

QuickUSB Evaluation Board QUSBEVB Rev B Pin Definitions

Rev B
Date 2/20/2012



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Connector J1 - See QuickUSB Target Interface Document

Connector J2 - 40 Pin 0.1" Header

Pin	Name	Dir	Description	Pin	Name	Dir	Description
1	+5V	N/A	Unregulated +5V from the USB bus <i>(Note 1)</i>	2	+5V	N/A	Unregulated +5V from the USB bus <i>(Note 1)</i>
3	PA0	I/O	FX2 Port A, Bit 0 / nSS2 / nINT0 / U1 Pin R14	4	RESET_B	OD	FX2 reset, Active low / U1 Pin L13
5	PA1	I/O	FX2 Port A, Bit 1 / nSS3 / nINT1 / U1 Pin T14	6	CLKOUT	Output	FX2 48MHz CPU clock
7	PA2	I/O	FX2 Port A, Bit 2 / nSS4 / SLOE / U1 Pin R13	8	IFCLK	Output	FX2 48MHz GPIO clock / U1 Pin H2
9	PA3	I/O	FX2 Port A, Bit 3 / nSS5 / U1 Pin T13	10	INT4	Input	FX2 8051 INT4 IRQ. Active high, edge sensitive (Not Used)
11	PA4	I/O	FX2 Port A, Bit 4 / nSS6 / FIFOADR0 / U1 Pin R12	12	RXD_0	Input	FX2 Serial Port 0 RxD
13	PA5	I/O	FX2 Port A, Bit 5 / nSS7 / FIFOADR1 / U1 Pin T12	14	TXD_0	Output	FX2 Serial Port 0 TxD
15	PA6	I/O	FX2 Port A, Bit 6 / nSS8 / PKTEND / U1 Pin N11	16	TXD_1	Output	FX2 Serial Port 1 TxD
17	PA7	I/O	FX2 Port A, Bit 7 / nSS9 / nSLCS / FLAGD / U1 Pin P13	18	RXD_1	Input	FX2 Serial Port 1 RxD
19	PB0	I/O	FX2 Port B, Bit 0 / FD0 / U1 Pin P12	20	CTL0	Output	FX2 GPIF CTL 0 / CMD_DATA / FLAGA / U1 Pin N15
21	PB1	I/O	FX2 Port B, Bit 1 / FD1 / U1 Pin T10	22	CTL1	Output	FX2 GPIF CTL 1 / REN / FLAGB / nFULL / U1 Pin N16
23	PB2	I/O	FX2 Port B, Bit 2 / FD2 / U1 Pin R10	24	CTL2	Output	FX2 GPIF CTL 2 / WEN / FLAGC / nEMPTY / U1 Pin M14
25	PB3	I/O	FX2 Port B, Bit 3 / FD3 / U1 Pin P11	26	CTL3	Output	FX2 GPIF CTL 3 / nREN / U1 Pin P14
27	PB4	I/O	FX2 Port B, Bit 4 / FD4 / U1 Pin R11	28	CTL4	Output	FX2 GPIF CTL 4 / nWEN / U1 Pin M15
29	PB5	I/O	FX2 Port B, Bit 5 / FD5 / U1 Pin T11	30	CTL5	Output	FX2 GPIF CTL 5 / nOE / RDYTST / U1 Pin M16
31	PB6	I/O	FX2 Port B, Bit 6 / FD6 / U1 Pin R8	32	RXD0	Input	FX2 Serial Port 0 TTL RxD (Do not use if U1 is populated)
33	PB7	I/O	FX2 Port B, Bit 7 / FD7 / U1 Pin T8	34	TXD0	Output	FX2 Serial Port 0 TTL RxD (Do not use if U1 is populated)
35	T0	Input	FX2 Input for Timer0	36	T1	Input	FX2 Input for Timer1
37	NC	N/A	No Connect	38	NC	N/A	No Connect
39	DGND	N/A	Ground	40	DGND	N/A	Ground

Connector J3 - 40 Pin 0.1" Header

Pin	Name	Dir	Description	Pin	Name	Dir	Description
1	+5V	N/A	Unregulated +5V from the USB bus <i>(Note 1)</i>	2	+5V	N/A	Unregulated +5V from the USB bus <i>(Note 1)</i>
3	PC0	I/O	FX2 Port C, Bit 0 / GPIFADR0 / U1 Pin R7	4	RDY0	Input	FX2 GPIF input signal 0 / nEMPTY / nSLRD / READY / U1 Pin L14
5	PC1	I/O	FX2 Port C, Bit 1 / GPIFADR1 / U1 Pin T7	6	RDY1	Input	FX2 GPIF input signal 1 / nFULL / nSLWR / U1 Pin L15
7	PC2	I/O	FX2 Port C, Bit 2 / GPIFADR2 / U1 Pin N8	8	RDY2	Input	FX2 GPIF input signal 2 / U1 Pin L16
9	PC3	I/O	FX2 Port C, Bit 3 / GPIFADR3 / U1 Pin N6	10	RDY3	Input	FX2 GPIF input signal 3 / U1 Pin K16
11	PC4	I/O	FX2 Port C, Bit 4 / GPIFADR4 / U1 Pin P6	12	RDY4	Input	FX2 GPIF input signal 4 / U1 Pin K15
13	PC5	I/O	FX2 Port C, Bit 5 / GPIFADR5 / U1 Pin R6	14	RDY5	Input	FX2 GPIF input signal 5 / U1 Pin N4
15	PC6	I/O	FX2 Port C, Bit 6 / GPIFADR6 / U1 Pin T6	16	RXD1	Input	FX2 Serial Port 1 TTL RxD (Do not use if U1 is populated)
17	PC7	I/O	FX2 Port C, Bit 7 / GPIFADR7 / U1 Pin N7	18	TXD1	Output	FX2 Serial Port 1 TTL RxD (Do not use if U1 is populated)
19	PD0	I/O	FX2 Port D, Bit 0 / FD8 / U1 Pin R5	20	PE0	I/O	FX2 Port E, Bit 0 / DATA0 / MOSI / U1 Pin K13 / U1 Pin F1
21	PD1	I/O	FX2 Port D, Bit 1 / FD9 / U1 Pin T5	22	PE1	I/O	FX2 Port E, Bit 1 / DCLK / SCK / U1 Pin N13 / U1 Pin H4
23	PD2	I/O	FX2 Port D, Bit 2 / FD10 / U1 Pin R4	24	PE2	I/O	FX2 Port E, Bit 2 / nCE
25	PD3	I/O	FX2 Port D, Bit 3 / FD11 / U1 Pin T4	26	PE3	I/O	FX2 Port E, Bit 3 / nCONFIG / U1 Pin J5
27	PD4	I/O	FX2 Port D, Bit 4 / FD12 / U1 Pin P4	28	PE4	I/O	FX2 Port E, Bit 4 / nSTATUS / U1 Pin M13
29	PD5	I/O	FX2 Port D, Bit 5 / FD13 / U1 Pin P5	30	PE5	I/O	FX2 Port E, Bit 5 / CONF_DONE / MISO / U1 Pin N14 / U1 Pin L13
31	PD6	I/O	FX2 Port D, Bit 6 / FD14 / U1 Pin T3	32	PE6	I/O	FX2 Port E, Bit 6 / nSS0
33	PD7	I/O	FX2 Port D, Bit 7 / FD15 / U1 Pin R3	34	PE7	I/O	FX2 Port E, Bit 7 / GPIFADR8 / nSS1 / U1 Pin J4 / U1 Pin N3
35	SCL	OD	FX2 Clock for I2C interface (Termination Supplied on Board) / U1 Pin N1	36	WAKEUP_B	Input	FX2 USB Wakeup. Active low.
37	SDA	OD	FX2 Data for I2C interface (Termination Supplied on Board) / U1 Pin N2	38	SW_PG	Output	FX2 Power Good
39	DGND	N/A	Ground	40	DGND	N/A	Ground

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Connector J4 - 40 Pin 0.1" Header

Pin	Name	Dir	Description	Pin	Name	Dir	Description
1	+5V	N/A	Unregulated +5V from the USB bus <i>(Note 1)</i>	2	+5V	N/A	Unregulated +5V from the USB bus <i>(Note 1)</i>
3	IO_E1	I/O	U1 Pin E1 / LVDS16p / 3.3V or 2.5V Selectable	4	IO_E2	I/O	U1 Pin E2 / LVDS16n / 3.3V or 2.5V Selectable
5	IO_E3	I/O	U1 Pin E3 / LVDS19p / 3.3V or 2.5V Selectable	6	IO_E4	I/O	U1 Pin E4 / LVDS19n / 3.3V or 2.5V Selectable
7	IO_D2	I/O	U1 Pin D2 / LVDS20p / 3.3V or 2.5V Selectable	8	IO_D1	I/O	U1 Pin D1 / LVDS20n / 3.3V or 2.5V Selectable
9	IO_C1	I/O	U1 Pin C1 / LVDS26p / 3.3V or 2.5V Selectable	10	IO_C2	I/O	U1 Pin C2 / LVDS26n / 3.3V or 2.5V Selectable
11	IO_A3	I/O	U1 Pin A3 / LVDS27p / 3.3V or 2.5V Selectable	12	IO_B3	I/O	U1 Pin B3 / LVDS27n / 3.3V or 2.5V Selectable
13	IO_A4	I/O	U1 Pin A4 / LVDS28p / 3.3V or 2.5V Selectable	14	IO_B4	I/O	U1 Pin B4 / LVDS28n / 3.3V or 2.5V Selectable
15	IO_A5	I/O	U1 Pin A5 / LVDS30p / 3.3V or 2.5V Selectable	16	IO_B5	I/O	U1 Pin B5 / LVDS30n / 3.3V or 2.5V Selectable
17	IO_C6	I/O	U1 Pin C6 / LVDS32p / 3.3V or 2.5V Selectable	18	IO_D6	I/O	U1 Pin D6 / LVDS32n / 3.3V or 2.5V Selectable
19	IO_A6	I/O	U1 Pin A6 / LVDS36p / 3.3V or 2.5V Selectable	20	IO_B6	I/O	U1 Pin B6 / LVDS36n / 3.3V or 2.5V Selectable
21	IO_B7	I/O	U1 Pin B7 / LVDS44p / 3.3V or 2.5V Selectable	22	IO_A7	I/O	U1 Pin A7 / LVDS44n / 3.3V or 2.5V Selectable
23	IO_D10	I/O	U1 Pin D10 / LVDS45p / 3.3V or 2.5V Selectable	24	IO_D11	I/O	U1 Pin D11 / LVDS45n / 3.3V or 2.5V Selectable
25	IO_A10	I/O	U1 Pin A10 / LVDS52p / 3.3V or 2.5V Selectable	26	IO_B10	I/O	U1 Pin B10 / LVDS52n / 3.3V or 2.5V Selectable
27	IO_A11	I/O	U1 Pin A11 / LVDS54p / 3.3V or 2.5V Selectable	28	IO_B11	I/O	U1 Pin B11 / LVDS54n / 3.3V or 2.5V Selectable
29	IO_A12	I/O	U1 Pin A12 / LVDS58p / 3.3V or 2.5V Selectable	30	IO_B12	I/O	U1 Pin B12 / LVDS58n / 3.3V or 2.5V Selectable
31	IO_A13	I/O	U1 Pin A13 / LVDS59p / 3.3V or 2.5V Selectable	32	IO_B13	I/O	U1 Pin B13 / LVDS59n / 3.3V or 2.5V Selectable
33	IO_C12	I/O	U1 Pin C12 / LVDS60p / 3.3V or 2.5V Selectable	34	IO_C13	I/O	U1 Pin C13 / LVDS60n / 3.3V or 2.5V Selectable
35	IO_A14	I/O	U1 Pin A14 / LVDS60p / 3.3V or 2.5V Selectable	36	IO_B14	I/O	U1 Pin B14 / LVDS60n / 3.3V or 2.5V Selectable
37	IO_D13	I/O	U1 Pin D13 / LVDS62p / 3.3V or 2.5V Selectable	38	IO_C14	I/O	U1 Pin C14 / LVDS62n / 3.3V or 2.5V Selectable
39	DGND	N/A	Ground	40	DGND	N/A	Ground

Connector J5 - 40 Pin 0.1" Header

Pin	Name	Dir	Description	Pin	Name	Dir	Description
1	+5V	N/A	Unregulated +5V from the USB bus <i>(Note 1)</i>	2	+5V	N/A	Unregulated +5V from the USB bus <i>(Note 1)</i>
3	IO_C16	I/O	U1 Pin C16 / LVDS64p / 3.3V or 2.5V Selectable	4	IO_C15	I/O	U1 Pin C15 / LVDS64n / 3.3V or 2.5V Selectable
5	IO_E16	I/O	U1 Pin E16 / LVDS68p / 3.3V or 2.5V Selectable	6	IO_E15	I/O	U1 Pin E15 / LVDS68n / 3.3V or 2.5V Selectable
7	IO_D16	I/O	U1 Pin D16 / LVDS70p / 3.3V or 2.5V Selectable	8	IO_D15	I/O	U1 Pin D15 / LVDS70n / 3.3V or 2.5V Selectable
9	IO_F13	I/O	U1 Pin F13 / LVDS72p / 3.3V or 2.5V Selectable	10	IO_E13	I/O	U1 Pin E13 / LVDS72n / 3.3V or 2.5V Selectable
11	IO_G13	I/O	U1 Pin G13 / LVDS73p / 3.3V or 2.5V Selectable	12	IO_G12	I/O	U1 Pin G12 / LVDS73n / 3.3V or 2.5V Selectable
13	IO_F16	I/O	U1 Pin F16 / LVDS75p / 3.3V or 2.5V Selectable	14	IO_F15	I/O	U1 Pin F15 / LVDS75n / 3.3V or 2.5V Selectable
15	IO_G15	I/O	U1 Pin G15 / LVDS76p / 3.3V or 2.5V Selectable	16	IO_G16	I/O	U1 Pin G16 / LVDS76n / 3.3V or 2.5V Selectable
17	IO_J12	I/O	U1 Pin J12 / LVDS77p / 3.3V or 2.5V Selectable	18	IO_H12	I/O	U1 Pin H12 / LVDS77n / 3.3V or 2.5V Selectable
19	NC	N/A	No Connect	20	NC	N/A	No Connect
21	NC	N/A	No Connect	22	NC	N/A	No Connect
23	NC	N/A	No Connect	24	NC	N/A	No Connect
25	NC	N/A	No Connect	26	NC	N/A	No Connect
27	NC	N/A	No Connect	28	NC	N/A	No Connect
29	NC	N/A	No Connect	30	NC	N/A	No Connect
31	NC	N/A	No Connect	32	NC	N/A	No Connect
33	DGND	N/A	Ground	34	DGND	N/A	Ground
35	IO_L1	I/O	U1 Pin L1 / Single Ended I/O, 3.3V	36	IO_L2	I/O	U1 Pin L2 / Single Ended I/O, 3.3V
37	IO_M1	I/O	U1 Pin M1 / Single Ended I/O, 3.3V	38	IO_M2	I/O	U1 Pin M2 / Single Ended I/O, 3.3V
39	DGND	N/A	Ground	40	DGND	N/A	Ground

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Connector J6 - 20 Pin 0.1" Header

Pin	Name	Dir	Description	Pin	Name	Dir	Description
1	+5V	N/A	Unregulated +5V from the USB bus <i>(Note 1)</i>	2	+5V	N/A	Unregulated +5V from the USB bus <i>(Note 1)</i>
3	IO_C3	I/O	U1 Pin C3 / Single Ended I/O, 3.3V or 2.5V Selectable	4	IO_C4	I/O	U1 Pin C4 / Single Ended I/O, 3.3V or 2.5V Selectable
5	IO_C5	I/O	U1 Pin C5 / Single Ended I/O, 3.3V or 2.5V Selectable	6	IO_C11	I/O	U1 Pin C11 / Single Ended I/O, 3.3V or 2.5V Selectable
7	IO_D7	I/O	U1 Pin D7 / Single Ended I/O, 3.3V or 2.5V Selectable	8	IO_D8	I/O	U1 Pin D8 / Single Ended I/O, 3.3V or 2.5V Selectable
9	IO_D9	I/O	U1 Pin D9 / Single Ended I/O, 3.3V or 2.5V Selectable	10	IO_F3	I/O	U1 Pin F3 / Single Ended I/O, 3.3V or 2.5V Selectable
11	IO_F4	I/O	U1 Pin F4 / Single Ended I/O, 3.3V or 2.5V Selectable	12	IO_F14	I/O	U1 Pin F14 / Single Ended I/O, 3.3V or 2.5V Selectable
13	IO_G4	I/O	U1 Pin G4 / Single Ended I/O, 3.3V or 2.5V Selectable	14	IO_H13	I/O	U1 Pin H13 / Single Ended I/O, 3.3V or 2.5V Selectable
15	IO_K1	I/O	U1 Pin K1 / Single Ended I/O, 3.3V	16	IO_K2	I/O	U1 Pin K2 / Single Ended I/O, 3.3V
17	IO_K4	I/O	U1 Pin K4 / Single Ended I/O, 3.3V	18	IO_K5	I/O	U1 Pin K5 / Single Ended I/O, 3.3V
19	DGND	N/A	Ground	20	DGND	N/A	Ground

Connector J8 - JTAG Header

Pin	Name	Dir	Description	Pin	Name	Dir	Description
1	TCK	Input	U1 Pin F2 / JTAG Clock	2	DGND	N/A	Ground
3	TDO	Output	U1 Pin G2 / JTAG Data Out	4	VCCIO	N/A	+3.3V with P3 Jumper Present, +2.5V Without P3 Jumper Present
5	TMS	Input	U1 Pin G1 / JTAG Select	6	VCCIO	N/A	+3.3V with P3 Jumper Present, +2.5V Without P3 Jumper Present
7	NC	N/A	No Connect	8	NC	N/A	No Connect
9	TDI	Input	U1 Pin H5 / JTAG Data In	10	DGND	N/A	Ground

Connector J10 - 20 Pin 0.1" Header

Pin	Name	Dir	Description	Pin	Name	Dir	Description
1	+5V	N/A	Unregulated +5V from the USB bus <i>(Note 1)</i>	2	+5V	N/A	Unregulated +5V from the USB bus <i>(Note 1)</i>
3	ECLK1	Input	U1 Pin B9 / LVDSCLK4p / CLK9 / External Clock Input to FPGA	4	ECLK0	Input	U1 Pin A9 / LVDSCLK4n / CLK8 / External Clock Input to FPGA
5	ECLK3	Input	U1 Pin N9 / LVDSCLK6p / CLK13 / External Clock Input to FPGA	6	ECLK2	Input	U1 Pin N10 / LVDSCLK6n / CLK12 / External Clock Input to FPGA
7	NC	N/A	No Connect	8	NC	N/A	No Connect
9	MCLK	Output	U1 Pin H16 / On-board Clock (X1) Output	10	NC	N/A	No Connect
11	CLKOUTP0	Output	U1 Pin L4 / PLL1_OUTp / PLL Output from FPGA	12	CLKOUTN0	Output	U1 Pin M4 / PLL1_OUTn / PLL Output from FPGA
13	CLKOUTP1	Output	U1 Pin E14 / PLL2_OUTp / PLL Output from FPGA	14	CLKOUTN1	Output	U1 Pin D14 / PLL2_OUTn / PLL Output from FPGA
15	CLKOUTP2	Output	U1 Pin D3 / PLL3_OUTp / PLL Output from FPGA	16	CLKOUTN2	Output	U1 Pin D4 / PLL3_OUTn / PLL Output from FPGA
17	CLKOUTP3	Output	U1 Pin P16 / PLL4_OUTp / PLL Output from FPGA	18	CLKOUTN3	Output	U1 Pin P15 / PLL4_OUTn / PLL Output from FPGA
19	DGND	N/A	Ground	20	DGND	N/A	Ground

Connector P1

Pin	Name	Dir	Description
1	NC	N/A	Not Connected
2	TXD_0	Output	FX2 RXD_0 Pin 51 (NULL Modem incorporated into board)
3	RXD_0	Input	FX2 TXD_0 Pin 50 (NULL Modem incorporated into board)
4	NC	N/A	Not Connected
5	DGND	N/A	Ground
6	NC	N/A	Not Connected
7	NC	N/A	Not Connected
8	NC	N/A	Not Connected
9	NC	N/A	Not Connected

Connector P2

Pin	Name	Dir	Description
1	NC	N/A	Not Connected
2	TXD_1	Output	FX2 RXD_1 Pin 53 (NULL Modem incorporated into board)
3	RXD_1	Input	FX2 TXD_1 Pin 52 (NULL Modem incorporated into board)
4	NC	N/A	Not Connected
5	DGND	N/A	Ground
6	NC	N/A	Not Connected
7	NC	N/A	Not Connected
8	NC	N/A	Not Connected
9	NC	N/A	Not Connected

QuickUSB Evaluation Board QUSBEVB Rev B Pin Definitions

Rev B
Date 2/20/2012



IC Socket X1 - Oscillator Socket

Pin	Name	Dir	Description	Pin	Name	Dir	Description
1	OE	Input	Not Connected	8	VCCIO	N/A	+3.3V with P3 Jumper Present, +2.5V Without P3 Jumper Present
4	DGND	N/A	Ground	5	OUT	Output	U1 Pin H16 / Oscillator Output / External Clock Input to FPGA

Notes:

1) +5V is the USB Bus Power. Do not exceed 400 mA total current drain from USB module. See QuickUSB® User Guide for more details.