



# Meridian CPU Mechanical Specification

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Revision 1.20

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## **1 Introduction**

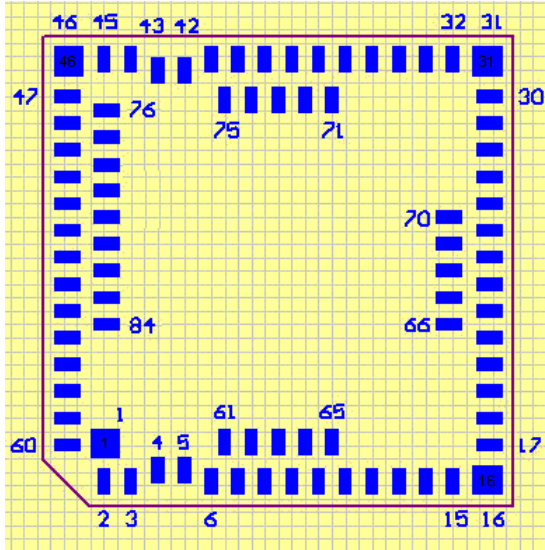
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This document describes the PCB foot print and pin numbering of the Meridian module.

## 2 Component Outline

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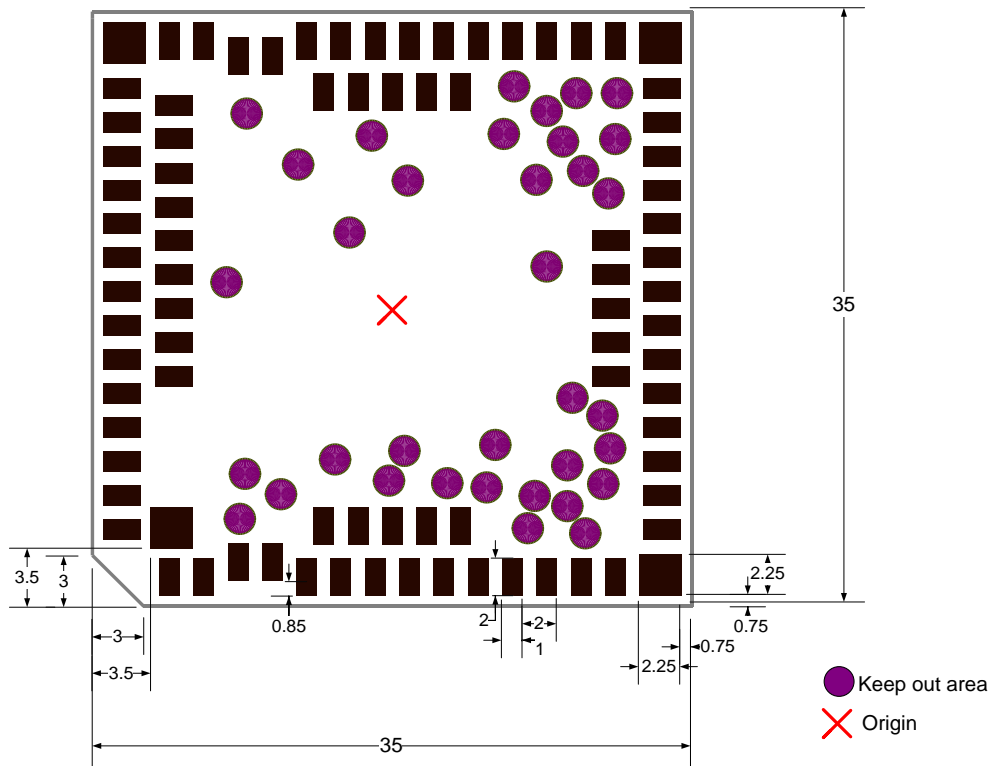
Top view



PCB dimensions = 35mm square with a 3.5mm chamfer on the corner nearest Pin1

All PCB edges are 17.5mm from 0,0 Datum

### 3 Basic Mechanical Drawing



## 4 Pad Centre Locations

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Default pad size is 1mm x 2mm

Pad size for pad 1, 16, 31 and 46 is 2.25mm x 2.25mm

Default pad centre to pad centre (pin pitch) dimension is 2.0mm

All dimensions in mm

Datum 0.0, 0.0 is the centre of the Meridian

Number	X Coord	Y Coord	Pad Name	Number	X Coord	Y Coord	Pad Name
1	-12.875mm	-12.875mm	0V	43	-9mm	14.9mm	GPIO5
2	-13mm	-15.75mm	+5V	44	-11mm	15.75mm	GPIO4
3	-11mm	-15.75mm	+3V3	45	-13mm	15.75mm	GPIO3
4	-9mm	-14.9mm	RESET_OUT	46	-15.625mm	15.625mm	0V
5	-7mm	-14.9mm	BOOT	47	-15.75mm	13mm	GPIO2
6	-5mm	-15.75mm	MODULE_RESET	48	-15.75mm	11mm	GPIO1
7	-3mm	-15.75mm	D-	49	-15.75mm	9mm	GPIO6
8	-1mm	-15.75mm	D+	50	-15.75mm	7mm	GPIO7
9	1mm	-15.75mm	UART1_TXD	51	-15.75mm	5mm	GPIO8
10	3mm	-15.75mm	UART1_RXD	52	-15.75mm	3mm	GPIO9
11	5mm	-15.75mm	UART1_RTS	53	-15.75mm	1mm	SSI_TXCLK
12	7mm	-15.75mm	UART1_CTS	54	-15.75mm	-1mm	SSI_TXFS
13	9mm	-15.75mm	UART2_TXD	55	-15.75mm	-3mm	SSI_TXDAT
14	11mm	-15.75mm	UART2_RXD	56	-15.75mm	-5mm	SSI_RXDAT
15	13mm	-15.75mm	UART2_RTS	57	-15.75mm	-7mm	SSI_RXCLK
16	15.625mm	-15.625mm	0V	58	-15.75mm	-9mm	SSI_RXFS
17	15.75mm	-13mm	UART2_CTS	59	-15.75mm	-11mm	SPI1_MOSI
18	15.75mm	-11mm	I2C_SDA	60	-15.75mm	-13mm	SPI1_SCLK
19	15.75mm	-9mm	I2C_SCL	61	-4mm	-12.75mm	SPI1_RDY
20	15.75mm	-7mm	PWM	62	-2mm	-12.75mm	SPI1_SS
21	15.75mm	-5mm	LCDD11	63	0mm	-12.75mm	SPI1_MISO
22	15.75mm	-3mm	LCDD12	64	2mm	-12.75mm	CONTRAST
23	15.75mm	-1mm	LCDD13	65	4mm	-12.75mm	VSYNC
24	15.75mm	1mm	LCDD14	66	12.75mm	-4mm	HSYNC
25	15.75mm	3mm	LCDD15	67	12.75mm	-2mm	LSCLK
26	15.75mm	5mm	LCDD5	68	12.75mm	0mm	ACD/OE
27	15.75mm	7mm	LCDD6	69	12.75mm	2mm	SPL_SPR
28	15.75mm	9mm	LCDD7	70	12.75mm	4mm	PS
29	15.75mm	11mm	LCDD8	71	4mm	12.75mm	CLS
30	15.75mm	13mm	LCDD9	72	2mm	12.75mm	REV
31	15.625mm	15.625mm	0V	73	0mm	12.75mm	GPIO13
32	13mm	15.75mm	LCDD10	74	-2mm	12.75mm	GPIO14
33	11mm	15.75mm	LCDD0	75	-4mm	12.75mm	GPIO15
34	9mm	15.75mm	LCDD1	76	-12.75mm	12mm	NC
35	7mm	15.75mm	LCDD2	77	-12.75mm	10mm	NC
36	5mm	15.75mm	LCDD3	78	-12.75mm	8mm	NC
37	3mm	15.75mm	LCDD4	79	-12.75mm	6mm	NC
38	1mm	15.75mm	TIN	80	-12.75mm	4mm	TMS

39	-1mm	15.75mm	TMR2OUT	81	-12.75mm	2mm	TCK
40	-3mm	15.75mm	GPIO10	82	-12.75mm	0mm	TDI
41	-5mm	15.75mm	GPIO11	83	-12.75mm	-2mm	TDO
42	-7mm	14.9mm	GPIO12	84	-12.75mm	-4mm	TRST

## 5 Routing/Copper keep-outs on mounting surface

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All dimensions in mm

Datum 0.0, 0.0 is the centre of the Meridian

The following 35 locations are each the centre point for a 1.6mm diameter routing/copper exclusion keep out on the surface of the customers PCB design.

X Coord	Y Coord
-8.525mm	11.525mm
-9.7mm	1.6mm
-5.525mm	8.525mm
-2.525mm	4.525mm
8.975mm	2.525mm
10.475mm	-5.2mm
12.575mm	6.825mm
8.975mm	11.675mm
11.225mm	-13.175mm
10.175mm	-9.175mm
8.375mm	7.625mm
3.175mm	-10.225mm
-6.525mm	-10.875mm
7.875mm	-12.875mm
-8.925mm	-12.325mm
13.075mm	12.725mm
12.975mm	10.025mm
12.225mm	-10.275mm
-3.37mm	-8.83mm
-1.225mm	10.225mm
12.225mm	-6.25mm
12.675mm	-8.175mm
5.975mm	-7.975mm
10.175mm	-11.575mm
8.275mm	-10.975mm
5.475mm	-10.475mm
10.7mm	12.725mm
-8.625mm	-9.675mm
9.925mm	9.875mm
-0.225mm	-10.075mm
0.875mm	7.579mm
7.075mm	13.125mm
6.475mm	10.325mm
0.675mm	-8.325mm
11.1mm	8.15mm

## Symbol pin and Function detail

Meridian Pad	Pad Name	Meridian Pad	Pad Name
1	0V	43	GPIO5
2	+5V	44	GPIO4
3	+3V3	45	GPIO3
4	/RESET_OUT	46	0V
5	BOOT	47	GPIO2
6	/MODULE_RESET	48	GPIO1
7	USB-	49	GPIO6
8	USB+	50	GPIO7
9	UART1_TXD	51	GPIO8
10	UART1_RXD	52	GPIO9
11	UART1_RTS	53	SSI0_TXCLK
12	UART1_CTS	54	SSI0_TXFS
13	UART2_TXD	55	SSI0_TXDAT
14	UART2_RXD	56	SSI0_RXDAT
15	UART2_RTS	57	SSI0_RXCLK
16	0V	58	SSI0_RXFS
17	UART2_CTS	59	SPI1_MOSI
18	I2C_SDA	60	SPI1_SCLK
19	I2C_SCL	61	SPI1_SPI_RDY
20	PWMO	62	SPI1_SS
21	LD11	63	SPI1_MISO
22	LD12	64	CONTRAST
23	LD13	65	VSYNC
24	LD14	66	HSYNC
25	LD15	67	LSCLK
26	LD5	68	ACD/OE
27	LD6	69	SPL_SPR
28	LD7	70	PS
29	LD8	71	CLS
30	LD9	72	REV
31	0V	73	GPIO13
32	LD10	74	GPIO14
33	LD0	75	GPIO15
34	LD1	76	NC
35	LD2	77	NC
36	LD3	78	NC
37	LD4	79	NC
38	TIN	80	TMS
39	TMR2OUT	81	TCK
40	GPIO10	82	TDI
41	GPIO11	83	/TDO
42	GPIO12	84	/TRST