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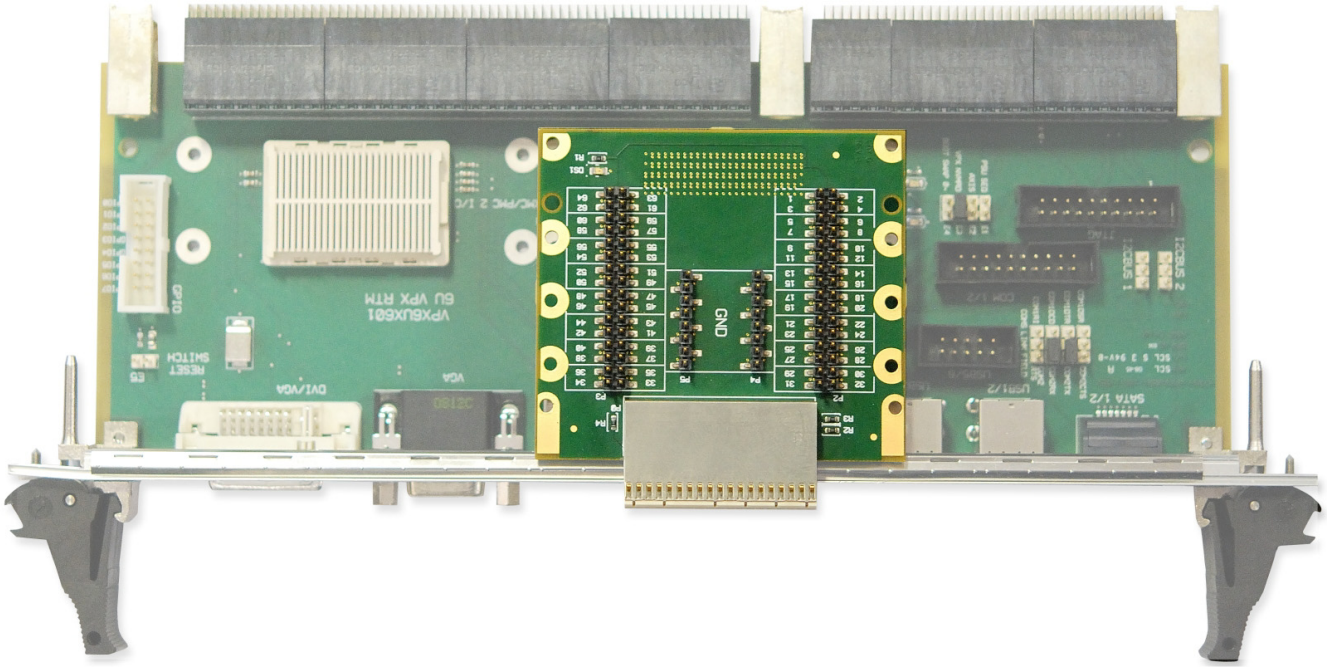
Find the *Abaco Systems PEX430* at our website: *Click HERE*

Hardware Reference Manual

MEZZIOP0

Edition 1DG

Publication No. MEZZIOP0-HRM/1DG



abaco SYSTEMS

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Document History

Edition	Date	Description
1	April 2011	Board Artwork Revision 1
1	February 2012	Note added to Sections 1.4.2/3/4
1QD	November 2016	No technical content change; re-branding only
1DG	June 2018	Minor corrections

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About This Manual

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WARNING
Warnings alert you to the risk of severe personal injury.


CAUTION
Cautions alert you to system danger or loss of data.


NOTE
Notes call attention to important features or instructions.


TIP
Tips give helpful hints on how to achieve things.


LINK
Links take you to other documents or websites. The purple link color may also be used within a body of text or paragraph to indicate a link (or hyperlink) to a different part of the same document.

Numbers

All numbers are expressed in decimal, except addresses and memory or register data, which are expressed in hexadecimal. Where confusion may occur, decimal numbers have a "D" subscript and binary numbers have a "b" subscript. The prefix "0x" shows a hexadecimal number, following the 'C' programming language convention. Thus:

One dozen = 12D = 0x0C = 1100b

The multipliers "k", "M" and "G" have their conventional scientific and engineering meanings of $x10^3$, $x10^6$ and $x10^9$ respectively. The only exception to this is in the description of the size of memory areas, when "K", "M" and "G" mean $x2^{10}$, $x2^{20}$ and $x2^{30}$ respectively.


NOTE
When describing transfer rates, "k", "M" and "G" mean $x10^3$, $x10^6$ and $x10^9$ *not* $x2^{10}$, $x2^{20}$ and $x2^{30}$.

Multiple bit fields are numbered from 0 to n, where 0 is the LSB and n is the MSB.

Text

Signal names ending with a tilde ("~") denote active low signals; all other signals are active high.

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LINKS
VPX I/O Modules Hardware Reference Manual, publication number VPXIOM-0HH.

PEX430 Hardware Reference Manual, publication number PEX430-0HH.

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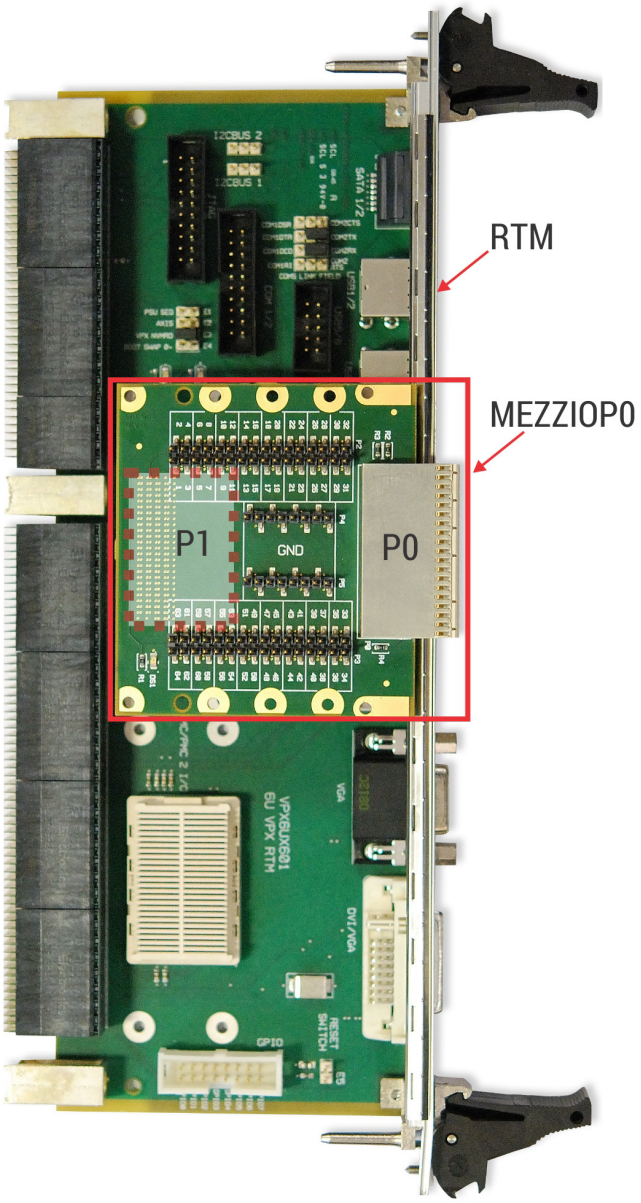
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1 • Functionality and Layout

1.1 Functional Description

Figure 1-1 MEZZIOP0 fitted to an RTM



MEZZIOP0 is connected via P1 to mating connectors on RTMs such as VPX6UX600, etc, as shown above. A fixing kit of screws and spacers is provided to enable a stable mechanical fitting with the RTM to be made.

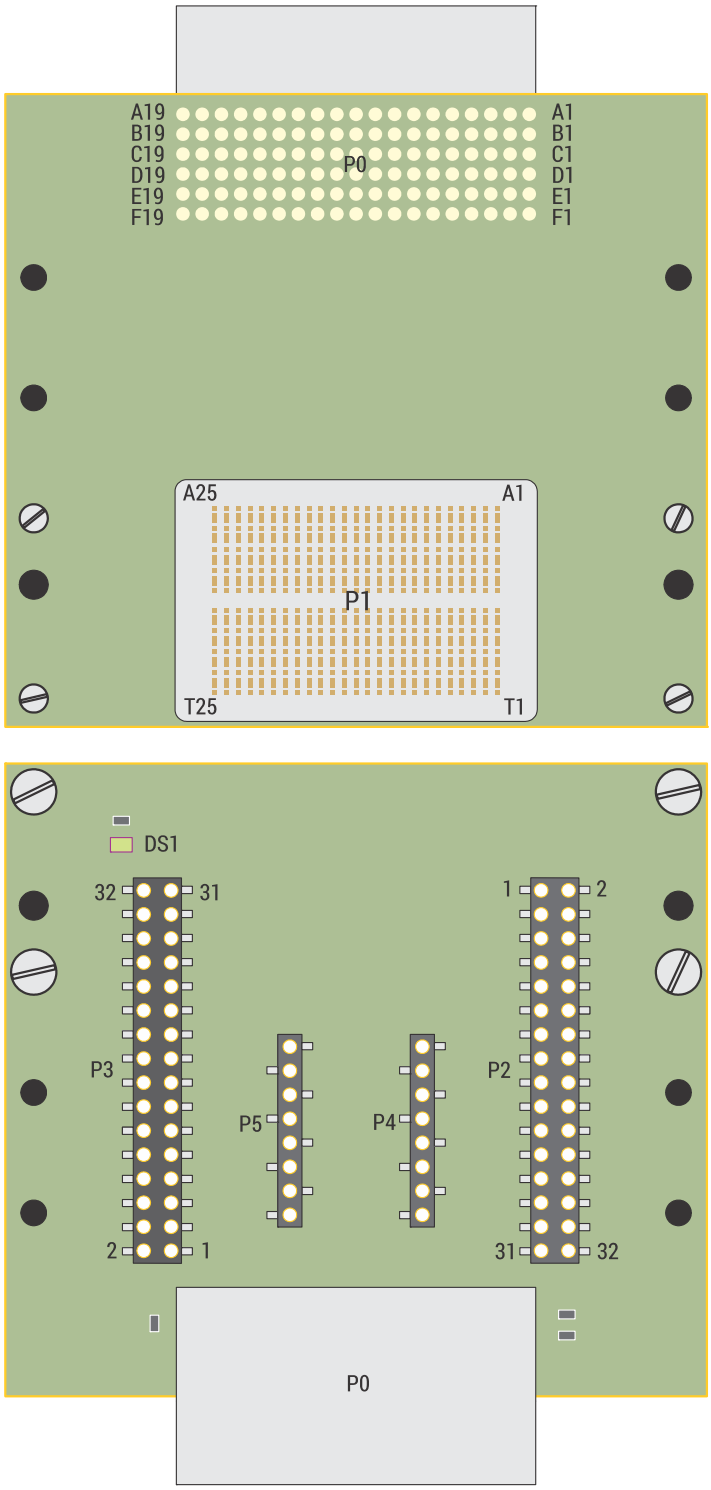
P0 is a standard Type B P0 connector that provides access to the IO signals of the PMC and XMC boards that may be fitted to the host SBC. See the VPX I/O Modules Hardware Reference Manual for more information.

LINK
VPX I/O Modules Hardware Reference Manual, publication number VPXIOM-0HH.

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1.2 Layout

Figure 1-2 MEZZIOP0 Component Layout



1.3 LED

DS1 is a green LED that indicates, when lit, that the MEZZIOP0 is connected to a compatible RTM.

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1.4 Connectors

1.4.1 Connector Designations

Table 1-1 Connector Designations

Connector	Description	Signals
P0	Type B	PMC_IO(1:64), VCC, GND
P1	18x25 way RTM interface	PMC_IO(1:64), VCC, GND
P2, P3	0.1" header, 2x16 way	PMC_IO(1:64)
P4, P5	0.1" header, 1x8 way	Ground only

1.4.2 P0

Addendum
February 2012

NOTE
When used with the PEX430RTM, the numbering of the PMC/XMC signals is different from that shown in Table 1-2 - see the PEX430RTM Hardware Reference Manual for details.

Table 1-2 P0 Pin Assignments

Pin	Row A	Row B	Row C	Row D	Row E	Row F
1	NC	NC	NC	NC	NC	GND
2	NC	NC	NC	NC	NC	GND
3	NC	NC	NC	VCC	VCC	GND
4	PMC_IO_5	PMC_IO_4	PMC_IO_3	PMC_IO_2	PMC_IO_1	GND
5	PMC_IO_10	PMC_IO_9	PMC_IO_8	PMC_IO_7	PMC_IO_6	GND
6	PMC_IO_15	PMC_IO_14	PMC_IO_13	PMC_IO_12	PMC_IO_11	GND
7	PMC_IO_20	PMC_IO_19	PMC_IO_18	PMC_IO_17	PMC_IO_16	GND
8	PMC_IO_25	PMC_IO_24	PMC_IO_23	PMC_IO_22	PMC_IO_21	GND
9	NC	NC	NC	NC	NC	GND
10	NC	NC	NC	NC	NC	GND
11	NC	NC	NC	NC	NC	GND
12	PMC_IO_30	PMC_IO_29	PMC_IO_28	PMC_IO_27	PMC_IO_26	GND
13	PMC_IO_35	PMC_IO_34	PMC_IO_33	PMC_IO_32	PMC_IO_31	GND
14	PMC_IO_40	PMC_IO_39	PMC_IO_38	PMC_IO_37	PMC_IO_36	GND
15	PMC_IO_45	PMC_IO_44	PMC_IO_43	PMC_IO_42	PMC_IO_41	GND
16	PMC_IO_50	PMC_IO_49	PMC_IO_48	PMC_IO_47	PMC_IO_46	GND
17	PMC_IO_55	PMC_IO_54	PMC_IO_53	PMC_IO_52	PMC_IO_51	GND
18	PMC_IO_60	PMC_IO_59	PMC_IO_58	PMC_IO_57	PMC_IO_56	GND
19	VCC	PMC_IO_64	PMC_IO_63	PMC_IO_62	PMC_IO_61	GND

NOTE
All signals are tracked as 50 Ω single-ended, with matched lengths between pairs, e.g. PMC_IO(1) with PMC_IO(3).

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1.4.3 P2 (PMC_IO(1:32))

Addendum
February 2012



NOTE

When used with the PEX430RTM, the numbering of the PMC/XMC signals is different from that shown in Table 1-3 - see the PEX430RTM Hardware Reference Manual for details

Table 1-3 P2 Pin Assignments

Pin	Signal	Pin	Signal
1	PMC_IO_1	2	PMC_IO_2
3	PMC_IO_3	4	PMC_IO_4
5	PMC_IO_5	6	PMC_IO_6
7	PMC_IO_7	8	PMC_IO_8
9	PMC_IO_9	10	PMC_IO_10
11	PMC_IO_11	12	PMC_IO_12
13	PMC_IO_13	14	PMC_IO_14
15	PMC_IO_15	16	PMC_IO_16
17	PMC_IO_17	18	PMC_IO_18
19	PMC_IO_19	20	PMC_IO_20
21	PMC_IO_21	22	PMC_IO_22
23	PMC_IO_23	24	PMC_IO_24
25	PMC_IO_25	26	PMC_IO_26
27	PMC_IO_27	28	PMC_IO_28
29	PMC_IO_29	30	PMC_IO_30
31	PMC_IO_31	32	PMC_IO_32

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1.4.4 P3 (PMC_IO(33:64))

Addendum
February 2012

NOTE
When used with the PEX430RTM, the numbering of the PMC/XMC signals is different from that shown in Table 1-4 - see the PEX430RTM Hardware Reference Manual for details

Table 1-4 P3 Pin Assignments

Pin	Signal	Pin	Signal
1	PMC_IO_33	2	PMC_IO_34
3	PMC_IO_35	4	PMC_IO_36
5	PMC_IO_37	6	PMC_IO_38
7	PMC_IO_39	8	PMC_IO_40
9	PMC_IO_41	10	PMC_IO_42
11	PMC_IO_43	12	PMC_IO_44
13	PMC_IO_45	14	PMC_IO_46
15	PMC_IO_47	16	PMC_IO_48
17	PMC_IO_49	18	PMC_IO_50
19	PMC_IO_51	20	PMC_IO_52
21	PMC_IO_53	22	PMC_IO_54
23	PMC_IO_55	24	PMC_IO_56
25	PMC_IO_57	26	PMC_IO_58
27	PMC_IO_59	28	PMC_IO_60
29	PMC_IO_61	30	PMC_IO_62
31	PMC_IO_63	32	PMC_IO_64

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