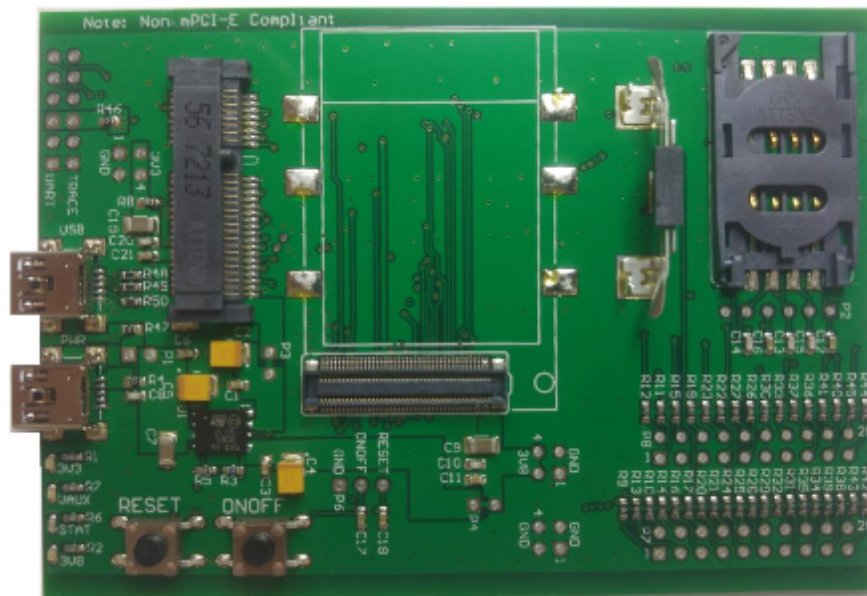HARDWARE REFERENCE MANUAL

EVB-MPCI-GFF

A GLYN PTY LTD EVB TO EVALUATE GFF, MPCI AND XBEE INTERFACE BOARDS DESIGNED BY GLYN PTY LTD

August 11, 2025

Revision 1.4

Revision	Date	Notes
1.0	28/09/2017	Initial hardware reference manual
1.1	14/11/2017	Update documentation wording
1.2	27/07/2018	Update layout, change introduction, additional wording changes
1.3	18/10/2018	Added XBee carrier board information, additional dimension information
1.4	11/08/2025	Updated logo Updated footer Updated introduction Updated Glynstore links

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Contents

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1   Introduction

The Glyn Pty Ltd EVB has been designed as a low-cost, easy-to-use board to evaluate both GFF, MPCI, and XBEE carrier boards that are available from Glyn.

The layout allows for one of GFF or MPCI or XBEE(via MPCI adaptor board) to be inserted at a time. The board can communicate and be powered via the UART cable or USB. An additional USB connection is available as a dedicated power source.

The board also has a large IO section available to allow for easy interfacing for fast evaluation.

A SIM holder is available for easy cellular connection for either board.

An adaptor board is also available for the XBee interface that plugs into the MPCI slot to allow for simple evaluation of the Glyn XBee range.

To purchase the Glyn EVB as well as our carrier boards, please check out our Webstore - Glynstore

Direct link to EVB page - EVB-MPCI-GFF

Direct link to Adaptor board page - XBEE-EVB-ADAPTOR

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2 Mechanical Specifications

2.1 Dimensions

EVB physical size - 100 x 70 x 8.2mm

XBEE adaptor physical size - 51.1 x 30.1 x 6.8mm(including header)

2.2 Socket Types

2.2.1 80-Way Plug Specifications

Manufacturer: Molex Inc.
Part Number: 0539490878

2.2.2 80-Way Socket Specifications

Manufacturer: Molex Inc.
Part Number: 0541500878

2.2.3 MPCI Connector Specifications

Socket:
Manufacturer: Attend
Part Number: 119A-56A00-R04

Latch:
Manufacturer: Attend
Part Number: 119A-56LATCH

2.2.4 10-Pin Right Angle Surface Mount Header

Manufacturer: Samtec Inc.
Part Number: TMM-110-01-T-S-SM

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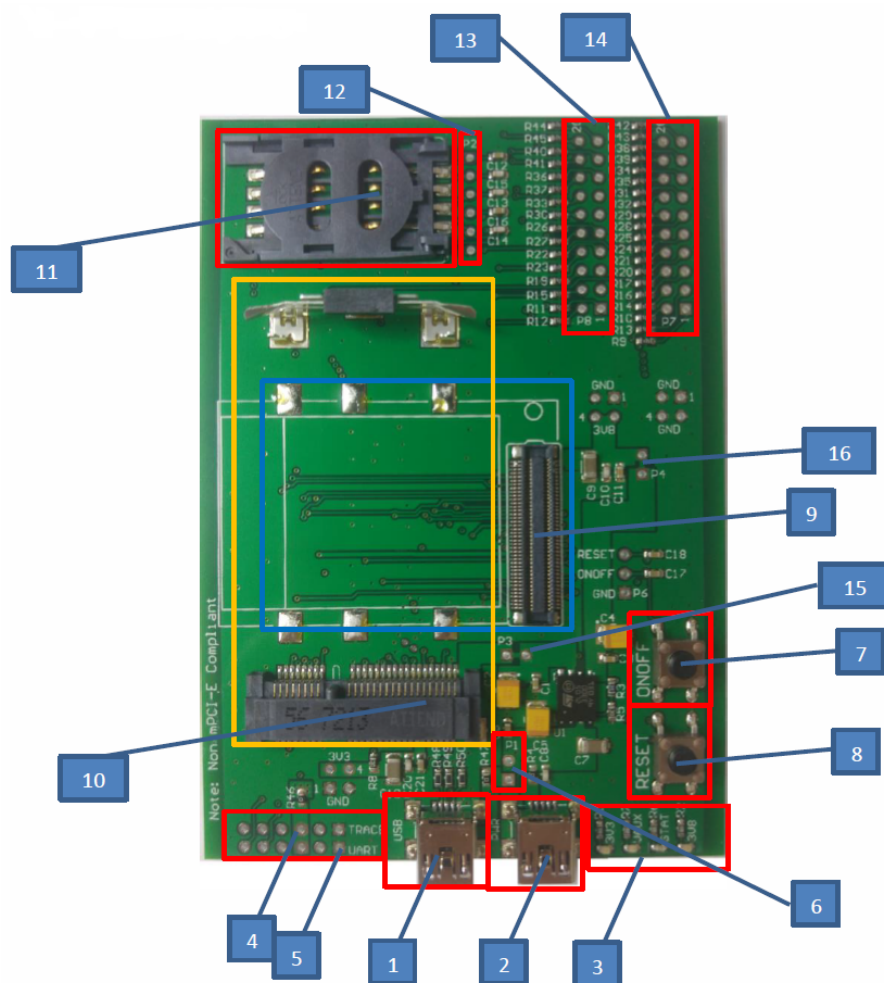www.glynstore.com

Pitch - Mating: 0.079"(2.00mm)
No. of Positions: 10
No. of Rows: 1
Mounting Type: Surface Mount

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3   Hardware Interface

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1. USB

USB Mini - Serial BUS connection to MPCI(10) or 80-way(9) interfaces. Option to power EVB direct via USB by connecting P1(6) via jumper or similar.

2. PWR

USB Mini - 5V power input only.

3. LED x 4

LED indicators - 3V3, VAUX, STAT_LED, and 3V8 from left-to-right.

4. Trace

Connection mapping below.

Note - Square pad indicates pin 1.

Pin	80-Way	MPCI	Function
1	GND	GND	GND
2	N/A	N/A	N/A
3	N/A	N/A	5V
4	Pin 24	N/A	TX_TRACE
5	Pin 23	N/A	RX_TRACE
6	N/A	N/A	N/A

5. UART

Connection mapping below.

Note - Square pad indicates pin 1.

Pin	80-Way	MPCI	Function
1	GND	GND	GND
2	Pin 28	Pin 45	CTS
3	N/A	N/A	5V
4	Pin 25	Pin 51	TXD
5	Pin 26	Pin 49	RXD
6	Pin 31	Pin 47	RTS

6. P1

Open connection, bridge connection to enable power input direct from USB(1).

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7. ONOFF
80-Way - On/Off button.
MPCI - No connection.

8. RESET
80-Way - Reset button for module.
MPCI - Reset button for module.

9. 80-Way Interface
Connector for Glyn GFF modules, including GFF910, GFFSigfox, GFFLora, and others including UC/GC864 from Telit.

10. MPCI Interface
Connector for Glyn MPCI modules, including both Glyn and Telit Xe910 carrier boards.

11. SIM Holder
SIM card holder, only used for cellular modems on either GFF or MPCI carrier boards.

12. P2
SIM mapping below.
Note - Square pad indicates pin 1.

Pin	Name	Notes
1	SIMVCC	Connected directly to modem interface
2	SIMRST	Connected directly to modem interface
3	SIMIO	Connected directly to modem interface
4	SIMIN	Connected directly to modem interface
5	SIMCLK	Connected directly to modem interface
6	GND	System Ground

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13: P8

IO Header 1 mapping below.

Note - Square pad indicates pin 1.

Pin	80-Way	MPCI	Function	Notes
1	45	42	STAT_LED	
2	9	5	EAR+	
3	49	N/A	PWR_MON	
4	10	7	EAR-	
5	50	11	VAUX	
6	13	1	MIC+	
7	51 & 52	N/A	CHARGE	
8	14	3	MIC-	
9	55	N/A	VRTC	
10	N/A	20	W_DIS#	
11	37	N/A	ADC1	
12	36	N/A	DVI_CLK	
13	38	N/A	ADC2	
14	N/A	N/A	N/A	
15	41	N/A	SPI_MRDY	
16	65	N/A	DVI_RX	
17	42	N/A	SPI_SRDY	
18	71	N/A	DVI_WA	
19	43	N/A	SPI_CLK	
20	44	N/A	SPI_CS	

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14. P7

IO Header 2 mapping below.

Note - Square pad indicates pin 1.

| Pin	80-Way	MPCI	Function	Notes
1	70	N/A	GPIO1	
2	23	N/A	TX_AUX	
3	74	6	GPIO2	
4	24	N/A	RX_AUX	
5	66	28	GPIO3	
6	25	51	TXD	
7	59	16	GPIO4	
8	26	49	RXD	
9	78	N/A	GPIO5	
10	27	46	DSR	
11	68	N/A	GPIO6	
12	28	45	CTS	
13	73	N/A	GPIO7	
14	29	48	DTR	
15	67	N/A	GPIO8	
16	30	32	RING	
17	76	N/A	GPIO9	
18	31	47	RTS	
19	63	N/A	GPIO10/DVI_TX	DVI_TX - If configured on GFF910
20	32	44	DCD	

15. P3

Power path for MPCI interface.

Can be used to measure current by cutting tracks between the 2 pads.

16. P4

Power path for 80-Way interface.

Can be used to measure current by cutting tracks between the 2 pads.

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4   XBee Adaptor Board
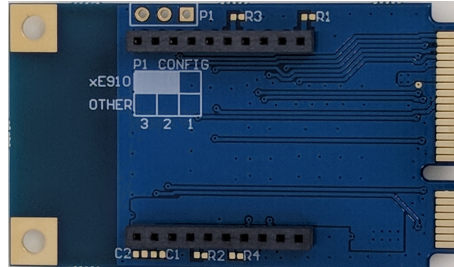
The XBEE-EVB-ADAPTOR has been designed to plug into the MPCI connector on board to allow for interfacing with XBEE carrier boards.

4.1   Mating Pinout for Adaptor board

XBee Pin	MPCI Pin	Notes
1	3V3	
2	49	
3	51	
4	GND	Can be cut - jumper R1
5	33	
6	3V3	Can be cut - jumper R4
7	38	
8	36	
9	48	
10	GND	
11	GND	Can be cut - jumper R3
12	45	
13	42	
14	3V3	
15	GND	Can be cut - jumper R2
16	47	
17	28	
18	16	
19	6	
20	P1-On board	Pin 1 & 2 pull to 3V3, Pin 2 & 3 pull to GND

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5   Power Supply

Glyn EVB supports 5V power supply.
This can be supplied via PWR-USB connector, UART, or USB-USB connec-
tor after bridging P1.

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