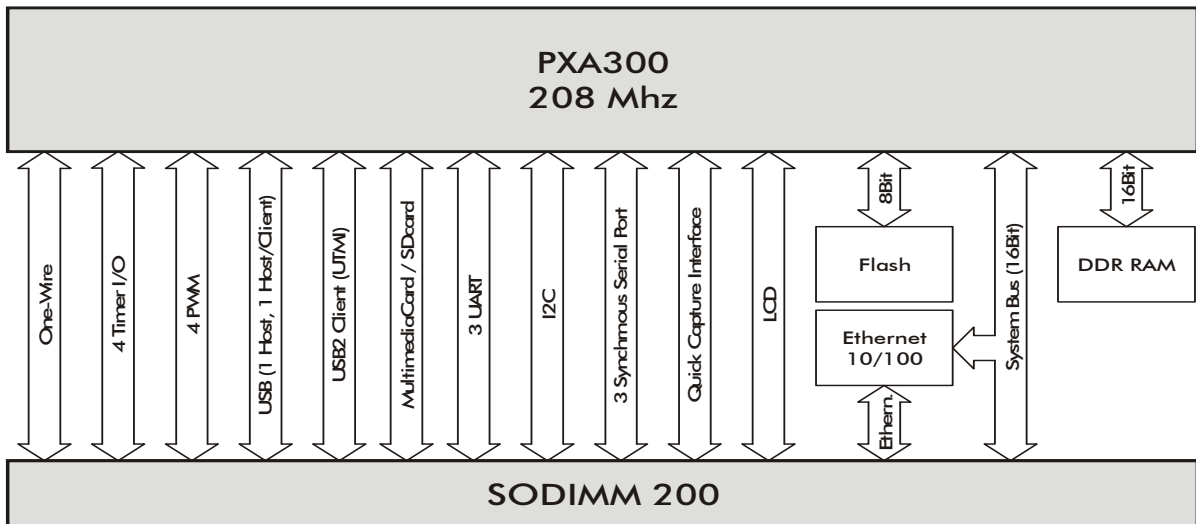


Figure 1: Colibri PXA300 block diagram

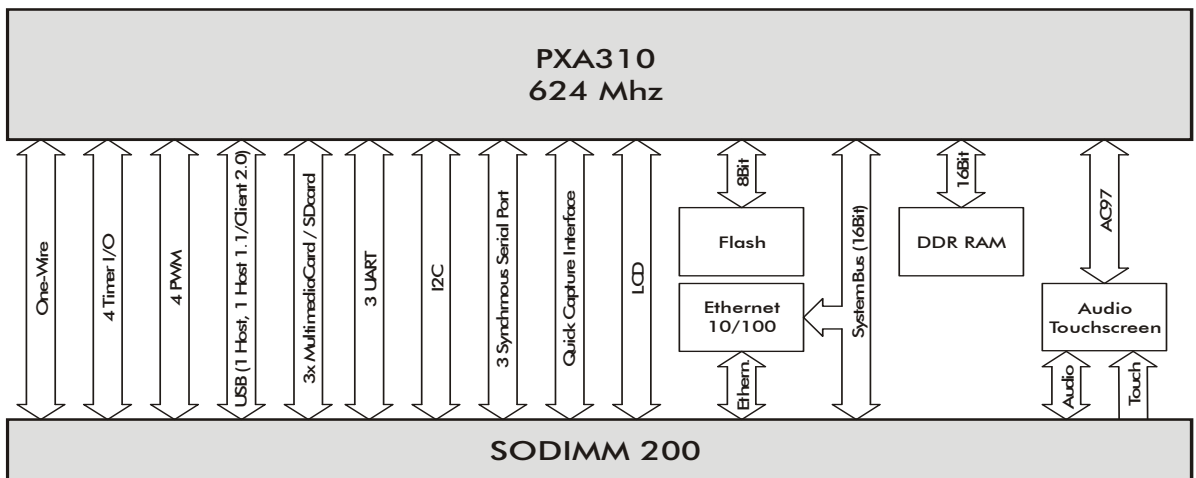


Figure 2: Colibri PXA300 block diagram

Figure 1 and 2 show the Colibri PXA300/310 interfaces. However, some PXA300/310 pins are mapped to multiple interfaces. Therefore not all functions can be used simultaneously.

Colibri PXA300/310 features an 8 bit interface to on board NAND FLASH and a 16 bit interface to the Ethernet controller.

Wireless Intel (Marvell) Speedstep® Technology, which adjusts the CPU core voltage dynamically according to the CPU load, and four low-power modes both enable excellent MIPS/mW performance for the Colibri PXA300/310 module.



3. Colibri PXA300/310 Connectors

3.1 Physical Locations

Along with the main 200 Pin SODIMM connector the Colibri PXA300/310 is equipped with two additional FCC connectors. The position of the connectors is shown in the figure below.

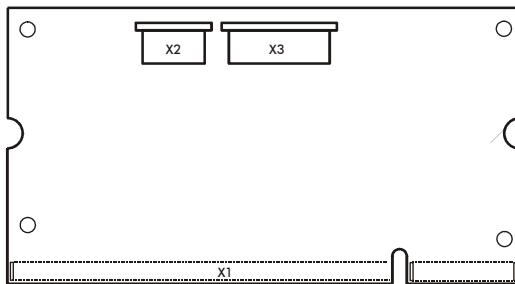


Figure 3: Location of Colibri PXA300/310 Connectors

3.2 Assignment

Some of the following pins are multiplexed, that means there is more than one PXA300/310 pin connected to one SODIMM or FFC pin. For example GPIO101 and GPIO115 are both assigned to SODIMM pin 25. Take care to tristate (set to input) the unused GPIO of the two multiplexed GPIO's when you are writing your software.

If there is no special note, the signals on the SODIMM connector are power supply pins or directly connected to the PXA3xx processor. Refer to the PXA3xx datasheets for more details about electrical specifications of these pins.

Caution: Pay attention to the notes of the individual signals!

3.2.1 SODIMM 200 (X1) Top Side (Toradex Logo)

Pin#	Compatible functions	Colibri PXA300 only	Colibri PXA310 only
1	SYS_EN ²		MIC_IN ¹
3		Not connected	VSS_AUDIO
5		Not connected	LINEIN_L ¹
7		Not connected	LINEIN_R ¹
9		Not connected	VSS_AUDIO
11		Not connected	VSS_AUDIO
13		Not connected	HEADPHONE_GND ¹
15		Not connected	HEADPHONE_L ¹
17		Not connected	HEADPHONE_R ¹
19	GPIO110 ³		
21	GPIO8		
23	GPIO103		
25	GPIO101 / GPIO115 ³		
27	GPIO90 / GPIO106		
29	GPIO105		
31	GPIO102		
33	GPIO99		



Pin#	Compatible functions	Colibri PXA300 only	Colibri PXA310 only
35	GPIO100		
37	GPIO104 / GPIO119		
39	GND		
41	GND		
43	GPIO13 / EXT_WAKEUP0 ⁶		
45	GPIO127		
47		GPIO7	GPIO7 ²⁰
49	GPIO4		
51	GPIO5		
53	GPIO6		
55		GPIO80	GPIO10_2 ⁵
57	GPIO70		
59	GPIO20 / CIF_DD7 (GPIO46) ⁴		
61	GPIO71		
63		GPIO31 ³	GPIO9_2 ⁵
65	GPIO48 / GPIO124		
67	GPIO45		
69		GPIO77	GPIO8_2 ⁵
71	GPIO39		
73		GPIO78	PWR_GPIO2 ⁷
75	CIF_MCLK (GPIO49) ⁴	GPIO79	
77		GPIO81	Not Connected
79	GPIO43		
81	CIF_VSYNC (GPIO52) ⁴ / GPIO83		
83	GND		
85	GPIO47 / GPIO125		
87	nRESET_OUT		
89	DF_ALE_nWE		
91	DF_CLE_nOE		
93	GPIO12 (RDnWR) ^{8,9}		
95	GPIO0		
97	GPIO44		
99	DF_ALE_nWE (GPIO95) ¹⁰		
101	GPIO41		
103	GPIO42		
105	GPIO16 / EXT_nCS0 ^{3,9}		
107	GPIO15 / EXT_nCS1 ⁹		
109	GND		
111	ADDRESS[00] ¹⁴		
113	ADDRESS[01] ¹⁴		
115	ADDRESS[02] ¹⁴		
117	ADDRESS[03] ¹⁴		



Pin#	Compatible functions	Colibri PXA300 only	Colibri PXA310 only
119	ADDRESS[04] ¹⁴		
121	ADDRESS[05] ¹⁴		
123	ADDRESS[06] ¹⁴		
125	ADDRESS[07] ¹⁴		
127	GPIO11 ⁸		
129	GPIO0_2 ⁵		
131	GPIO1_2 ⁵		
133	GPIO96		
135	GPIO97 ¹⁹		
137	GPIO98 ¹⁹		
139	USBH1_P ¹¹		
141	USBH1_N ¹¹		
143	USBC_H_P ¹²		
145	USBC_H_N ¹²		
147	GND		
149	DATA[00]		
151	DATA[01]		
153	DATA[02]		
155	DATA[03]		
157	DATA[04]		
159	DATA[05]		
161	DATA[06]		
163	DATA[07]		
165	DATA[08]		
167	DATA[09]		
169	DATA[10]		
171	DATA[11]		
173	DATA[12]		
175	DATA[13]		
177	DATA[14]		
179	DATA[15]		
181	GND		
183	ETH_LINK_ACT ¹³		
185	nETH_SPEED100 ¹³		
187	ETH_TXO- ¹³		
189	ETH_TXO+ ¹³		
191	GND		
193	ETH_RXI- ¹³		
195	ETH_RXI+ ¹³		
197	GND		
199	GND		



3.2.2 SODIMM 200 (X1) Bottom Side

Pin#	Compatible functions	Colibri PXA300 only	Colibri PXA310 only
2		GPIO23	AD3 ¹
4		GPIO24	AD2 ¹
6		GPIO25	AD1 ¹
8		Not connected	AD0 ¹
10		Not connected	AVDD_AUDIO
12		Not connected	AVDD_AUDIO
14		GPIO27	TSPX ¹
16		GPIO28	TSMX ¹
18		GPIO29	TSPY ¹
20		GPIO107	TSMY ¹
22	nGPIO_RESET		
24	nBATT_FAULT (BATT_SENSE) ¹⁵		
26	nRESET_EXT		
28	GPIO19		
30	GPIO17		
32	GPIO111		
34	GPIO114		
36	GPIO112		
38	GPIO113		
40	VCC_BATT ¹⁶		
42	+3V3		
44	GPIO75		
46	GPIO61		
48	GPIO63		
50	GPIO65		
52	GPIO66		
54	GPIO67		
56	GPIO74		
58	GPIO57		
60	GPIO56		
62	GPIO62		
64	GPIO69		
66	GPIO68		
68	GPIO73		
70	GPIO55		
72	GPIO59		
74	GPIO64		
76	GPIO54		
78	GPIO58		
80	GPIO60		
82	GPIO72		



Pin#	Compatible functions	Colibri PXA300 only	Colibri PXA310 only
84	+3V3		
86	GPIO86 ³		
88	GPIO85 ^{17,18}		
90	GPIO87 ¹⁷		
92	GPIO88 ^{17,18}		
94	CIF_HSYNC (GPIO51) ⁴		
96	CIF_PCLK (GPIO50) ⁴		
98	GPIO40		
100	GPIO122		
102	GPIO12 (RDnWR) ^{8,9}		
104	GPIO11 ⁸		
106	GPIO89 / EXT_nCS2 ⁹		
108	+3V3		
110	ADDRESS[08] ¹⁴		
112	ADDRESS[09] ¹⁴		
114	ADDRESS[10] ¹⁴		
116	ADDRESS[11] ¹⁴		
118	GPIO116 ³		
120	GPIO117 ³		
122	GPIO118 ³		
124	GPIO120 ³		
126	nBE0		
128	nBE1		
130	nDF_RE_OE		
132	nDF_WE		
134		GPIO38	Not connected
136	GPIO2_2 ^{3,5}		
138	GPIO3_2 ^{3,5}		
140	GPIO121 ³		
142	GPIO123 ³		
144	GPIO4_2 ^{3,5}		
146	GPIO5_2 ^{3,5}		
148	+3V3		
150		GPIO82	Not connected
152	GPIO18 / GPIO126		
154	GPIO53 / GPIO91		
156	GPIO92		
158	GPIO93		
160	GPIO94		
162		GPIO32	Not connected
164		GPIO33	Not connected
166		GPIO34	Not connected



Pin#	Compatible functions	Colibri PXA300 only	Colibri PXA310 only
168		GPIO35	Not connected
170		GPIO36	Not connected
172		GPIO37	Not connected
174	GPIO10		
176	GPIO9		
178	GPIO6_2 ^{3,5}		
180		GPIO30	Not connected
182	+3V3		
184	Do not connect		
186	nLUA		
188	nLLA		
190	GPIO14		
192	GPIO3		
194	GPIO22		
196	GPIO21		
198	+3V3		
200	+3V3		

3.2.3 Additional GPIOs (X3)

Connector: FCC 18 pins, 0.5mm pitch, bottom contact

Pin Nr.	Compatible Function	Colibri PXA300 only	Colibri PXA310 only
1	GPIO86 ³		
2	GPIO3_2 ^{3,5}		
3	GPIO110 ³		
4	GPIO6_2 ^{3,5}		
5	GPIO109		
6	GPIO2_2 ^{3,5}		
7		GPIO31 ³	Do not Connect
8	GPIO108		
9	GPIO5_2 ^{3,5}		
10	GPIO118 ³		
11	GPIO120 ³		
12	GPIO116 ³		
13	GPIO117 ³		
14	GPIO121 ³		
15	GPIO123 ³		
16	GPIO4_2 ^{3,5}		
17	GPIO101 / GPIO115 ³		
18	GPIO16 / EXT_nCS0 ^{3,9}		



3.2.4 JTAG (X2)

Connector: FCC 8 pins, 0.5mm pitch, bottom contact

Pin Nr.	Signal name
1	+3V3
2	GND
3	TMS
4	nTRST
5	TCK
6	TDO
7	TDI
8	nReset_OUT

Notes: (see next page)



Notes:

1. For electrical specifications please refer to the Wolfson WM9715L datasheet. See also chap. 4.8 for more details about analog inputs AD[3:0].
2. The SYS_EN signal is directly connected to the PXA on the Colibri PXA300 module. On the Colibri PXA310 board this signal is multiplexed with the MIC_IN signal. Have a look at our Wiki for details. <http://wiki.toradex.com>
3. These pins are connected to an SODIMM pin and to an extension connector pin. Be careful by using these pins when using the extension connector.
4. These pins don't have GPIO as alternate function 0. See chapter 4.5 GPIO for more details.
5. These pins are second instance GPIOs. See chapter 4.5 GPIO for more details.
6. See chapter 4.4 EXT_WAKEUP0 for more details.
7. PWR_GPIO2 on the Colibri PXA310 is the GPIO2 of the National PMIC LP3972. It's not recommended to use this pin on Colibri PXA310 or designs that have to be compatible with the Colibri PXA310. For more details please refer to the National LP3972 datasheet.
8. These GPIOs are connected to two SODIMM pins each. Be careful by using these pins.
9. See *Colibri PXA CPLD Description* for details about how to enable EXT_nCSx and RDnWR.
10. This pin is always new (DF_ALE_nWE). It's not possible to use this pin as GPIO.
11. For electrical specifications please refer to the Fairchild USB1T1105 datasheet.
12. For electrical specifications please refer to the SMSC USB3329 datasheet.
13. For electrical specifications please refer to the Asix AX88796B datasheet.
14. For electrical specifications please refer to the Xilinx XC2C64A datasheet.
15. See chapter 4.1 nBATT_FAULT for more details.
16. See chapter 4.6 VCC_BATT for more details.
17. These pins are used when updating the CPLD on the PXA (SODIMM pin 88, 90, 92). Do not drive these pins until the CPLD update is done. The CPLD update has to be started manually (Toradex Bootloader V3.3 and higher). You can use these pins when not performing a CPLD update.
18. These pins have an internal pull-up of about 10kOhm.
19. GPIO97 has an internal pull-down of about 75kOhm.
GPIO98 has an internal pull-up of about 1MOhm.
20. Do not use GPIO7 on Colibri PXA310 (SODIMM pin 47) with alternate function GPIO. Reason: GPIO7_2 is already used as GPIO on the module. Using GPIO7 as GPIO would lead to wrong behavior of the GPIO7_2 on the module. SODIMM pin 47 can be used with any alternate function other than GPIO.



4. Signal description

The following signals are Colibri PXA300/310 specific signals. For descriptions about the other signals see the corresponding datasheets mentioned in chapter 1.4 *Reference Documents*.

4.1 nBATT_FAULT (formerly BATT_SENSE)

The nBATT_FAULT signal can be used control the nBATT_FAULT signal of the PXA3xx.

4.1.1 For Colibri PXA300 up to V 1.1

nBATT_FAULT is connected to the LBF and LBR input of the Maxim 866x PMIC and to a 1MOhm pull-up resistor to VCC on the Colibri module.

The nBatt_Fault signal of the PXA3xx gets asserted if the voltage applied to the nBATT_FAULT input pin drops below 1.2V. It's deasserted if the voltage exceeds 1.25V.

4.1.2 For Colibri PXA300/PXA310 V1.2 and higher

The nBATT_FAULT signal is connected to the PXA3xx's nBATT_FAULT pin through a diode. You can always pull down this signal externally to assert the nBATT_FAULT signal of the PXA.

This signal is also connected to the power management IC LP3972 on the Colibri and is asserted when VCC_BATT is present and the +3.3V supply is below 2.8V. It de-asserts when the +3.3V supply is above 3.0V (Default PMIC values).

4.2 External Chip Selects

See Colibri PXA CPLD Description for more details.

4.3 MEM Ctrl Signals

See Colibri PXA CPLD Description for more details.

4.4 EXT_WAKEUP0

The EXT_WAKEUP0 signal on SODIMM pin 43 is the main wakeup source of the PXA300/310. For more information about this pin see the PXA3xx developer's manual.

4.5 GPIO

Some of the SODIMM pins have more than one GPIO assigned. If you would like to use one of them, then tristate the other one (set to GPIO input). For example if you would like to use an alternate function of the GPIO101 you have to set the GPIO115 to GPIO input.

The GPIO46 and GPIO49-52 don't have GPIO as alternate function 0.

The alternate function GPIO is as mentioned below:

GPIO46 (AltFn 1); GPIO49 (AltFn 3); GPIO50 (AltFn 2); GPIO51 (AltFn 3); GPIO52 (AltFn 3)

On the Colibri PXA300 the GPIO0 to GPIO6 have a second instance (GPIO0_2 to GPIO6_2).

On the Colibri PXA310 the GPIO0 to GPIO10 have a second instance (GPIO0_2 to GPIO10_2).

They are assigned to different balls on the PXA. You can use one of them as GPIO and the other one should have a different alternate function than GPIO. The GPIO registers are the same for both (e.g. GPIO0 and GPIO_2 share the same bit in the GPIO level register GPLR0[0]). Be careful when using both as GPIO: When choosing GPIO input, then the value in the GPIO level register is GPIOx OR GPIOx_2. When choosing output, both GPIO pins will provide the level from the level register.

Do not use GPIO7 on Colibri PXA310 (SODIMM pin 47) with alternate function GPIO. Reason: GPIO7_2 is already used as GPIO on the module. Using GPIO7 as GPIO would lead to wrong



behavior of the GPIO7_2 on the module. SODIMM pin 47 can be used with any alternate function other than GPIO.

4.6 VCC_BATT

This power domain can be used to power the VCC_BATT power domain of the PXA processor. For general designs it is recommended to connect this pin to normal +3.3V power supply. This pin must be powered in order to boot the Colibri successfully.

4.7 AVDD_AUDIO, AVSS_AUDIO

These pins are available on PXA310 modules only. These pins must be connected to 3.3V and GND even if audio and touch-screen functionality aren't used. You can connect this to normal 3.3V and GND or to filtered 3.3V and GND.

4.8 Analog Inputs AD[3:0]

Analog input maximum voltage on Colibri PXA310 (Colibri PXA300 doesn't have analog inputs):

- AD[3, 1, 0]: 0V to 3.3V

- AD[2]: 0V to 5V

We recommend using 3.3V as maximum voltage on all AD inputs to ensure the compatibility to future Colibri modules.



5. Compatibility to Colibri PXAxxx and Trizeps III/IV

Colibri PXA300/310 modules can be used as a replacement for the Colibri PXA270/Colibri PXA320 (Colibri PXAxxx) or Keith & Koep's Trizeps III / IV family of modules. This chapter points out the differences for a smooth transition.

There is a Migration Guide available on www.toradex.com which shows the compatible signals of all Colibri modules.

5.1 Alternate Function Mapping

Colibri PXA300/310 and PXAxxx/Trizeps share a compatible pin mapping regarding all pins as GPIOs. However, the mapping GPIOxx to SODIMM pin yy is not identical.

This fact leads to the following consequences:

- As long as Colibri PXA300/310 pins are used only as general purpose IOs (GPIOs), Colibri PXAxxx and Trizeps III/IV are hardware compatible. Slight Software adaptations are necessary in most projects to transition between Colibri PXAxxx and Trizeps III / IV to remap the GPIO pins.
- Many of the PXA300 pins are multiplexed so they can be configured for use as a general purpose I/O signal (GPIOxx) or as one of several alternate functions (for example as SDIO interface signals). Not all of these alternate functions are available on the same Colibri PXAxxx and Trizeps III / IV pins.

5.2 USB Channels

The Colibri PXA300/310 module provides one USB host and one shared USB (selectable host/client) channel as differential pair.

The Colibri PXA300/310 module can be configured to map the USB shared channel to SODIMM pins 28 and 30. Contact Toradex for further information.



6. Technical Specifications

6.1 Electrical Characteristics

Symbol	Description	Min	Typ	Max	Unit
VCC	Power supply operating voltage	3.0	3.3	3.6	V
IDD_208A ¹	Operating at 208 MHz, Ethernet off, Display off, Idle		106		mA
IDD_208B ¹	Operating at 208 MHz, Ethernet off, Display on, Idle		127		mA
IDD_208C ¹	Operating at 208 MHz, Ethernet off, Display on, 100% CPU		153		mA
IDD_624A ²	Operating at 624 MHz, Ethernet off, Display off, Idle		209		mA
IDD_624B ²	Operating at 624 MHz, Ethernet off, Display on, Idle		233		mA
IDD_624C ²	Operating at 624 MHz, Ethernet off, Display on, 100% CPU		357		mA
IDD_ETHL	Ethernet on		+106		mA
IDD_ETHNL	Ethernet on, no link (probing with default timings)		+81		mA
IDD_SUSP	In Suspend-Mode		1.5		mA
VIH	Digital input high voltage	VCC*0.8		VCC+0.3	V
VIL	Digital input low voltage	-0.3		VCC*0.2	V
VCC_SR	VCC Slew Rate	2		12	kV/s

Notes:

1. PXA300 @ 208MHz
2. PXA310 @ 624MHz

6.2 Mechanical Characteristics

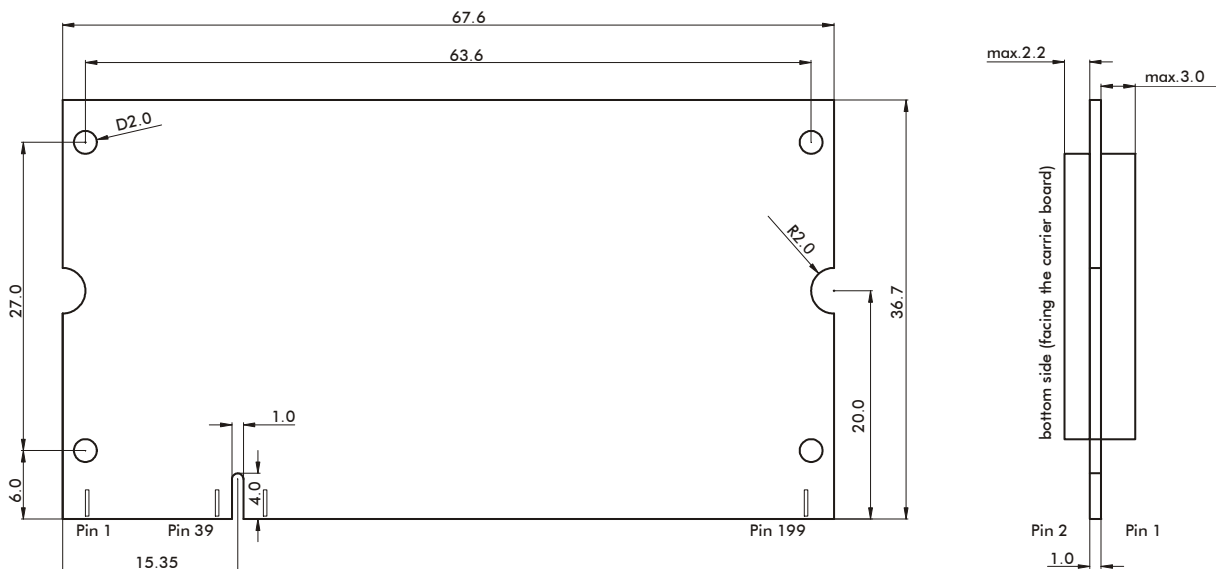


Figure 4: Mechanical dimensions of the Colibri PXA300/310 module
Tolerance for all measures: +/- 0.1 mm



6.2.1 Sockets for the Colibri PXA300/310 Module

The Colibri PXA300/310 module fits into a regular 2.5V (DDR1) SODIMM200 memory socket. A choice of SODIMM200 socket manufacturers is given below:

FCI:	http://www.fciconnect.com
Foxconn:	http://www.foxconn.com
JAE:	http://www.jae.com
Tyco Electronics (AMP):	http://www.tycoelectronics.com

6.3 Temperature Range

Module	Description	Min	Typ	Max	Unit
Colibri PXA 300	Operating temperature range	0		70 ¹	°C
Colibri PXA 310	Operating temperature range	-20		85 ¹	°C

Notes:

1. The maximum temperature is limited by the case temperature of the PXA processor which must not exceed 85°C. For passive thermal solutions this may result in an ambient temperature lower than the stated value. For further details please refer to Marvell's EMTS datasheet.

6.4 RoHS Compliance

Colibri PXA300/310 modules comply with the European Union's Directive 2002/95/EC: "Restrictions of Hazardous Substances".



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