QuickUSB Evaluation Board QUSBEVB Target Interface Connector
Rev A
Date 2/15/2006

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Connector J1 - See Target Interface Document

Connector J2

Pin	Name	Dir	Description	Pin	Name	Dir	Description
1	+5V	N/A	Unregulated +5V from the USB bus *(Note 1)*	2	+5V	N/A	Unregulated +5V from the USB bus *(Note 1)*
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 *(Note 4)*
13	PA5	I/O	FX2 Port A, Bit 5 / nSS7 / FIFOADR1 / U1 Pin T12	14	TXD_0	Output	FX2 Serial Port 0 TxD *(Note 4)*
15	PA6	I/O	FX2 Port A, Bit 6 / nSS8 / PKTEND / U1 Pin N11	16	TXD_1	Output	FX2 Serial Port 1 TxD *(Note 4)*
17	PA7	I/O	FX2 Port A, Bit 7 / nSS9 / nSLCS / FLAGD / U1 Pin P13	18	RXD_1	Input	FX2 Serial Port 1 RxD *(Note 4)*
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	GND	N/A	Ground	40	GND	N/A	Ground

Connector J3

Pin	Name	Dir	Description	Pin	Name	Dir	Description
1	+5V	N/A	Unregulated +5V from the USB bus *(Note 1)*	2	+5V	N/A	Unregulated +5V from the USB bus *(Note 1)*
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. (not used)
37	SDA	OD	FX2 Data for I2C interface (Termination Supplied on Board) / U1 Pin N2	38	SW_PG	Output	FX2 Power Good
39	GND	N/A	Ground	40	GND	N/A	Ground

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Connector J4

Pin	Name	Dir	Description	Pin	Name	Dir	Description
1	+5V	N/A	Unregulated +5V from the USB bus *(Note 1)*	2	+5V	N/A	Unregulated +5V from the USB bus *(Note 1)*
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	GND	N/A	Ground	40	GND	N/A	Ground

Connector J5

Pin	Name	Dir	Description	Pin	Name	Dir	Description
1	+5V	N/A	Unregulated +5V from the USB bus *(Note 1)*	2	+5V	N/A	Unregulated +5V from the USB bus *(Note 1)*
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	GND	N/A	Ground	34	GND	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	GND	N/A	Ground	40	GND	N/A	Ground

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Connector J6

Pin	Name	Dir	Description	Pin	Name	Dir	Description
1	+5V	N/A	Unregulated +5V from the USB bus *(Note 1)*	2	+5V	N/A	Unregulated +5V from the USB bus *(Note 1)*
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	GND	N/A	Ground	20	GND	N/A	Ground

Connector J10

Pin	Name	Dir	Description	Pin	Name	Dir	Description
1	+5V	N/A	Unregulated +5V from the USB bus *(Note 1)*	2	+5V	N/A	Unregulated +5V from the USB bus *(Note 1)*
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	GND	N/A	Ground	20	GND	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	GND	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	GND	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

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.
2) RXD0, TXD0, RXD1, & TXD1 are all TTL Serial Lines from the FX2. These signals are only usable when U1 is not populated.
3) SPI functionality is provided on DATA0 and DCLK.
4) If U1 on QuickUSB Module is populated with a Linear Tech part, QuickUSB Module uses EIA/TIA 564 levels. If U1 on QuickUSB Module is populated with a TI part, QuickUSB Module uses RS-232 levels.