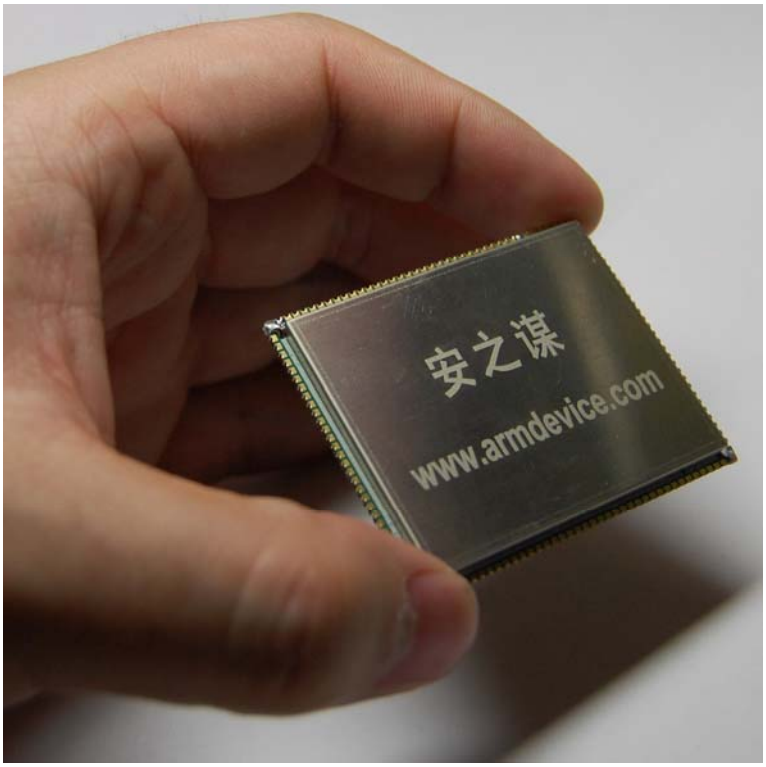
AZM335X Hardware Manual



ARMDEVICE (BEIJING) CO.,LTD.

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PREFACE

Key Words:

Name	Description
PWR	Supply voltage
AP	Analog Power
A	Analog
DGND	GND
GNDA_ADC	Analog GND
REF	Reference voltage
VBUS	USB voltage
Input	Digital input
Output	Digital output
I/O	Digital input/ output
BAT	Batter power supply
VRTC	RTC power supply
PMIC	Power manager IC
AIN	Analog input

AZM335x is a single-side-component SMD module.

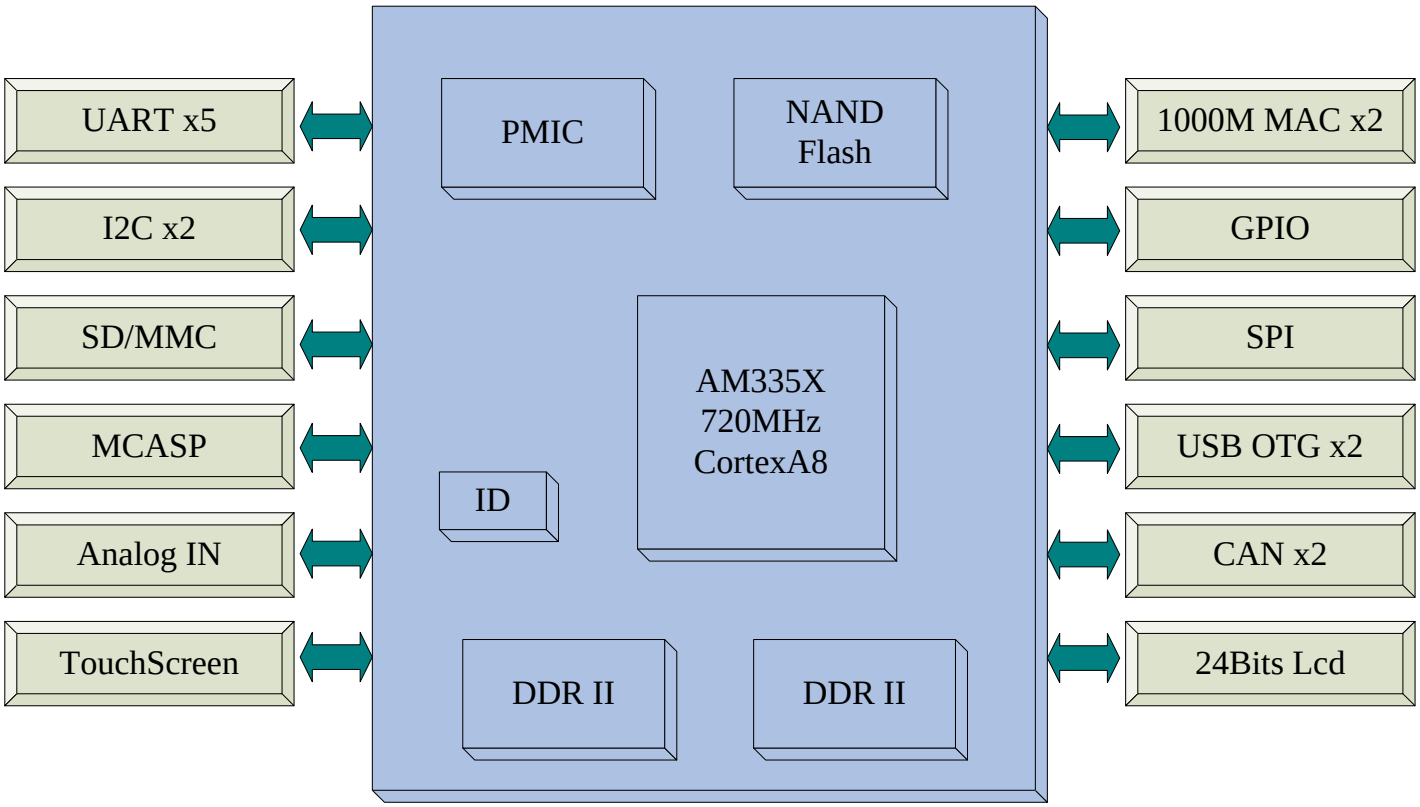
1. Features of AZM335X Core board

- TI AM335X Processor,Cortex A8 Core,up to 720MHz.
- Module Size：52mm X 42mm.
- Multi-layer PCB and one side component.
- PAD for EMI Shielding Case.
- The board-on-board PCB using plated half-holes.
- Industrial temperature: -40℃-80℃
- 128MB DDR2 Memory, Up to 512MB;
- 256MB SLC NAND FLASH, Up to 2GB;
- Onboard Unique ID, For anti copy;
- Default boot mode is micro sd/nand flash/uart;
- AZM335X full featured pin-out;
- Support AC-DC power or chargeable battery power;
- Power supply: AC-DC 5V/500ma
  Battery:2.7-5.5V/500ma
- Power consumer: Typical 2W, Maximum 3W.
  (VDD=+5.0V,128MB DDRII,256MB NAND FLASH,720Mhz CPU)

2. Peripherals of AZM335X Core board

- **2 Channels of CAN**
- **5 UARTs**
- **2 USB OTG**
- **1 MICRO SD/MMC**
- **2 MCASP**
- **2 I2C**
- **1 SPI**
- **2 10/100/1000 Ethernet with RGMII pins**
- **24bits LCD interface**
- **Power management support battery monitoring**
- **7 anlog input include 4 lines resistive touchscreen**
- **Interruptible GPIO**

3. Block Diagram And Top-Bottom View



4. AZM335X BOOT Mode And SD Recovery

The Default boot mode is:

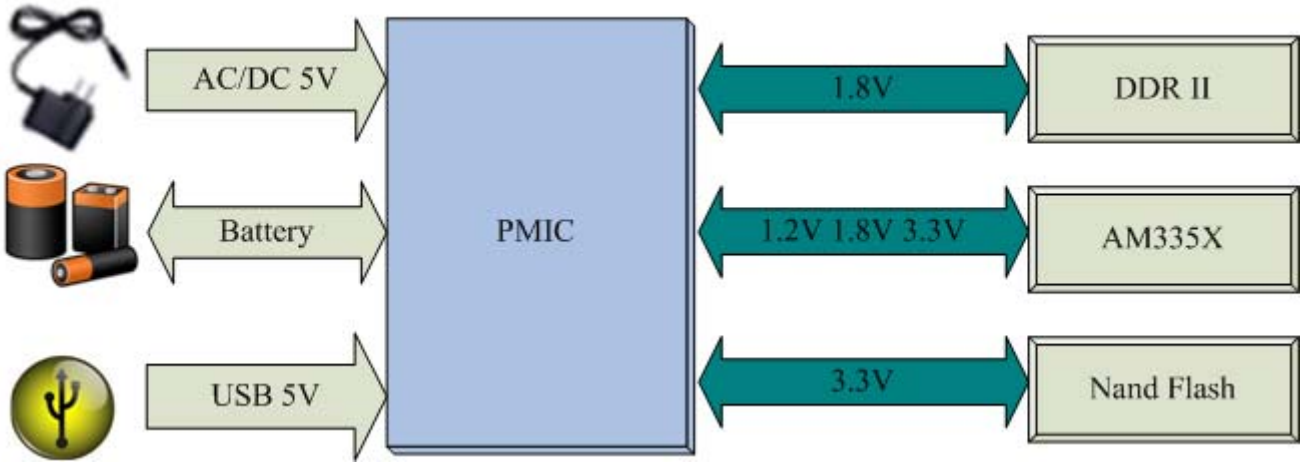
NAND-SD-UART

The SD boot has the second priority after NAND boot.

But there is a pin for skip the NAND boot. So it's simple for entering SD recovery mode.

5. Power Management of AZM335X AZM335X Core board

The AZM335X use a PMIC IC for more capabilities of power management.

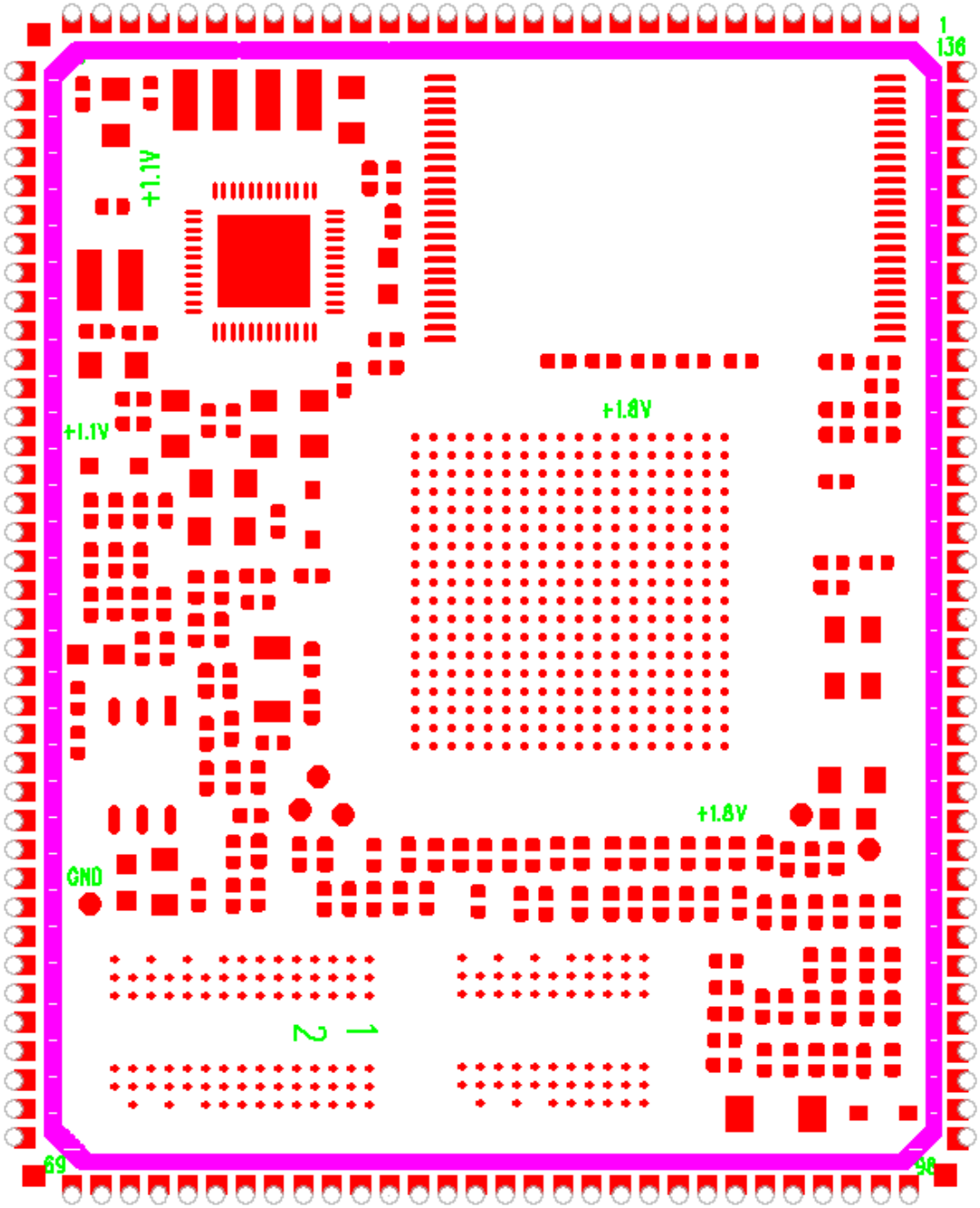


It supports battery supply, USB supply and AC/DC supply.

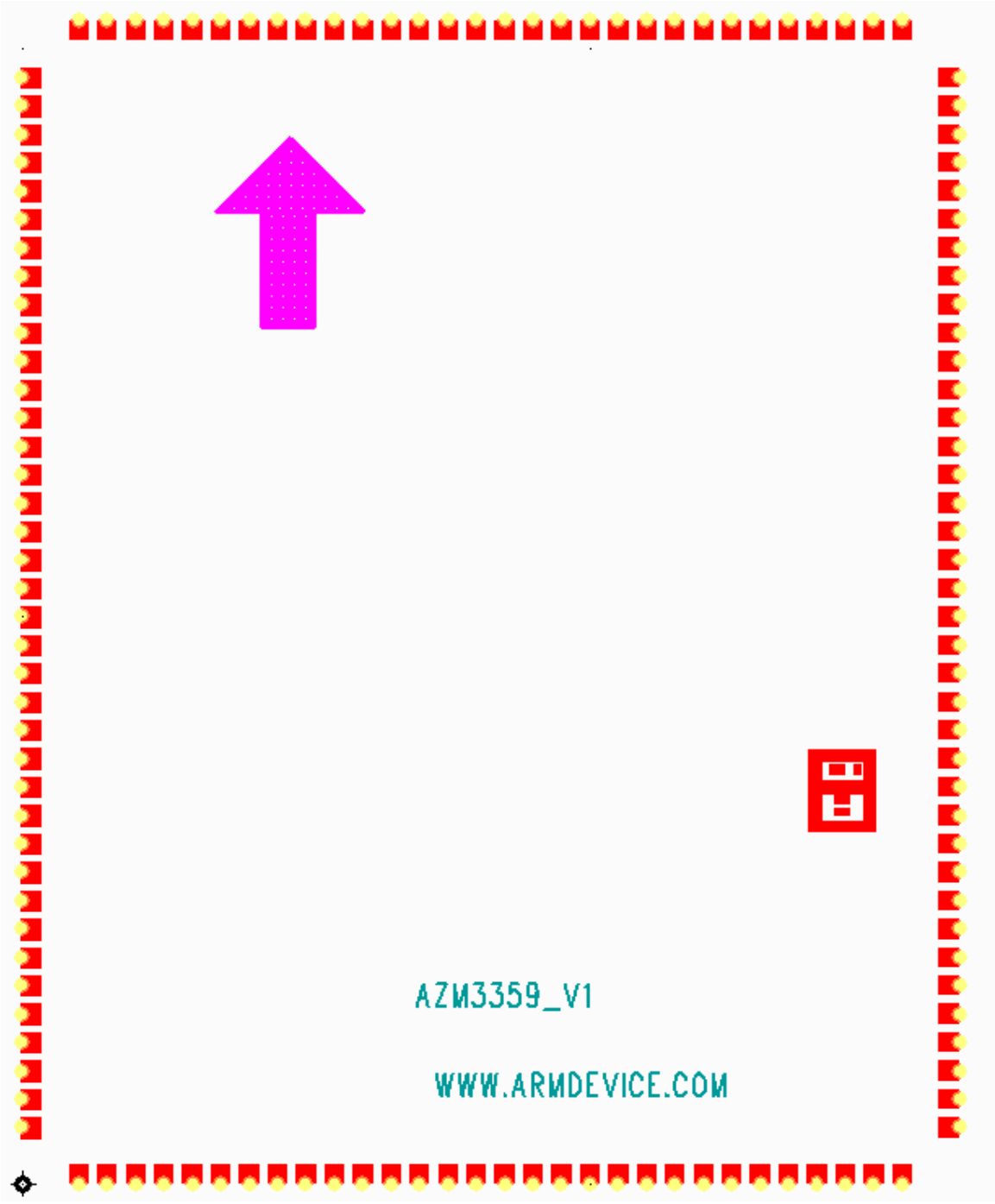
It also supports battery charging, monitoring and energy management.

6. View of the AZM335X Core Board.

Top View

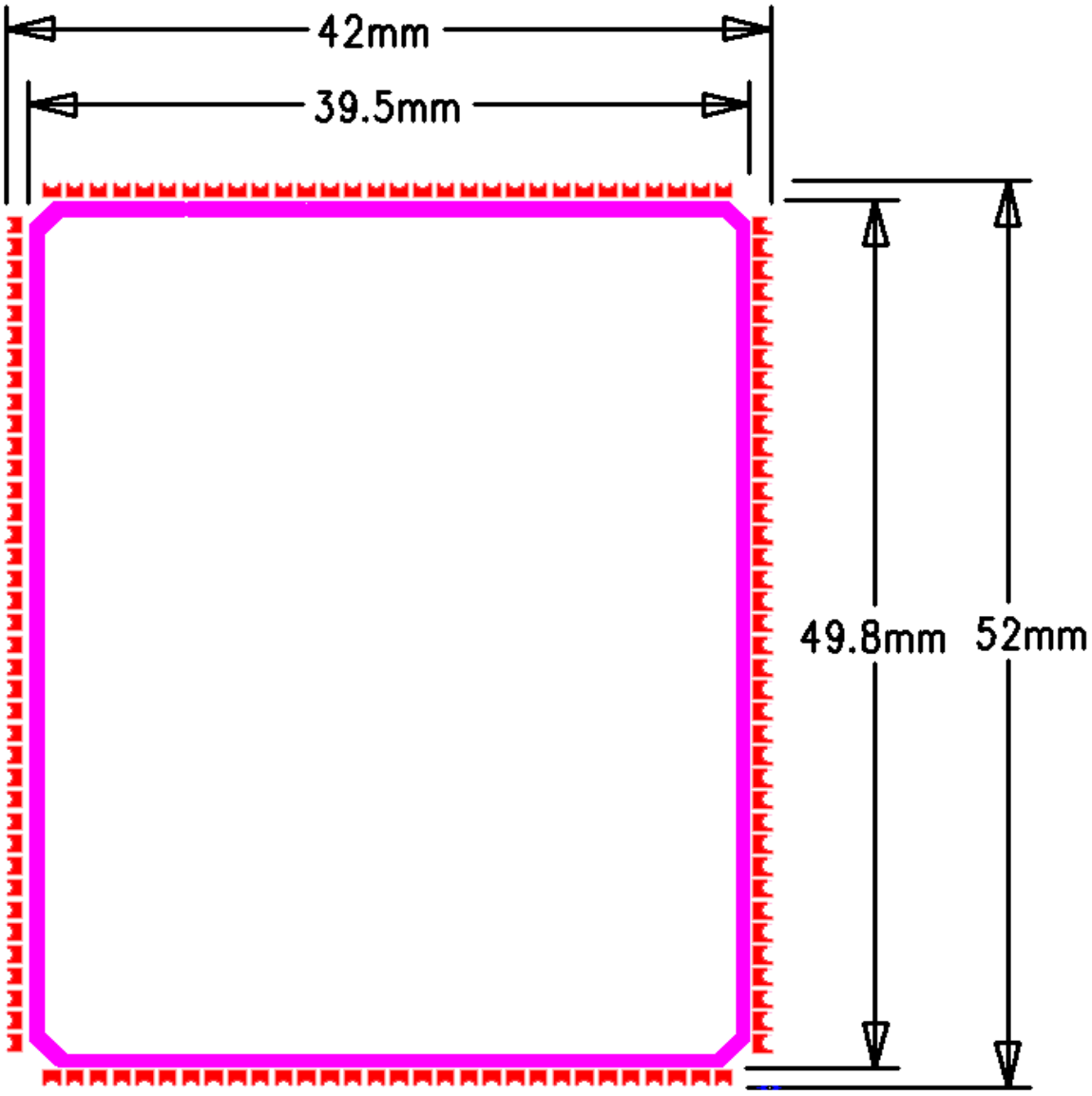


Bottom View



7.AZM335X Size

Moudle Size : 52mmX42mm;
EMI Shielding Case Size : 49.8mm X 39.5mm;
Storage Temperature : -40℃ - 125℃;
Work Temperature : -40℃ - 80℃;
Humidity : 0 to 95% RH non-condensing, non-fogging;
Lead Free;



8. Pins and Connections of AZM335X Core Board

Pin	Signal	Pin on CPU	Type	POWER	Description
1	DGND	-	GND	GND	Digital power gnd 0V
2	VDD_5V	-	POWER	VDD5V	+5V Digital power supply
3	VLDO_EXT	-	POWER	+3.3V	NOTE:THIS power is output; 100mA
4	GPIO2_1	V21	I/O	+3.3V	GPIO2_1
5	GPIO1_30	U9	I/O	+3.3V	GPIO1_30
6	GPIO2_0	T13	I/O	+3.3V	GPIO2_0
7	GPIO3_2/ SPI1_D1	J15	I/O	+3.3V	GPIO3_2/ SPI1_D1
8	GPIO3_1/ SPI1_D0	H17	I/O	+3.3V	GPIO3_1/ SPI1_D0
9	GPIO3_0/ SPI1_CLK	H16	I/O	+3.3V	GPIO3_0/ SPI1_CLK
10	USB1_VBUS	T18	IN	+5V	USB 1 bus voltage
11	USB1_DRVVBUS	F15	OUT	+3.3V	USB 1 VBUS control output
12	USB1_ID	P17	IN	+1.8V	USB 1 port identification
13	USB0_VBUS	P15	IN	+5V	USB 0 bus voltage
14	USB0_DRVVBUS	F16	OUT	+3.3V	USB 0 VBUS control output
15	USB0_ID	P16	IN	+1.8V	USB 0 port identification
16	USB1_DM	R18	A	+3.3V	USB 1 data
17	USB1_DP	R17	A	+3.3V	USB 1 data
18	USB0_DP	N17	A	+3.3V	USB 0 data

19	USB0_DM	N18	A	+3.3V	USB 0 data
20	USB_DC	-	POWER	VDD5V	USB power supply
21	CAN1_RX	E17	IN	+3.3V	CAN1 Receive Data
22	CAN1_TX	E18	OUT	+3.3V	CAN1 Transmit Data
23	CAN0_TX	E15	OUT	+3.3V	CAN0 Transmit Data
24	CAN0_RX	E16	IN	+3.3V	CAN0 Receive Data
25	GPIO0_7	C18	I/O	+3.3V	GPIO0_7/ SPI1_CS1
26	BAT_TEMP	-	IN	AP	电池温度检测输入
27	BAT	-	POWER	VBAT	BATTER Supply
28	VRTC_EXT	-	POWER	VRTC	外部 RTC 电池供电
29	VDD_5V	-	POWER	VDD5V	+5V Digital power supply
30	DGND	-	GND	GND	Digital power gnd 0V
31	DGND	-	GND	GND	Digital power gnd 0V
32	VDD_5V	-	POWER	VDD5V	+5V Digital power supply
33	PWR_BUT	-	IN	+3.3V	Power On Button
34	UART1_TXD	D15	OUT	+3.3V	UART1 TXD
35	UART1_RXD	D16	IN	+3.3V	UART1 RXD
36	UART2_TXD	B17	OUT	+3.3V	UART2 TXD
37	UART2_RXD	A17	IN	+3.3V	UART2 RXD
38	I2C1_SDA	B16	I/O	+3.3V	●I2C1 SDA
39	I2C1_SCL	A16	I/O	+3.3V	●I2C1 SCL

40	I2C2_SDA	D18	I/O	+3.3V	●I2C2 SDA ●UART1_CTSN
41	I2C2_SCL	D17	I/O	+3.3V	●I2C2 SCL ●UART1_RTSN
42	SYS_RESETn	-	OUT	+3.3V	SYSTEM RESET OUTPUT
43	MMC0_DAT2	F18	I/O	+3.3V	MMC/SDIO 0 data2
44	MMC0_DAT3	F17	I/O	+3.3V	MMC/SDIO 0 data3
45	MMC0_CMD	G18	I/O	+3.3V	MMC/SDIO 0 command
46	MMC0_CLKO	G17	I/O	+3.3V	MMC/SDIO 0 clk
47	MMC0_DAT0	G16	I/O	+3.3V	MMC/SDIO 0 data0
48	MMC0_DAT1	G15	I/O	+3.3V	MMC/SDIO 0 data1
49	MMC0_CD	C15	I	+3.3V	CARD Detection Signal
50	CLKOUT2	D14	OUT	+3.3V	CLOCK OUTPUT
51	GPIO0_29	H18	I/O	+3.3V	GPIO0_29
52	MCASP0_FSR	C13	I/O	+3.3V	MCASP0 Receive Frame Sync
53	MCASP0_AHCLKR	C12	I/O	+3.3V	McASP0 Receive Master Clock
54	MCASP0_ACLKX	A13	I/O	+3.3V	McASP0 Transmit Bit Clock
55	MCASP0_FSX	B13	I/O	+3.3V	McASP0 Transmit Frame Sync
56	MCASP0_AXR0	D12	I/O	+3.3V	McASP0 Serial Data 0
57	MCASP0_AXR1	D13	I/O	+3.3V	McASP0 Serial Data 1
58	MCASP0_AHCLKX	A14	I/O	+3.3V	McASP0 Transmit Master Clock
59	AIN0	B6	IN	AP	ADC input 0
60	AIN1	C7	IN	AP	ADC input 1

61	AIN2	B7	IN	AP	ADC input 2
62	AIN3	A7	IN	AP	ADC input 3
63	AIN4	C8	IN	AP	ADC input 4
64	AIN5	B8	IN	AP	ADC input 5
65	AIN6	A8	IN	AP	ADC input 6
66	GNDA_ADC	-	GND	AGND	ANALOG GND
67	VDD_5V	-	POWER	VDD5V	+5V Digital power supply
68	DGND	-	GND	GND	Digital power gnd 0V
69	DGND	-	GND	GND	Digital power gnd 0V
70	VDD_5V	-	POWER	VDD5V	+5V Digital power supply
71	GPIO2_6	R1	I/O	+3.3V	LCD DATA 0 signal
72	GPIO2_7	R2	I/O	+3.3V	LCD DATA 1 signal
73	GPIO2_8	R3	I/O	+3.3V	LCD DATA 2 signal
74	GPIO2_9	R4	I/O	+3.3V	LCD DATA 3 signal
75	GPIO2_10	T1	I/O	+3.3V	LCD DATA 4 signal
76	GPIO2_11	T2	I/O	+3.3V	LCD DATA 5 signal
77	GPIO2_12	T3	I/O	+3.3V	LCD DATA 6 signal
78	GPIO2_13	T4	I/O	+3.3V	LCD DATA 7 signal
79	UART5_TXD	U1	OUT	+3.3V	●LCD DATA 8 signal ●UART5_TXD
80	UART5_RXD	U2	IN	+3.3V	●LCD DATA 9 signal ●UART5_RXD
81	UART3_CTSN	U3	IN	+3.3V	●LCD DATA 10 signal ●UART35_CTSN

82	UART3_RTSN	U4	OUT	+3.3V	●LCD DATA 11 signal ●UART3_RTSN
83	UART4_CTSN	V2	IN	+3.3V	●LCD DATA 12 signal ●UART4_CTSN
84	UART4_RTSN	V3	OUT	+3.3V	●LCD DATA 13 signal ●UART4_RTSN
85	UART5_CTSN	V4	IN	+3.3V	●LCD DATA 14 signal ●UART5_CTSN
86	UART5_RTSN	T5	OUT	+3.3V	●LCD DATA 15 signal ●UART5_RTSN
87	GPIO1_15	U13	I/O	+3.3V	LCD DATA 16 signal
88	GPIO1_14	V13	I/O	+3.3V	LCD DATA 17 signal
89	GPIO1_13	R12	I/O	+3.3V	LCD DATA 18 signal
90	GPIO1_12	T12	I/O	+3.3V	LCD DATA 19 signal
91	GPIO0_27	U12	I/O	+3.3V	LCD DATA 20 signal
92	GPIO0_26	T11	I/O	+3.3V	●LCD DATA 21 signal ●Ehrpwm2_tripzone_input
93	EHRPWM2B	T10	I/O	+3.3V	●LCD DATA 22 signal ●EHRPWM2B
94	EHRPWM2A	U10	I/O	+3.3V	●LCD DATA 23 signal ●EHRPWM2B
95	GPIO2_25	R6	I/O	+3.3V	LCD DE signal
96	GPIO1_28	U18	I/O	+3.3V	●LCD POWER EN signal ●MCASP0_ACLKR
97	VDD_5V	-	POWER	VDD5V	+5V Digital power supply
98	DGND	-	GND	GND	Digital power gnd 0V
99	DGND	-	GND	GND	Digital power gnd 0V
100	VDD_5V	-	POWER	VDD5V	+5V Digital power supply
101	GPIO2_24	V5	I/O	+3.3V	LCD PCLK signal
102	GPIO2_23	R5	I/O	+3.3V	LCD HSYNC signal

103	GPIO2_22	U5	I/O	+3.3V	LCD VSYNC signal
104	RGMII2_RCTL	V14	IN	+3.3V	RGMII2 Receive Control
105	RGMII2_RXD3	V16	IN	+3.3V	RGMII2 Receive Data 3
106	RGMII2_RXD2	U16	IN	+3.3V	RGMII2 Receive Data 2
107	RGMII2_RXD1	T16	IN	+3.3V	RGMII2 Receive Data 1
108	RGMII2_RXD0	V17	IN	+3.3V	RGMII2 Receive Data 0
109	RGMII2_RCLK	T15	IN	+3.3V	RGMII2 Receive Clock
110	DGND	-	GND	GND	Digital power gnd 0V
111	RGMII2_TCLK	U15	OUT	+3.3V	RGMII2 Transmit Clock
112	RGMII2_TXD3	U14	OUT	+3.3V	RGMII2 Transmit Data 3
113	RGMII2_TXD2	T14	OUT	+3.3V	RGMII2 Transmit Data 2
114	RGMII2_TXD1	R14	OUT	+3.3V	RGMII2 Transmit Data 1
115	RGMII2_TXD0	V15	OUT	+3.3V	RGMII2 Transmit Data 0
116	RGMII2_TCTL	R13	OUT	+3.3V	RGMII2 Transmit Control
117	RGMII1_RXD3	L17	IN	+3.3V	●RGMII1 Receive Data 3 ●UART3_RXD
118	RGMII1_RXD2	L16	IN	+3.3V	●RGMII1 Receive Data 2 ●UART3_TXD
119	RGMII1_TXD3	J18	OUT	+3.3V	●RGMII1 Transmit Data 3 ●UART4_RXD
120	RGMII1_TXD2	K15	OUT	+3.3V	●RGMII1 Transmit Data 2 ●UART4_TXD
121	RGMII1_RCTL	J17	IN	+3.3V	RGMII1 Receive Control
122	RGMII1_RXD1	L15	IN	+3.3V	RGMII1 Receive Data 1
123	RGMII1_RXD0	M16	IN	+3.3V	RGMII1 Receive Data 0

124	DGND	-	GND	GND	Digital power gnd 0V
125	RGMII1_RCLK	L18	IN	+3.3V	RGMII1 Receive Clock
126	RGMII1_TCLK	K18	OUT	+3.3V	RGMII1Transmit Clock
127	RGMII1_TCTL	J16	OUT	+3.3V	RGMII1 Transmit Control
128	RGMII1_TXD1	K16	OUT	+3.3V	RGMII1 Transmit Data 1
129	RGMII1_TXD0	K17	OUT	+3.3V	RGMII1 Transmit Data 0
130	MDIO_DATA	M17	I/O	+3.3V	MDIO_DATA
131	MDIO_CLK	M18	OUT	+3.3V	MDIO_CLK
132	GPIO1_31	V9	I/O	+3.3V	GPIO1_31
133	GPIO0_31	U17	I/O	+3.3V	GPIO0_31
134	GPMC_CSN0	-	IN	+3.3V	NAND flash chip select sw
135	VDD_5V	-	POWER	VDD5V	+5V Digital power supply
136	DGND	-	GND	GND	Digital power gnd 0V

SD / MMC Card

Pin#	Signal	Type	POWER	Description
43	MMC0_DAT2	I/O	+3.3V	MMC/SDIO 0 data2
44	MMC0_DAT3	I/O	+3.3V	MMC/SDIO 0 data3
45	MMC0_CMD	I/O	+3.3V	MMC/SDIO 0 command
46	MMC0_CLKO	I/O	+3.3V	MMC/SDIO 0 clk

47	MMC0_DAT0	I/O	+3.3V	MMC/SDIO 0 data0
48	MMC0_DAT1	I/O	+3.3V	MMC/SDIO 0 data1
49	CD/EMU4	I	+3.3V	CARD Detection Signal

USB0

USB2.0 high speed PHY with OTG support.

Pin#	Signal	Type	POWER	Description
13	USB0_VBUS	IN	+5V	USB 0 bus voltage
14	USB0_DRVVBUS	OUT	+3.3V	USB 0 VBUS control output
15	USB0_ID	IN	+1.8V	USB 0 port identification
18	USB0_DP	A	+3.3V	USB 0 data
19	USB0_DM	A	+3.3V	USB 0 data

USB1

USB2.0 high speed PHY with OTG support.

Pin#	Signal	Type	POWER	Description
10	USB1_VBUS	IN	+5V	USB 1 bus voltage
11	USB1_DRVVBUS	OUT	+3.3V	USB 1 VBUS control output
12	USB1_ID	IN	+1.8V	USB 1 port identification
16	USB1_DM	A	+3.3V	USB 1 data

17	USB1_DP	A	+3.3V	USB 1 data

SPI1

Pin#	Signal	Type	POWER	Description
7	GPIO3_2	I/O	+3.3V	GPIO3_2/ SPI1_D1
8	GPIO3_1	I/O	+3.3V	GPIO3_1/ SPI1_D0
9	GPIO3_0	I/O	+3.3V	GPIO3_0/ SPI1_CLK
25	GPIO0_7	I/O	+3.3V	GPIO0_7/ SPI1_CS1

I2C

Notice: There is no on-board pull-up resistor on I2C signals.

38	I2C1_SDA	I/O	+3.3V	I2C1	SDA
39	I2C1_SCL	I/O	+3.3V	I2C1	SCL
40	I2C2_SDA	I/O	+3.3V	I2C2	SDA
41	I2C2_SCL	I/O	+3.3V	I2C2	SCL

CAN0

CAN0 pins are multiuse with debug UART.

Pin#	Signal	Type	POWER	Description
23	CAN0_TX	OUT	+3.3V	CAN0 Transmit Data

24	CAN0_RX	IN	+3.3V	CAN0 Receive Data

CAN1

Pin#	Signal	Type	POWER	Description
21	CAN1_RX	IN	+3.3V	CAN1 Receive Data
22	CAN1_TX	OUT	+3.3V	CAN1 Transmit Data

UART

Pin#	Signal	Type	POWER	Description
34	UART1_TXD	OUT	+3.3V	UART1 TXD
35	UART1_RXD	IN	+3.3V	UART1 RXD
40	UART1_CTSN	IN	+3.3V	UART1_CTSN
41	UART1_RTSN	OUT	+3.3V	UART1_RTSN
36	UART2_TXD	OUT	+3.3V	UART2 TXD
37	UART2_RXD	IN	+3.3V	UART2 RXD
117	UART3_RXD	IN	+3.3V	UART3_RXD
118	UART3_TXD	OUT	+3.3V	UART3_TXD
119	UART4_RXD	IN	+3.3V	●UART4_RXD

120	UART4_TXD	OUT	+3.3V	●UART4_TXD

IrDA

Pin#	Signal	Type	POWER	Description
117	UART3_RXD	IN	+3.3V	IrDA *Receive*
118	UART3_TXD	OUT	+3.3V	IrDA *Transmit*

McASP0

Pin#	Signal	Type	POWER	Description
52	MCASP0_FSR	I/O	+3.3V	MCASP0 Receive Frame Sync
53	MCASP0_AHCLKR	I/O	+3.3V	McASP0 Receive Master Clock
54	MCASP0_ACLKX	I/O	+3.3V	McASP0 Transmit Bit Clock
55	MCASP0_FSX	I/O	+3.3V	McASP0 Transmit Frame Sync
56	MCASP0_AXR0	I/O	+3.3V	McASP0 Serial Data 0
57	MCASP0_AXR1	I/O	+3.3V	McASP0 Serial Data 1
58	MCASP0_AHCLKX	I/O	+3.3V	McASP0 Transmit Master Clock
96	MCASP0_ACLKR	I/O	+3.3V	MCASP0_ACLKR

24BIT LCD

Pin#	Signal	Type	POWER	Description
71	GPIO2_6	I/O	+3.3V	LCD DATA 0 signal
72	GPIO2_7	I/O	+3.3V	LCD DATA 1 signal
73	GPIO2_8	I/O	+3.3V	LCD DATA 2 signal
74	GPIO2_9	I/O	+3.3V	LCD DATA 3 signal
75	GPIO2_10	I/O	+3.3V	LCD DATA 4 signal
76	GPIO2_11	I/O	+3.3V	LCD DATA 5 signal
77	GPIO2_12	I/O	+3.3V	LCD DATA 6 signal
78	GPIO2_13	I/O	+3.3V	LCD DATA 7 signal
79	UART5_TXD	OUT	+3.3V	LCD DATA 8 signal
80	UART5_RXD	IN	+3.3V	LCD DATA 9 signal
81	UART3_CTSN	IN	+3.3V	LCD DATA 10 signal
82	UART3_RTSN	OUT	+3.3V	LCD DATA 11 signal
83	UART4_CTSN	IN	+3.3V	LCD DATA 12 signal
84	UART4_RTSN	OUT	+3.3V	LCD DATA 13 signal
85	UART5_CTSN	IN	+3.3V	LCD DATA 14 signal
86	UART5_RTSN	OUT	+3.3V	LCD DATA 15 signal
87	GPIO1_15	I/O	+3.3V	LCD DATA 16 signal

88	GPIO1_14	I/O	+3.3V	LCD DATA 17 signal
89	GPIO1_13	I/O	+3.3V	LCD DATA 18 signal
90	GPIO1_12	I/O	+3.3V	LCD DATA 19 signal
91	GPIO0_27	I/O	+3.3V	LCD DATA 20 signal
92	GPIO0_26	I/O	+3.3V	LCD DATA 21 signal
93	EHRPWM2B	I/O	+3.3V	LCD DATA 22 signal
94	EHRPWM2A	I/O	+3.3V	LCD DATA 23 signal
95	GPIO2_25	I/O	+3.3V	LCD DE signal
96	GPIO1_28	I/O	+3.3V	LCD POWER EN signal
101	GPIO2_24	I/O	+3.3V	LCD PCLK signal
102	GPIO2_23	I/O	+3.3V	LCD HSYNC signal
103	GPIO2_22	I/O	+3.3V	LCD VSYNC signal

Touch screen input

Pin#	Signal	Type	POWER	Description
59	AIN0	IN	AP	ADC input 0 TOUCH_X+
60	AIN1	IN	AP	ADC input 1 TOUCH_X-
61	AIN2	IN	AP	ADC input 2 TOUCH_Y+
62	AIN3	IN	AP	ADC input 3 TOUCH_Y-

Ethernet 1 RGMII

Pin#	Signal	Type	POWER	Description
117	RGMII1_RXD3	IN	+3.3V	●RGMII1 Receive Data 3 ●UART3_RXD
118	RGMII1_RXD2	IN	+3.3V	●RGMII1 Receive Data 2 ●UART3_TXD
119	RGMII1_TXD3	OUT	+3.3V	●RGMII1 Transmit Data 3 ●UART4_RXD
120	RGMII1_TXD2	OUT	+3.3V	●RGMII1 Transmit Data 2 ●UART4_TXD
121	RGMII1_RCTL	IN	+3.3V	RGMII1 Receive Control
122	RGMII1_RXD1	IN	+3.3V	RGMII1 Receive Data 1
123	RGMII1_RXD0	IN	+3.3V	RGMII1 Receive Data 0
125	RGMII1_RCLK	IN	+3.3V	RGMII1 Receive Clock
126	RGMII1_TCLK	OUT	+3.3V	RGMII1Transmit Clock
127	RGMII1_TCTL	OUT	+3.3V	RGMII1 Transmit Control
128	RGMII1_TXD1	OUT	+3.3V	RGMII1 Transmit Data 1
129	RGMII1_TXD0	OUT	+3.3V	RGMII1 Transmit Data 0

Ethernet 2 RGMII

Pin#	Signal	Type	POWER	Description
104	RGMII2_RCTL	IN	+3.3V	RGMII2 Receive Control

105	RGMII2_RXD3	IN	+3.3V	RGMII2 Receive Data 3
106	RGMII2_RXD2	IN	+3.3V	RGMII2 Receive Data 2
107	RGMII2_RXD1	IN	+3.3V	RGMII2 Receive Data 1
108	RGMII2_RXD0	IN	+3.3V	RGMII2 Receive Data 0
109	RGMII2_RCLK	IN	+3.3V	RGMII2 Receive Clock
111	RGMII2_TCLK	OUT	+3.3V	RGMII2 Transmit Clock
112	RGMII2_TXD3	OUT	+3.3V	RGMII2 Transmit Data 3
113	RGMII2_TXD2	OUT	+3.3V	RGMII2 Transmit Data 2
114	RGMII2_TXD1	OUT	+3.3V	RGMII2 Transmit Data 1
115	RGMII2_TXD0	OUT	+3.3V	RGMII2 Transmit Data 0
116	RGMII2_TCTL	OUT	+3.3V	RGMII2 Transmit Control

PHY management

Pin#	Signal	Type	POWER	Description
130	MDIO_DATA	I/O	+3.3V	MDIO_DATA
131	MDIO_CLK	OUT	+3.3V	MDIO_CLK

Enhanced PWM

Pin#	Signal	Type	POWER	Description

92	EHRPWM2_tripzone_input	I/O	+3.3V	EHRPWM 2_tripzone_input
93	EHRPWM2B	I/O	+3.3V	EHRPWM2B
94	EHRPWM2A	I/O	+3.3V	EHRPWM2B

General Purpose I/Os

4	GPIO2_1	I/O	+3.3V	GPIO2_1
5	GPIO1_30	I/O	+3.3V	GPIO1_30
6	GPIO2_0	I/O	+3.3V	GPIO2_0
132	GPIO1_31	I/O	+3.3V	GPIO1_31
133	GPIO0_31	I/O	+3.3V	GPIO0_31

Batter power

Pin#	Signal	Type	POWER	Description
26	BAT_TEMP	IN	AP	电池温度检测输入
27	BAT	POWER	VBAT	BATTER Supply

RTC

RTC 电池供电电压为 1.8V,外接 RTC 纽扣电池

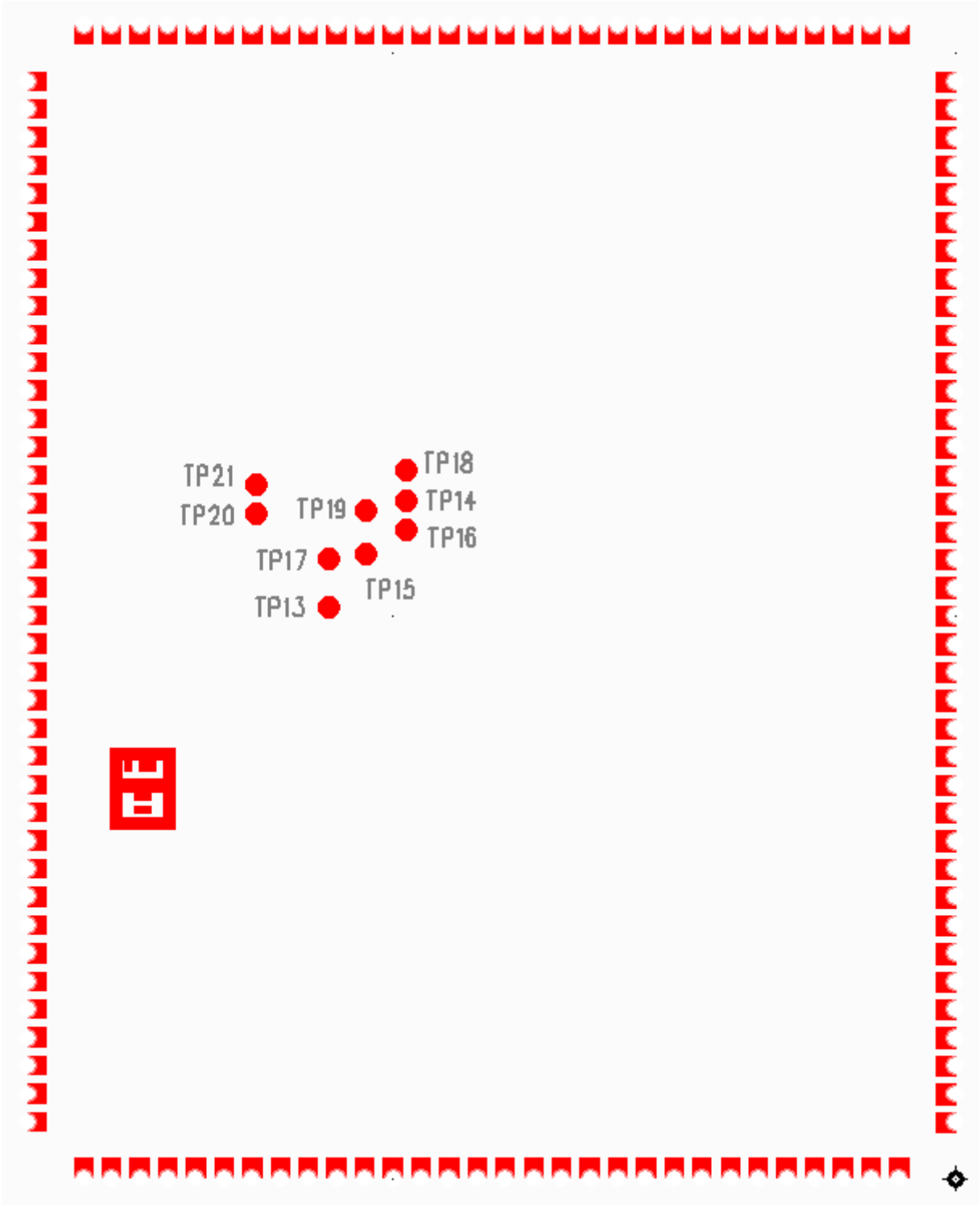
Pin#	Signal	Type	POWER	Description
28	VRTC_EXT	POWER	VRTC	RTC 外部纽扣电池供电

ADC input

Pin#	Signal	Type	POWER	Description
59	AIN0	IN	AP	ADC input 0
60	AIN1	IN	AP	ADC input 1
61	AIN2	IN	AP	ADC input 2
62	AIN3	IN	AP	ADC input 3
63	AIN4	IN	AP	ADC input 4
64	AIN5	IN	AP	ADC input 5
65	AIN6	IN	AP	ADC input 6
66	GNDA_ADC	GND	AGND	ANALOG GND

JTAG

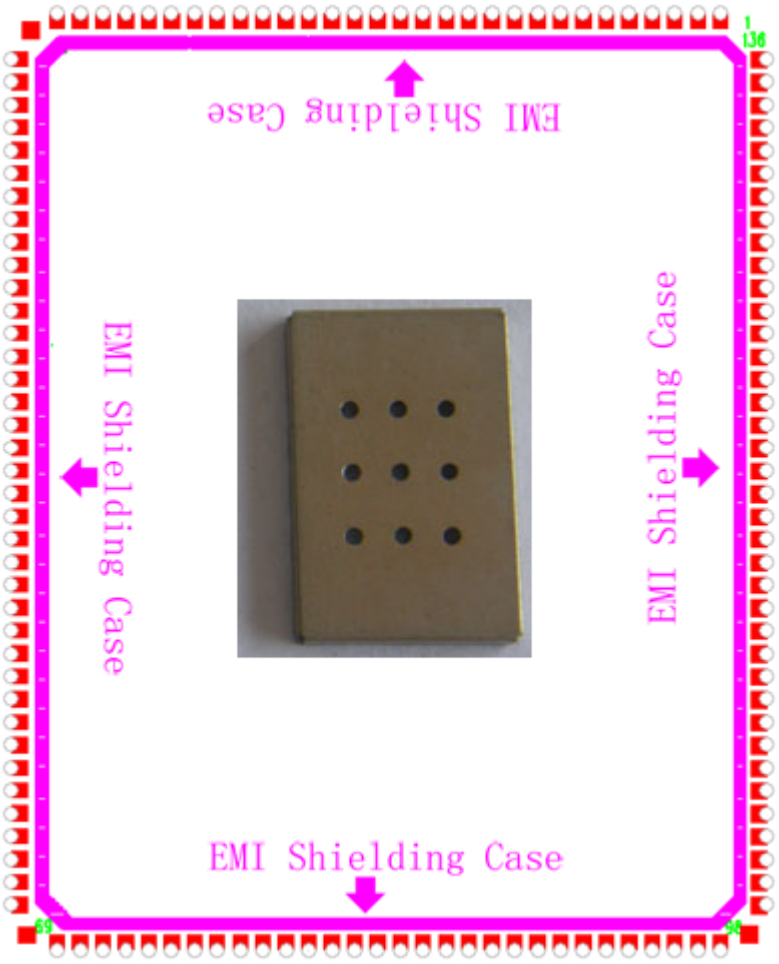
The JTAG signals are designed as test pins on bottom side of the board.

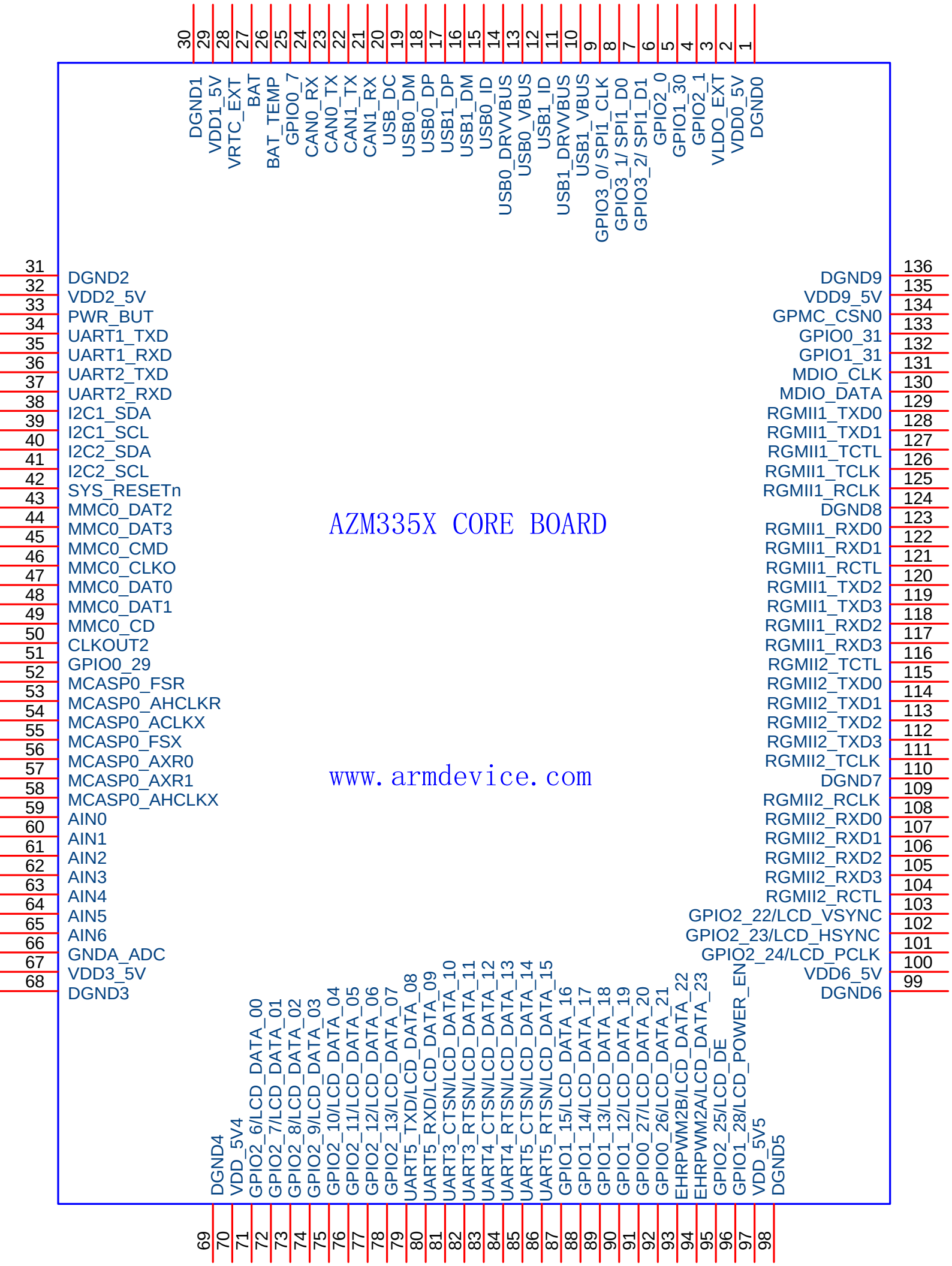


PIN	Signal	Type	POWER	Description
TP13	JTAG_TRSTn	IN	+3V3	**JTAG TEST RESET**
TP14	JTAG_TMS	IN	+3V3	**JTAG TEST MODE SELECT**
TP15	JTAG_TDI	IN	+3V3	**JTAG TEST DATA INPUT**
TP16	JTAG_TCK	IN	+3V3	**JTAG TEST CLOCK**
TP17	JTAG_TDO	OUT	+3V3	**JTAG TEST DATA OUTPUT**
TP18	JTAG_EMU0	I/O	+3V3	**MISC EMULATION PIN**
TP19	JTAG_EMU1	I/O	+3V3	**MISC EMULATION PIN**
TP20	VDD_3V3B	POWER	+3V3	**+3.3V Digital power output**
TP21	GND	GND	GND	**Digital power gnd 0V**

9. EMI Performance

The AM335x core board has very good EMI performance because it support EMI Shielding Case.




AZM335X CORE BOARD
www.armdevice.com
1 DGND0
2 VDD0_5V
3 VLDO_EXT
4 GPIO2_1
5 GPIO1_30
6 GPIO2_0
7 GPIO3_2/ SPI1_D1
8 GPIO3_1/ SPI1_D0
9 GPIO3_0/ SPI1_CLK
10 USB1_VBUS
11 USB1_DRVVBUS
12 USB1_ID
13 USB0_VBUS
14 USB0_DRVVBUS
15 USB0_ID
16 USB1_DM
17 USB1_DP
18 USB0_DP
19 USB0_DM
20 USB_DC
21 CAN1_RX
22 CAN1_TX
23 CAN0_TX
24 CAN0_RX
25 GPIO0_7
26 BAT_TEMP
27 BAT
28 VRTC_EXT
29 VDD1_5V
30 DGND1
31 DGND2
32 VDD2_5V
33 PWR_BUT
34 UART1_TXD
35 UART1_RXD
36 UART2_TXD
37 UART2_RXD
38 I2C1_SDA
39 I2C1_SCL
40 I2C2_SDA
41 I2C2_SCL
42 SYS_RESETn
43 MMC0_DAT2
44 MMC0_DAT3
45 MMC0_CMD
46 MMC0_CLKO
47 MMC0_DAT0
48 MMC0_DAT1
49 MMC0_CD
50 CLKOUT2
51 GPIO0_29
52 MCASP0_FSR
53 MCASP0_AHCLKR
54 MCASP0_ACLKX
55 MCASP0_FSX
56 MCASP0_AXR0
57 MCASP0_AXR1
58 MCASP0_AHCLKX
59 AIN0
60 AIN1
61 AIN2
62 AIN3
63 AIN4
64 AIN5
65 AIN6
66 GNDA_ADC
67 VDD3_5V
68 DGND3
69 DGND4
70 VDD_5V4
71 GPIO2_6/LCD_DATA_00
72 GPIO2_7/LCD_DATA_01
73 GPIO2_8/LCD_DATA_02
74 GPIO2_9/LCD_DATA_03
75 GPIO2_10/LCD_DATA_04
76 GPIO2_11/LCD_DATA_05
77 GPIO2_12/LCD_DATA_06
78 GPIO2_13/LCD_DATA_07
79 UART5_TXD/LCD_DATA_08
80 UART5_RXD/LCD_DATA_09
81 UART3_CTSN/LCD_DATA_10
82 UART3_RTSN/LCD_DATA_11
83 UART4_CTSN/LCD_DATA_12
84 UART4_RTSN/LCD_DATA_13
85 UART5_CTSN/LCD_DATA_14
86 UART5_RTSN/LCD_DATA_15
87 GPIO1_15/LCD_DATA_16
88 GPIO1_14/LCD_DATA_17
89 GPIO1_13/LCD_DATA_18
90 GPIO1_12/LCD_DATA_19
91 GPIO0_27/LCD_DATA_20
92 GPIO0_26/LCD_DATA_21
93 EHRPWM2B/LCD_DATA_22
94 EHRPWM2A/LCD_DATA_23
95 GPIO2_25/LCD_DE
96 GPIO1_28/LCD_POWER_EN
97 VDD_5V5
98 DGND5
99 DGND6
100 VDD6_5V
101 GPIO2_24/LCD_PCLK
102 GPIO2_23/LCD_HSYNC
103 GPIO2_22/LCD_VSYNC
104 RGMII2_RCTL
105 RGMII2_RXD3
106 RGMII2_RXD2
107 RGMII2_RXD1
108 RGMII2_RXD0
109 RGMII2_RCLK
110 DGND7
111 RGMII2_TCLK
112 RGMII2_TXD3
113 RGMII2_TXD2
114 RGMII2_TXD1
115 RGMII2_TXD0
116 RGMII2_TCTL
117 RGMII1_RXD3
118 RGMII1_RXD2
119 RGMII1_TXD3
120 RGMII1_TXD2
121 RGMII1_RCTL
122 RGMII1_RXD1
123 RGMII1_RXD0
124 DGND8
125 RGMII1_RCLK
126 RGMII1_TCLK
127 RGMII1_TCTL
128 RGMII1_TXD1
129 RGMII1_TXD0
130 MDIO_DATA
131 MDIO_CLK
132 GPIO1_31
133 GPIO0_31
134 GPMC_CSN0
135 VDD9_5V
136 DGND9