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# TPIM004

## PIM I/O Module for Quad Ethernet PMCs

Version 1.0

### User Manual

Issue 1.0

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**TPIM004-10**

PIM I/O Module with 4 RJ45 connectors for e.g. TPMC382, or TPMC882

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**Style Conventions**

Hexadecimal characters are specified with prefix 0x, i.e. 0x029E (that means hexadecimal value 029E).

For signals on hardware products, an 'Active Low' is represented by the signal name with # following, i.e. IP\_RESET#.

Access terms are described as:

W	Write Only
R	Read Only
R/W	Read/Write
R/C	Read/Clear
R/S	Read/Set

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# 1 Product Description

The TPIM004 is a standard single-width PIM I/O module. PIM Modules are used with a PIM Carrier like TEWS' TCP020-TM, TVME020-TM or others to offer easy access to the back I/O lines of PMCs.

The TPIM004 provides access to the Fast Ethernet ports of TEWS' Fast Ethernet PMCs with back I/O like the TPMC882-11 or the TPMC382. Refer to the TPMC Data Sheets to find out if the TPIM004 can be used with the corresponding PMC.

The operating temperature range is -40°C to +85°C.

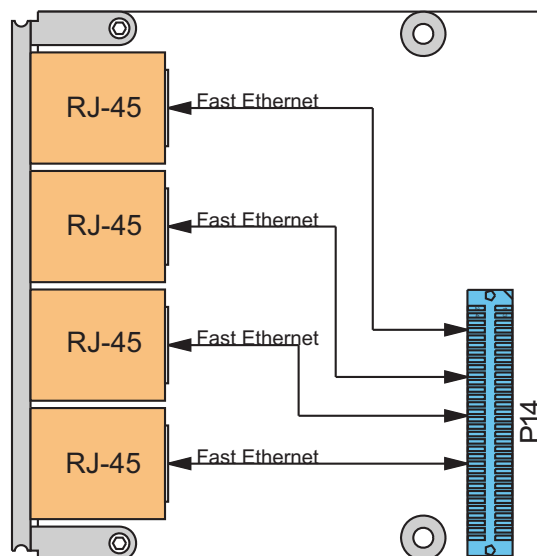


Figure 1-1 : Block Diagram

## 2 Technical Specification

<b>PIM Interface</b>		
<b>Form Factor</b>	Standard single-width PIM I/O Module	
<b>Front Panel</b>	EMI Front Panel	
<b>Number of PMC I/O Lines supported</b>	32	
<b>On Board Devices</b>		
<b>Common Mode Choke</b>	2 x LG01-0356N2 or compatible	
<b>I/O Interface</b>		
<b>Number of Channels</b>	4 x Fast Ethernet Port	
<b>I/O Connector</b>	4 x RJ45 Modular Jack (AMP 406732-2 or compatible)	
<b>Physical Data</b>		
<b>Power Requirements</b>	none	
<b>Temperature Range</b>	Operating	-40°C to +85°C
	Storage	-40°C to +85°C
<b>MTBF</b>	742000 h	
<b>Humidity</b>	5 – 95 % non-condensing	
<b>Weight</b>	45 g	

Figure 2-1 : Technical Specification

# 3 Pin Assignment

## 3.1 Overview

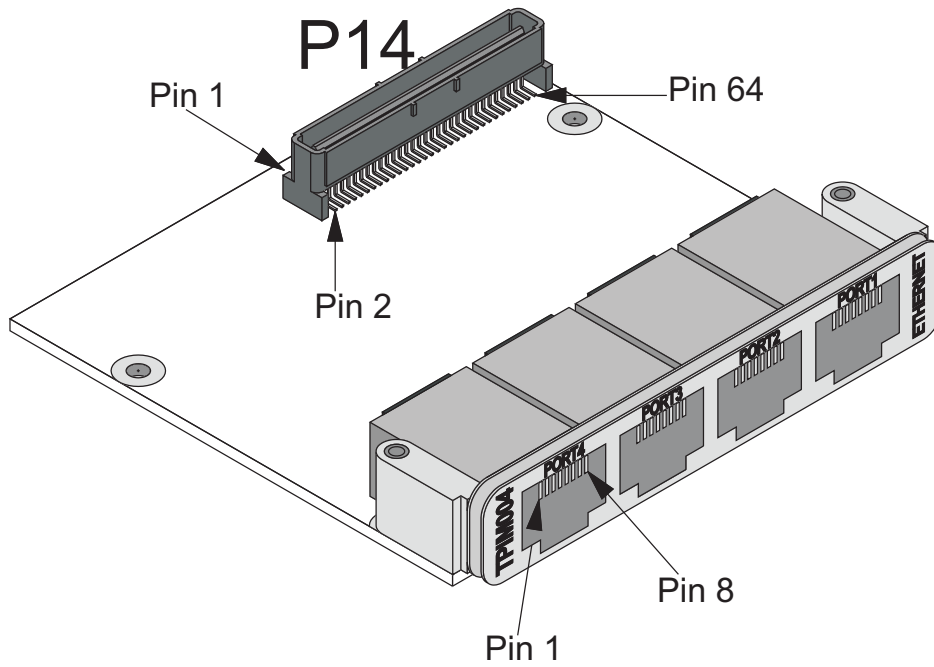


Figure 3-1 : TPIM004-10 Connector Location



## 3.2 Connector P14

P14 Pin	Signal Name	Signal Name	P14 Pin
1	Not Connected	Not Connected	2
3	Not Connected	Not Connected	4
5	Not Connected	Not Connected	6
7	Not Connected	Not Connected	8
9	Not Connected	Not Connected	10
11	Not Connected	Not Connected	12
13	COMMON4	COMMON4	14
15	LAN4_Tx+	LAN4_Rx+	16
17	COMMON4	COMMON4	18
19	LAN4_Tx-	LAN4_Rx-	20
21	Not Connected	Not Connected	22
23	COMMON3	COMMON3	24
25	LAN3_Tx+	LAN3_Rx+	26
27	COMMON3	COMMON3	28
29	LAN3_Tx-	LAN3_Rx-	30
31	Not Connected	Not Connected	32
33	COMMON2	COMMON2	34
35	LAN2_Tx+	LAN2_Rx+	36
37	COMMON2	COMMON2	38
39	LAN2_Tx-	LAN2_Rx-	40
41	Not Connected	Not Connected	42
43	COMMON1	COMMON1	44
45	LAN1_Tx+	LAN1_Rx+	46
47	COMMON1	COMMON1	48
49	LAN1_Tx-	LAN1_Rx-	50
51	Not Connected	Not Connected	52
53	Not Connected	Not Connected	54
55	Not Connected	Not Connected	56
57	Not Connected	Not Connected	58
59	Not Connected	Not Connected	60
61	Not Connected	Not Connected	62
63	Not Connected	Not Connected	64

Figure 3-2 : P14 Pin Assignment

### 3.3 Front Panel I/O Connectors

On the TPIM004-10, the Ethernet signals are accessible by four RJ45 Modular Jacks. The connectors are located in the PIM front panel. For Pin Assignment and Front Panel labeling, see the figures below.

Pin	Signal
1	TX+
2	TX-
3	RX+
4	Not Used*)
5	Not Used*)
6	RX-
7	Not Used*)
8	Not Used*)

\*) These pins are connected to the termination plane via 75 Ohm resistors. This provides a low frequency return path for the Ethernet signals.

Figure 3-3 : Per Channel Front I/O Pin Assignment

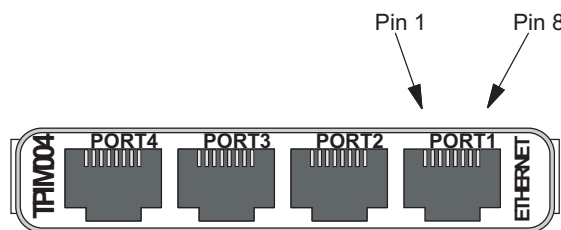


Figure 3-4 : Front Panel View