

TITAN Development Kit

PC/104 Single Board Computer

Issue A – October 2011 – ETH_TITAN_DEVKIT_USM

WARRANTY

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REVISION HISTORY

<i>Issue no.</i>	<i>PCB</i>	<i>Date</i>	<i>Comments</i>
Issue A	V111	3rd October 2011	

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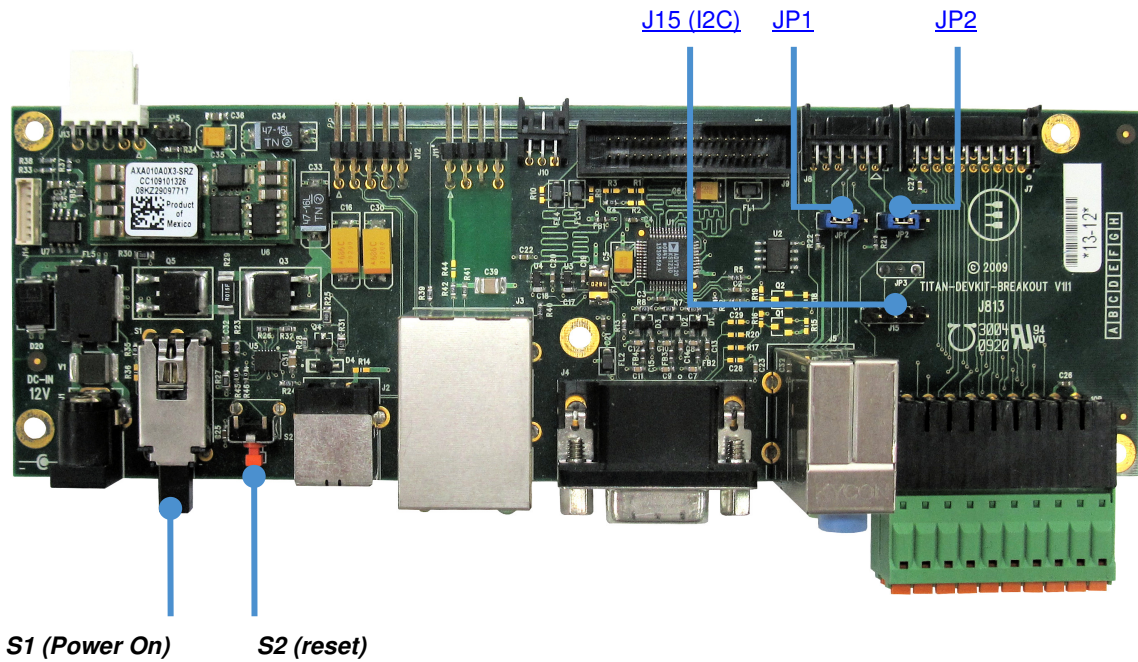
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Connectors

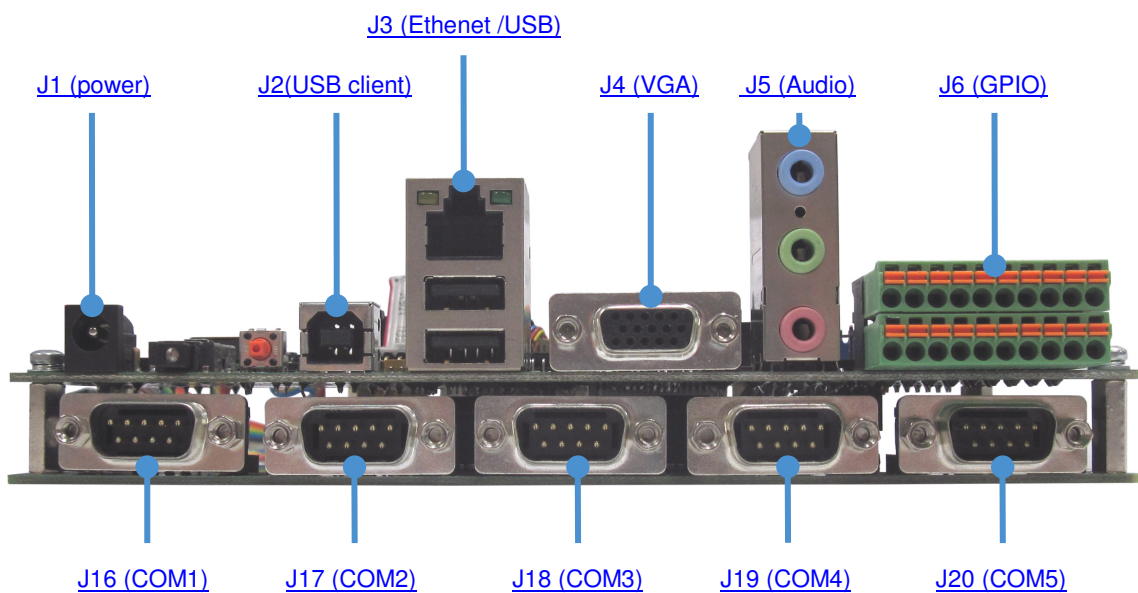
TITAN-Breakout board

The following diagrams show the location of the connectors and jumpers on the TITAN-Breakout.

Top view



Front view

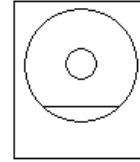


Connectors

Connector	Function
J1	Power Jack
J2	USB Client
J3	Ethernet and dual USB
J4	VGA
J5	Audio
J6	GPIO
J15	I2C
J16	COM1 RS232
J17	COM2 RS232
J18	COM3 RS232
J19	COM4 RS232
J20	COM5 RS422/485
JP1	Audio out right selection
JP2	Audio out left selection

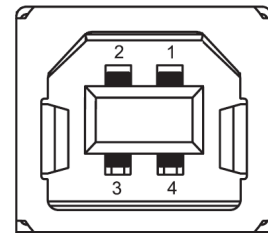
J1 – +5V DC IN, 2.1mm jack

Pin	Signal name
Tip	Positive terminal (+12V)
Sleeve	Negative terminal (0V)



J2 – USB Client

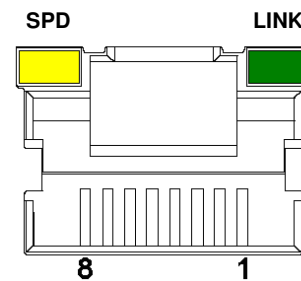
Pin	Signal name
1	USB_VCC
2	USB_D-
3	USB_D+
4	GND



J3 – Ethernet and USB1/2

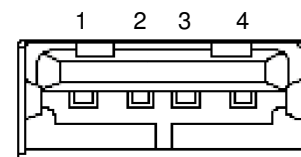
Ethernet

Pin	Signal name
1	TX+
2	TX-
3	RX+
4	-
5	-
6	RX-
7	-
8	-



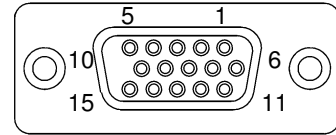
USB1/2

Pin (top)	Signal name	Pin (bottom)	Signal name
1	USB_VCC2	1	USB_VCC1
2	USB_D2-	2	USB_D1-
3	USB_D2+	3	USB_D1+
4	GND	4	GND



J4 –VGA connector

Pin	Signal name	Pin	Signal name
1	RED	9	5V
2	GREEN	10	GND
3	BLUE	11	NC
4	NC	12	DDC_SDA
5	GND	13	HSYNC
6	GND	14	VSYNC
7	GND	15	DDC_SCL
8	GND		

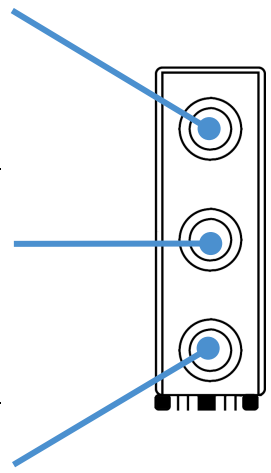


J5 – Audio jacks

Pin	Signal name
Tip	LINE_IN_L
Ring	LINE_IN_R
Sleeve	GND

Pin	Signal name
Tip	LINE_OUT_L
Ring	LINE_OUT_R
Sleeve	GND

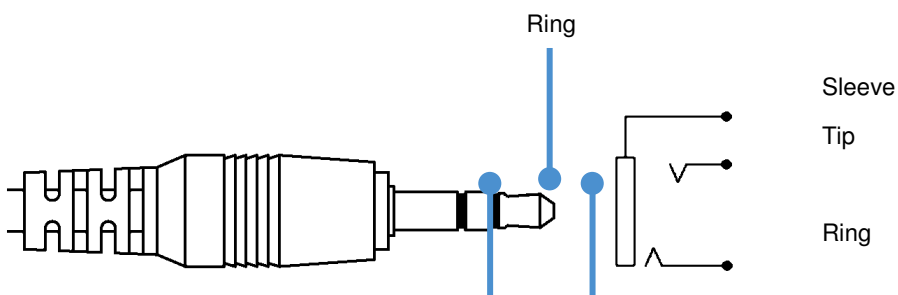
Pin	Signal name
Tip	MIC_IN
Ring	
Sleeve	Ground



LINE IN, MIC, LINE OUT – Audio connectors

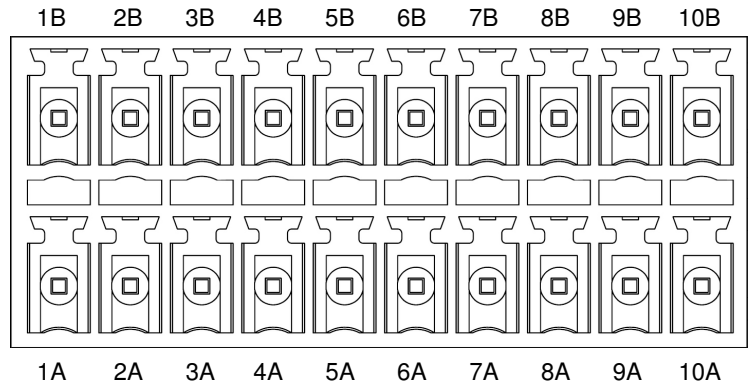
3.5mm stereo audio jacks are used for audio connection.

The audio connectors are illustrated in the following diagram:



J6 – GPIO connector

Pin	Signal name	Pin	Signal name
1A	P7	1B	P15
2A	P6	2B	P14
3A	P5	3B	P13
4A	P4	4B	P12
5A	P2	5B	P11
6A	P3	6B	P10
7A	P1	7B	P9
8A	P0	8B	P8
9A	VCC	9B	VCC
10A	GND	10B	GND



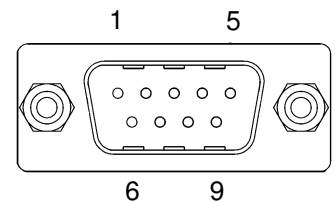
J15 – I2C

Pin	Signal name
1	+3V3
2	I2C_SDA
3	I2C_SCL
4	GND



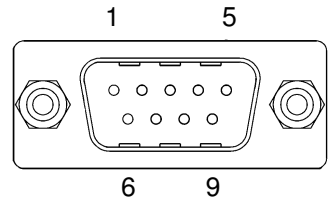
J16 – COM1 (RS232 serial port)

Pin	Signal name	Pin	Signal name
1	DCD	6	DSR
2	RX	7	RTS
3	TX	8	CTS
4	DTR	9	RI
5	GND		



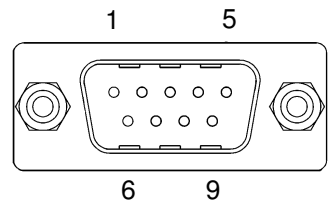
J17 – COM2 (RS232 serial port)

Pin	Signal name	Pin	Signal name
1	-	6	-
2	RX	7	RTS
3	TX	8	CTS
4	-	9	-
5	GND		



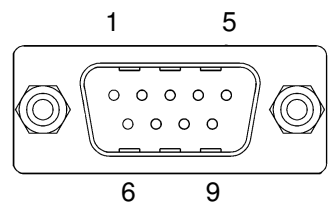
J18 – COM3 (RS232 serial port)

Pin	Signal name	Pin	Signal name
1	-	6	-
2	RX	7	-
3	TX	8	-
4	-	9	-
5	GND		



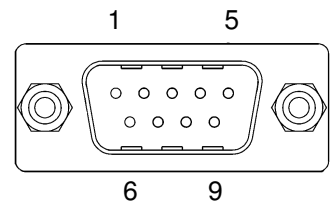
J19 – COM4 (RS232 serial port)

Pin	Signal name	Pin	Signal name
1	DCD	6	DSR
2	RX	7	RTS
3	TX	8	CTS
4	DTR	9	RI
5	GND		



J20 – COM5 (RS422/485 serial port)

Pin	Signal name	Pin	Signal name
1	-	6	-
2	-	7	-
3	RX/TX+	8	RX/TX-
4	RX+	9	RX-
5	GND		


JP1 – Headphones out right selection

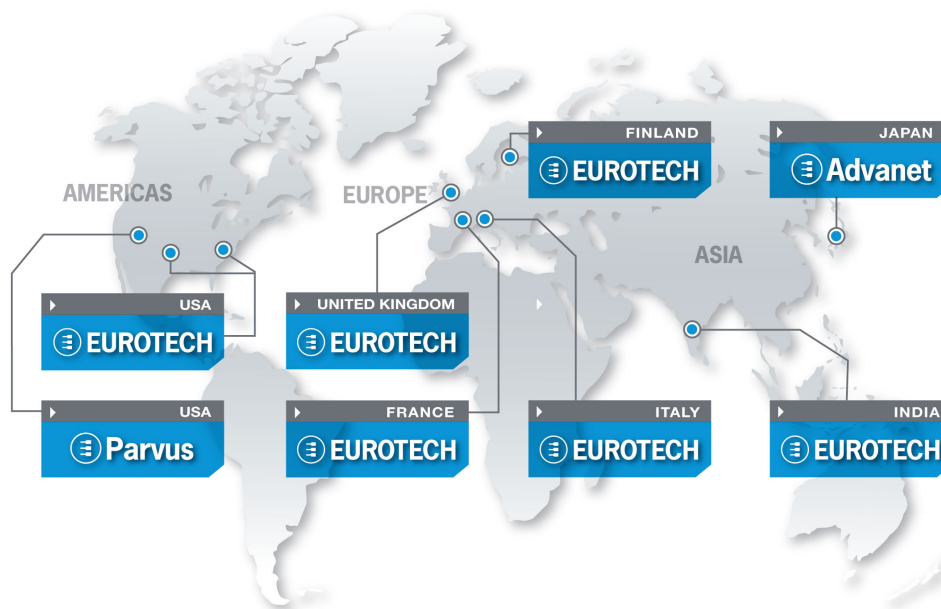
Pin	Signal name
1	LINE_OUT_R
2	HP_OUT_R
3	SPK_OUT_R


JP2 – Headphones out left selection

Pin	Signal name
1	LINE_OUT_L
2	HP_OUT_L
3	SPK_OUT_L



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