



# VMEbus Modules

Data Sheets of TEWS' VMEbus Modules

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**TEWS TECHNOLOGIES GmbH**

Am Bahnhof 7 25469 Halstenbek, Germany

Phone: +49 (0) 4101 4058 0

Fax: +49 (0) 4101 4058 19

e-mail: [info@tews.com](mailto:info@tews.com)

[www.tews.com](http://www.tews.com)

## **About TEWS TECHNOLOGIES**

TEWS TECHNOLOGIES is a leading solutions provider of embedded I/O and CPU products based on open architecture standards such as PMC, XMC, IndustryPack® (IP), CompactPCI, standard PCI, PCIe, VME, and AMC.

TEWS has more than 30 years of experience designing and building turn-key embedded interface solutions using the philosophy to listen and respond to our customers' needs.

Using this 'customer first' approach, TEWS has developed a large number of standard and custom products for applications in industrial control, telecommunication infrastructure, medical equipment, traffic control and COTS.

TEWS' line of embedded I/O solutions is available worldwide through a global network of distributors.

## **Quality Assurance / Warranty**

TEWS operates three subsidiaries to meet global demand for pre and post sales support, reduced development time, long term product availability, and complete product lifecycle management.

TEWS is committed to continuously improving the quality of our products and services. As a reflection of our commitment to quality, TEWS has implemented and received ISO9001:2008 certification.

All TEWS' products feature a five-year limited warranty.

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## RoHS / WEEE Compliance

TEWS TECHNOLOGIES believes in conducting business in a manner that respects the environment and consequently has embraced the RoHS regulations of the European Community.

TEWS now produces RoHS-compliant versions of our products, provided all required components are available RoHS-compliant. Products which do not have RoHS-compliant components available may be redesigned to meet the regulations on a case-by-case basis. Redesigned product will match the original product in form, fit and/or function whenever possible.

Non-compliant products will continue to be available for all applications which are exempt from the RoHS directives and have a continuing requirement for leaded solder.

More information regarding RoHS compliance is available on the specific product pages at [www.tews.com](http://www.tews.com).

## Software support

Software support is a critical and defining component of the TEWS' I/O product offering. Our modular hardware designs are coupled with extensive software drivers and support for most major real-time and server operating systems such as VxWorks, Windows XP/XPE/2000, Integrity, Linux, LynxOS, and QNX. Supported CPU architectures are Intel, PowerPC and 68k (for IndustryPack only).

For IndustryPack carriers and modules, TEWS has developed a layered driver concept that includes both a carrier driver layer and an IP module driver layer.

All TEWS' IndustryPack carriers are supported directly by the carrier driver, and a generic driver is included for integration of third party products.

A key element of our software is our support staff. All TEWS' support engineers are professionally trained to ensure in-depth support for software drivers and integration.

## VMEbus Modules

VMEbus technology is well-established for industrial applications and automation technology with high-security standards, infinite processor performance requirements, and real-time capability. A wide range of technical and commercial aspects have contributed to the unique success of the VMEbus concept. Among these aspects is the international open standard nature of VME, a mechanical structure based on classic 19-inch rackmount concepts, a choice of 3U and 6U Eurocard sizing, a wide range of COTS (commercial off-the-shelf) products, a wide vendor base, and continued improvement to the VME standard.

After more than two decades on the market, VMEbus has become a proven and reliable industry standard for many industrial and communications applications.

Since 1985, TEWS TECHNOLOGIES has offered VME products. At that time, TEWS recognized the need for a standard I/O product offering, and with Motorola's backing of the bus architecture, VME was the natural choice. Our experience in the modular I/O market grew from our work with VME. In addition to our well known modular I/O

solutions, we offer VME IndustryPack carriers, VME PowerPC CPU designs, and general VME-based industrial I/O solutions. TEWS is committed to long-term support of the VMEbus, and will continue to announce VME products in the near future.

If you wish to inquire about custom VME designs, please contact TEWS directly at our offices in Germany or the United States. TEWS works closely with OEM and government customers to deliver accelerated time to market, long-term product availability and comprehensive product lifecycle management -- from the design stage through manufacturing, testing and beyond to post-sales support.

In addition to our well known IP modules, we offer a complete line of PCI, PCIe, Compact PCI, XMC, AMC, and numerous PMC modules off-the-shelf.

All TEWS modules feature a five-year limited warranty, and many are offered standard in extended temperature (-40°C to +85°C). Software drivers for VxWorks, LynxOS, Linux, QNX, Integrity and Windows XP/XPE/2000 are available.

For more information go to [www.tews.com](http://www.tews.com).

# TVME200 VMEbus Carrier for 4 IndustryPacks®

### Application Information

The TVME200 is 6U VMEbus Carrier for up to 4 single-size or 2 double-size IndustryPack (IP) modules used to build modular, flexible and cost effective I/O solutions for applications in process control, medical systems, telecommunication and traffic control.



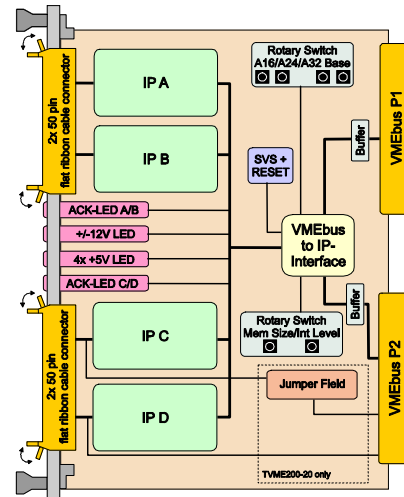
A set of 16-position rotary switches allows easy configuration of VME Short I/O and Memory addresses. Interrupt routing from the IP slots to the VME IRQ's can be done in two ways: programmable by software or selection of predefined sets by a rotary switch.

Four 50 pin 0.1 inch flat ribbon cable connectors mounted in the front panel of the TVME200 provide access to all IP I/O lines. Additional, on the TVME200-20 all I/O lines of 'IP D' are routed to VME P2 and 14 user selectable I/O lines of 'IP C' can be routed to VME P2 via a jumper field.

Status indicators for IP access, +5V and +/-12V are provided.

The IP power lines are fuse protected by self healing fuses and RF filtered. The operating temperature ranges between -40°C and +85°C.

For First-Time-Buyers the Engineering Documentation TVME200-ED is recommended. The Engineering Documentation includes TVME200-DOC, schematics and data sheets of TVME200.



### Technical Information

- Form Factor: VMEbus Board, 6U
- VMEbus Slave Interface:
  - Short I/O: A16, D08/16, size: 1 Kbyte
  - Standard memory: A24, D08/16
    - Size: programmable, 32 Kbytes to 2 Mbytes per IP
  - Extended memory: A32, D08/16
    - Size: fixed, 8 Mbytes per IP
  - Interrupts: IRQ1-7
- ANSI/VITA 4-1995 compliant interface to IndustryPack modules
  - IndustryPack slots: Four single-size or two double-size with front panel I/O
  - 8 MHz interface, no DMA
  - Routing of IP interrupt levels to VME IRQ1-7: programmable by software or selection of predefined sets by a rotary switch
  - I/O access: 50 pin 0.1 inch flat ribbon cable connector per IP mounted in front panel
    - Rear I/O of 'IP C' and 'IP D' (TVME200-20 only)
- Status LED's
  - ACK LED for each IP module
  - +5V Power LED for each IP slot
  - +12V and -12V Power LED
- Self healing fuses and RF-filtering on all IP power lines
- Operating temperature -40°C to +85°C

### Order Information

#### RoHS Compliant

- TVME200-10R** VMEbus Carrier for 4 IP modules (6U);  
Front panel I/O, Standard Handles
- TVME200-20R** VMEbus Carrier for 4 IP modules (6U);  
Front panel I/O and Rear I/O of 'IP C'  
and 'IP D', Standard Handles

#### None RoHS Compliant

- TVME200-10 None RoHS compliant version of  
TVME200-10R
- TVME200-20 None RoHS compliant version of  
TVME200-20R

#### Documentation

- TVME200-DOC** User Manual
- TVME200-ED** Engineering Documentation (TVME200-  
DOC, Schematics, Assembly Drawing,  
Data Sheets)

#### Software

- CARRIER-SW-25** Integrity Software Support
- CARRIER-SW-42** VxWorks Software Support (Legacy  
and VxBus-enabled Software Support)
- CARRIER-SW-65** Windows XP/XPE/2000 IP Carrier  
Software Support
- CARRIER-SW-72** LynxOS IP Carrier Software Support
- CARRIER-SW-82** Linux IP Carrier Software Support
- CARRIER-SW-95** QNX 6 IP Carrier Software Support
- For other operating systems please contact TEWS.

#### Related Products

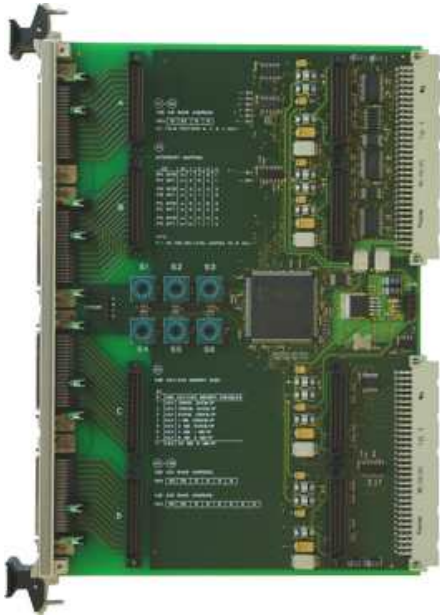
- TA305** Cable Kit for Modules with 50 pin  
ribbon cable connector

## TVME201 VMEbus Carrier for 4 IndustryPacks®

### Application Information

The TVME201 is 6U VMEbus Carrier for up to four single-size or two double-size IndustryPack (IP) modules allowing to build up modular, flexible and cost effective I/O solutions for all kinds of applications like process control, medical systems, telecommunication and traffic control.

For improved EMI protection, four HD50 SCSI-2 type connectors are mounted in the EMI front panel of the TVME201 and provide access to all IP I/O lines. Status indicators for IP access, +5V and +/-12V are provided in the front panel.



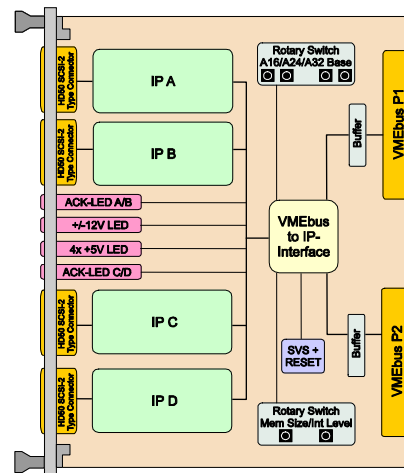
A set of 16-position rotary switches allows easy configuration of VME Short I/O and Memory addresses. Interrupt routing from the IP slots to the VME IRQ's can be done in two ways: programmable by software or selection of predefined sets by a rotary switch.

The IP power lines are fuse protected by self healing fuses and RF filtered. The operating temperature ranges between -40°C and +85°C.

For First-Time-Buyers the Engineering Documentation TVME201-ED is recommended. The Engineering Documentation includes TVME201-DOC, schematics and data sheets of TVME201.

### Technical Information

- Form Factor: VMEbus board, 6U
- VMEbus slave interface:
- Short I/O: A16, D08/16, size: 1 Kbytes
- Standard Memory: A24, D08/16
- Size: programmable, 32 Kbytes to 2 Mbytes per IP
- Extended Memory: A32, D08/16
- Size: fixed, 8 Mbytes per IP
- Interrupts: IRQ1-7
- ANSI/VITA 4-1995 compliant interface to IndustryPack modules
- IndustryPack slots: Four single-size or two double-size with front panel I/O
- 8 MHz interface, no DMA
- Routing of IP Interrupt Levels to VME IRQ1-7: programmable by software or selection of predefined sets by a rotary switch
- I/O access by HD50 SCSI-2 type connector per IP mounted in EMI front panel
- EMI front panel
- Status LED's
- ACK LED for each IP module
- +5V Power LED for each IP slot
- +12V and -12V Power LED
- Self Healing fuses and RF-filtering on all IP power lines
- Operating Temperature -40°C to +85°C



### Order Information

#### RoHS Compliant

**TVME201-10R** VMEbus Carrier for 4 IP modules (6U);  
Front panel I/O, Standard Handles

#### None RoHS Compliant

**TVME201-10** None RoHS compliant version of TVME201-10R

#### Documentation

**TVME201-DOC** User Manual  
**TVME201-ED** Engineering Documentation (TVME201-DOC, Schematics, Assembly Drawing, Data Sheets)

#### Software

**CARRIER-SW-25** Integrity Software Support  
**CARRIER-SW-42** VxWorks Software Support (Legacy and VxBus-enabled Software Support)  
**CARRIER-SW-65** Windows XP/XPE/2000 IP Carrier Software Support  
**CARRIER-SW-72** LynxOS IP Carrier Software Support  
**CARRIER-SW-82** Linux IP Carrier Software Support  
**CARRIER-SW-95** QNX 6 IP Carrier Software Support  
For other operating systems please contact TEWS.

#### Related Products

**TA301** Cable Kit for modules with HD50 connector

### TVME202 VMEbus Carrier for 4 IndustryPacks®

#### Application Information

The TVME202 is 6U VMEbus Carrier for up to 4 single-size or 2 double-size IndustryPack (IP) modules provides modular, flexible and cost effective I/O solutions for applications in process control, medical systems, telecommunication and traffic control.

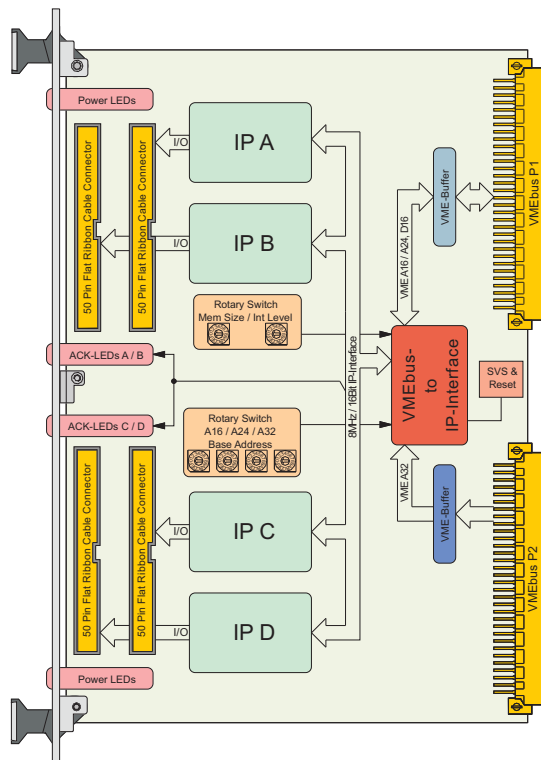
A set of 16-position rotary switches allows easy configuration of VME Short I/O and Memory addresses. Interrupt routing from the IP slots to the VME IRQ's are programmable by software or can be selected from predefined sets by a rotary switch.

Four 50 pin 0.1 inch flat ribbon cable connectors mounted on the TVME202 provide front I/O access to all IP I/O lines.

Status indicators for IP access, +5V and +/-12V are provided.

The IP power lines are fuse protected by self healing fuses and RF filtered. The operating temperature ranges between -40°C and +85°C.

For First-Time-Buyers the Engineering Documentation TVME202-ED is recommended. The Engineering Documentation includes TVME202-DOC, schematics and data sheets of TVME202.



#### Technical Information

- Form Factor: VMEbus Board, 6U
- VMEbus Slave Interface:
  - Short I/O: A16, D08/16, size: 1 Kbyte
  - Standard memory: A24, D08/16
    - Size: programmable, 32 Kbytes to 2 Mbytes per IP
  - Extended memory: A32, D08/16
    - Size: fixed, 8 Mbytes per IP
  - Interrupts: IRQ1-7
- ANSI/VITA 4-1995 compliant interface to IndustryPack modules
  - IndustryPack slots: Four single-size or two double-size with front panel I/O
  - 8 MHz interface, no DMA
  - Routing of IP interrupt levels to VME IRQ1-7: programmable by software or selection of predefined sets by a rotary switch
  - I/O access: 50 pin 0.1 inch flat ribbon cable connector per IP
- Status LED's
  - ACK LED for each IP module
  - +5V Power LED for each IP slot
  - +12V and -12V Power LED
- Self healing fuses and RF-filtering on all IP power lines
- Operating temperature -40°C to +85°C

### Order Information

#### RoHS Compliant

**TVME202-10R** VMEbus Carrier for 4 IP modules (6U);  
Front panel I/O, Standard Handles

#### None RoHS Compliant

TVME202-10 None RoHS compliant version of  
TVME202-10R

#### Documentation

**TVME202-DOC** User Manual

**TVME202-ED** Engineering Documentation (TVME202-  
DOC, Schematics, Assembly Drawing,  
Data Sheets)

#### Software

**CARRIER-SW-25** Integrity Software Support

**CARRIER-SW-42** VxWorks Software Support (Legacy  
and VxBus-enabled Software  
Support)

**CARRIER-SW-65** Windows XP/XPE/2000 IP Carrier  
Software Support

**CARRIER-SW-72** LynxOS IP Carrier Software Support

**CARRIER-SW-82** Linux IP Carrier Software Support

**CARRIER-SW-95** QNX 6 IP Carrier Software Support

For other operating systems please contact TEWS.

#### Related Products

**TA305** Cable Kit for Modules with 50 pin  
ribbon cable connector

### TVME210 VMEbus Carrier for 2 IndustryPacks®

#### Application Information

The TVME210 is a 3U VMEbus Carrier for up to two single-size or one double-size IndustryPack (IP) modules allowing to build up modular, flexible and cost effective I/O solutions for all kinds of applications like process control, medical systems, telecommunication and traffic control.

Two 50 pin 0.1 inch flat ribbon cable connectors mounted in the front panel of the TVME210 provide access to all IP I/O lines. Status indicators for IP access, +5V and +/-12V are provided.



TVME210-10



TVME210-11

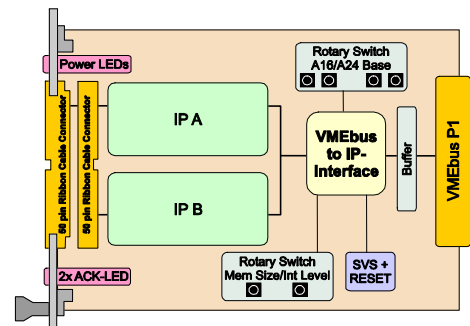
A set of 16-position rotary switches allows easy configuration of VME Short I/O and Memory addresses. Interrupt routing from the IP slots to the VME IRQ's can be done in two ways: programmable by software or selection of predefined sets by a rotary switch.

The IP power lines are fuse protected by self healing fuses and RF filtered. The operating temperature range is -40°C and +85°C.

For First-Time-Buyers the Engineering Documentation TVME210-ED is recommended. The Engineering Documentation includes TVME210-DOC, schematics and data sheets of TVME210.

#### Technical Information

- Form Factor: VMEbus board, 3U
- VMEbus Slave Interface:
  - Short I/O: A16, D08/16, size: 512 bytes
  - Standard Memory: A24, D08/16
  - Size: programmable, 32 Kbytes to 4 Mbytes per IP or 2 Mbytes to 8 Mbytes for one IP
  - Interrupts: IRQ1-7
- ANSI/VITA 4-1995 compliant interface to IndustryPack modules
  - IndustryPack slots: Two single-size or one double-size with front panel I/O
  - 8 MHz interface, no DMA
  - Routing of IP Interrupt Levels to VME IRQ1-7: programmable by software or selection of predefined sets by a rotary switch
  - I/O access: 50 pin 0.1 inch flat ribbon cable connector (1x90°, 1x180°) per IP mounted in front panel
- Status LED's
  - ACK LED for each IP module
  - +5V Power LED for each IP slot
  - +12V and -12V Power LED
- Self Healing fuses and RF-filtering on all IP power lines
- Operating Temperature -40°C to +85°C



### Order Information

#### RoHS Compliant

- TVME210-10R** VMEbus Carrier for 2 IP modules (3U), front panel I/O, Standard Handles, 3U front panel
- TVME210-11R** VMEbus Carrier for 2 IP modules (3U), front panel I/O, Standard Handles, 6U front panel

#### None RoHS Compliant

- TVME210-10 None RoHS compliant version of TVME210-10R
- TVME210-11 None RoHS compliant version of TVME210-11R

#### Documentation

- TVME210-DOC** User Manual
- TVME210-ED** Engineering Documentation (TVME210-DOC, Schematics, Assembly Drawing, Data Sheets)

#### Software

- CARRIER-SW-25** Integrity Software Support
- CARRIER-SW-42** VxWorks Software Support (Legacy and VxBus-enabled Software Support)
- CARRIER-SW-65** Windows XP/XPE/2000 IP Carrier Software Support
- CARRIER-SW-72** LynxOS IP Carrier Software Support
- CARRIER-SW-82** Linux IP Carrier Software Support
- CARRIER-SW-95** QNX 6 IP Carrier Software Support
- For other operating systems please contact TEWS.

#### Related Products

- TA305** Cable Kit for modules with 50 pin ribbon cable connector

### TVME211 VMEbus Carrier for 2 IndustryPacks®

#### Application Information

The TVME211 is a 3U VMEbus Carrier for up to two single-size or one double-size IndustryPack (IP) modules allowing to build up modular, flexible and cost effective I/O solutions for all kinds of applications like process control, medical systems, telecommunication and traffic control.

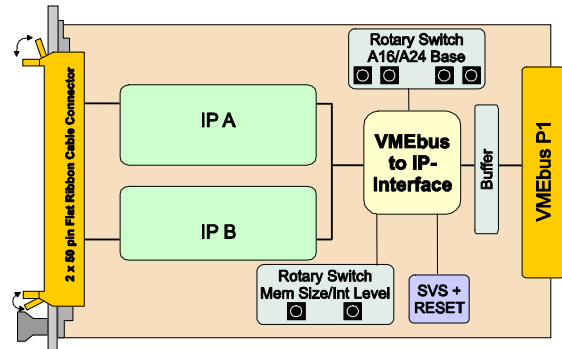
Two 50 pin 0.1 inch flat ribbon cable connectors mounted in the front panel of the TVME211 provide access to all IP I/O lines.

A set of 16-position rotary switches allows easy configuration of VME Short I/O and Memory addresses. Interrupt routing from the IP slots to the VME IRQ's can be done in two ways: programmable by software or selection of predefined sets by a rotary switch.

The IP power lines are fuse protected by self healing fuses and RF filtered. The operating temperature range is -40°C and +85°C.



For First-Time-Buyers the Engineering Documentation TVME211-ED is recommended. The Engineering Documentation includes TVME211-DOC, schematics and data sheets of TVME211.



#### Technical Information

- Form Factor: VMEbus board, 3U
- VMEbus Slave Interface:
  - Short I/O: A16, D08/16, size: 512 bytes
  - Standard Memory: A24, D08/16
  - Size: programmable, 32 Kbytes to 4 Mbytes per IP or 2 Mbytes to 8 Mbytes for one IP
  - Interrupts: IRQ1-7
- ANSI/VITA 4-1995 compliant interface to IndustryPack modules
  - IndustryPack slots: Two single-size or one double-size with front panel I/O
  - 8 MHz interface, no DMA
  - Routing of IP Interrupt Levels to VME IRQ1-7: programmable by software or selection of predefined sets by a rotary switch
  - I/O access: 50 pin 0.1 inch flat ribbon cable connector (stacked version) per IP mounted in front panel
- Self Healing fuses and RF-filtering on all IP power lines
- Operating temperature -40°C to +85°C

### Order Information

#### RoHS Compliant

<b>TVME211-10R</b>	VMEbus Carrier for 2 IP modules (3U), front panel I/O, Standard Handles, 3U front panel
<b>TVME211-11R</b>	VMEbus Carrier for 2 IP modules (3U), front panel I/O, Standard Handles, 6U front panel

#### None RoHS Compliant

TVME211-10	None RoHS compliant version of TVME211-10R
TVME211-11	None RoHS compliant version of TVME211-11R

#### Documentation

<b>TVME211-DOC</b>	User Manual
<b>TVME211-ED</b>	Engineering Documentation (TVME211-DOC, Schematics, Assembly Drawing, Data Sheets)

#### Software

<b>CARRIER-SW-25</b>	Integrity Software Support
<b>CARRIER-SW-42</b>	VxWorks Software Support (Legacy and VxBus-enabled Software Support)
<b>CARRIER-SW-65</b>	Windows XP/XPE/2000 IP Carrier Software Support
<b>CARRIER-SW-72</b>	LynxOS IP Carrier Software Support
<b>CARRIER-SW-82</b>	Linux IP Carrier Software Support
<b>CARRIER-SW-95</b>	QNX 6 IP Carrier Software Support

For other operating systems please contact TEWS.

#### Related Products

<b>TA305</b>	Cable Kit for modules with 50 pin ribbon cable connector
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### TVME220 VME64x Carrier for 4 IndustryPacks®

#### Application Information

The TVME220 is a 6U VMEbus carrier for up to 4 single-size or two double-size IndustryPack (IP) modules used to build modular, flexible and cost effective I/O solutions for applications in process control, medical systems, telecommunication and traffic control.

The TVME220 uses VME64x-compliant connectors to increase the quantity of rear I/O connections beyond that of standard VME. All of the 200 I/O lines from the 4 IP slots are available at the VME64x connectors P0 and P2. The I/O mapping is compliant to the ANSI/VITA 4.1-1996 standard.

Although the rear connectors are VME64x, the electrical interface is standard VME, so that nearly all CPU products still have full access to the IP modules mounted on the TVME220.

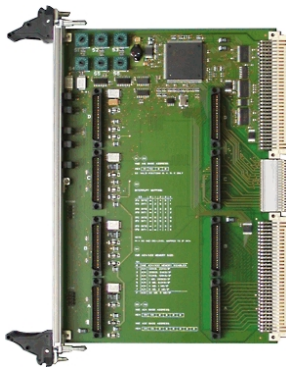
Status indicators for IP access, +5V and +/-12V are provided in the EMI shielded front panel.

A set of 16-position rotary switches allows easy configuration of VME Short I/O and memory addresses. Interrupt routing from the IP slots to the VME IRQ's can be done in two ways: programmable by software or selection of predefined sets by a rotary switch.

The IP power lines are fuse protected by self healing fuses and RF filtered. The operating temperature ranges between -40°C and +85°C.

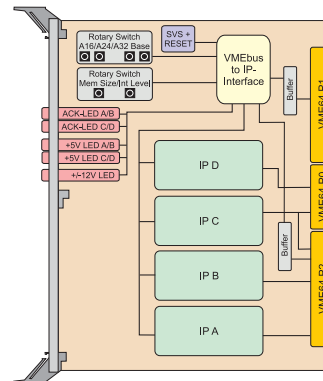
Two Transition Modules, TVME001-TM and TVME002-TM are available for easy access to all IP I/O lines.

For First-Time-Buyers the Engineering Documentation TVME220-ED is recommended. The Engineering Documentation includes TVME220-DOC, schematics and data sheets of TVME220.



#### Technical Information

- Form Factor: VME64x-Board, 6U
- VME64 (ANSI/VITA 1-1994) and VME64x (ANSI/VITA 1.1-1997) compliant Slave Interface
  - Short I/O: A16, D08/16, size: 1 Kbytes
  - Standard Memory: A24, D08/16
    - Size: 32 Kbytes to 2 Mbytes per IP
  - Extended Memory: A32, D08/16
    - Size: fixed, 8 Mbytes per IP
  - Interrupts: IRQ1-7
- ANSI/VITA 4-1995 compliant interface to IndustryPack modules
  - IndustryPack slots: Four single-size or two double-size with back I/O via P0 and P2
  - 8 MHz interface, no DMA
  - Routing of IP Interrupt Levels to VME IRQ1-7: programmable by software or selection of predefined sets by a rotary switch
- ANSI/VITA 4.1-1996 compliant mapping of IP I/O lines to VME64x connectors P0 and P2
- Status LED's:
  - ACK LED for each IP module
  - +5V Power LED for each IP slot
  - +12V and -12V Power LED
- Self Healing fuses and RF-filtering on all IP power lines
- Operating temperature -40°C to +85°C



### Order Information

#### RoHS Compliant

**TVME220-10R** VME64x VMEbus Carrier for 4 IP modules (6U), Back I/O on P0 and P2, EMI front panel

#### None RoHS Compliant

**TVME220-10** None RoHS compliant version of TVME220-10R

#### Documentation

**TVME220-DOC** User Manual  
**TVME220-ED** Engineering Documentation (TVME220-DOC, Schematics, Assembly Drawing, Data Sheets)

#### Software

**CARRIER-SW-25** Integrity Software Support  
**CARRIER-SW-42** VxWorks Software Support (Legacy and VxBus-enabled Software Support)  
**CARRIER-SW-65** Windows XP/XPE/2000 IP Carrier Software Support  
**CARRIER-SW-72** LynxOS IP Carrier Software Support  
**CARRIER-SW-82** Linux IP Carrier Software Support  
**CARRIER-SW-95** QNX 6 IP Carrier Software Support  
For other operating systems please contact TEWS.

#### Related Products

**TVME001-TM** Transition Module; all IP I/O lines accessible via four 50 pin ribbon cable connectors, no front panel  
**TVME002-TM** Transition Module; all IP I/O lines accessible via four HD50 SCSI-2 type connectors mounted in 6U EMI front panel

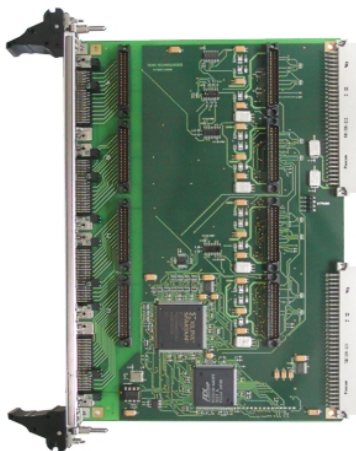
### TVME230 PCI Expansion Card for 4 IndustryPack®

#### Application Information

The TVME230 is a 6U Expansion Card for VMEbus CPU's with a PCI Expansion Connector like the TVME8240, TVME8300, TVME8400, MVME5500, MVME5100, MVME3100, MVME2300 or MVME2400. It provides access to four single-size or two double-size IndustryPack (IP) modules via the PCI Expansion Connector. This adds 200 additional I/O lines to the CPU, used to build modular, flexible and cost effective I/O solutions for applications in process control, medical systems, telecommunication and traffic control.

For improved EMI protection, four HD50 SCSI-2 type connectors are mounted in the EMI front panel of the TVME230 and provide access to all IP I/O lines. Status indicators for IP access, +5V and +/-12V are provided in the front panel.

As an order option, the TVME230 is available with standard VME handles or IEEE1101 handles.



The TVME230 can operate with 3.3V and 5.0V PCI I/O signaling voltage.

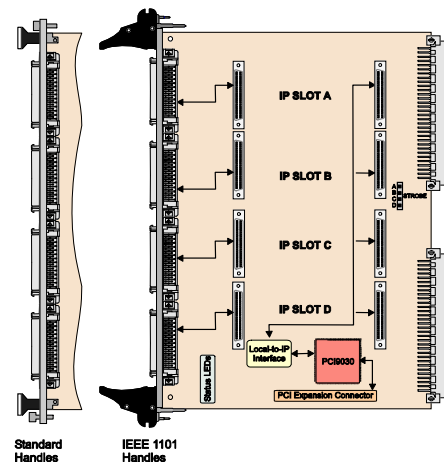
All IP interrupt request lines are mapped to PCI INTA. For fast interrupt source detection, the TVME230 provides a special IP interrupt status register.

The IP power lines are fuse protected by self healing fuses and RF filtered. The operating temperature range is -40°C to +85°C.

For First-Time-Buyers the Engineering Documentation TVME230-ED is recommended. The Engineering Documentation includes TVME230-DOC, schematics and data sheets of TVME230.

#### Technical Information

- Form Factor: VMEbus board, 6U
  - Board size: 160 mm x 233.35 mm
- PCI 2.2 compliant interface
  - PCI Interface : 33 MHz; 32 bit
  - 5V and 3.3V PCI I/O signaling voltage
- ANSI/VITA 4-1995 compliant interface to IndustryPack modules
  - IndustryPack slots: 4 single-size or 2 double-size
  - IP Power: +5V, +12V and -12V are taken from the VMEbus backplane
  - 8/32 MHz interface, no DMA
  - 8 MByte memory space per IP
  - Routing of all IP interrupts to PCI INTA, local interrupt status register
  - I/O access: HD50 SCSI-2 type connector per IP, front panel I/O
- Status LED's
  - ACK LED for each IP module
  - +5V Power LED for each IP slot
  - +12V and -12V Power LED
- Self Healing fuses and RF-filtering on all IP power lines
- Operating temperature -40°C to +85°C



### Order Information

#### RoHS Compliant

- TVME230-10R** PCI Expansion Card for 4 IP modules (6U); Front panel I/O, IEEE1101 Handles
- TVME230-11R** PCI Expansion Card for 4 IP modules (6U); Front panel I/O, standard handles

#### None RoHS Compliant

- TVME230-10 None RoHS compliant version of TVME230-10R
- TVME230-11 None RoHS compliant version of TVME230-11R

#### Documentation

- TVME230-DOC** User Manual
- TVME230-ED** Engineering Documentation (TVME230-DOC, Schematics, Assembly Drawing, Data Sheets)

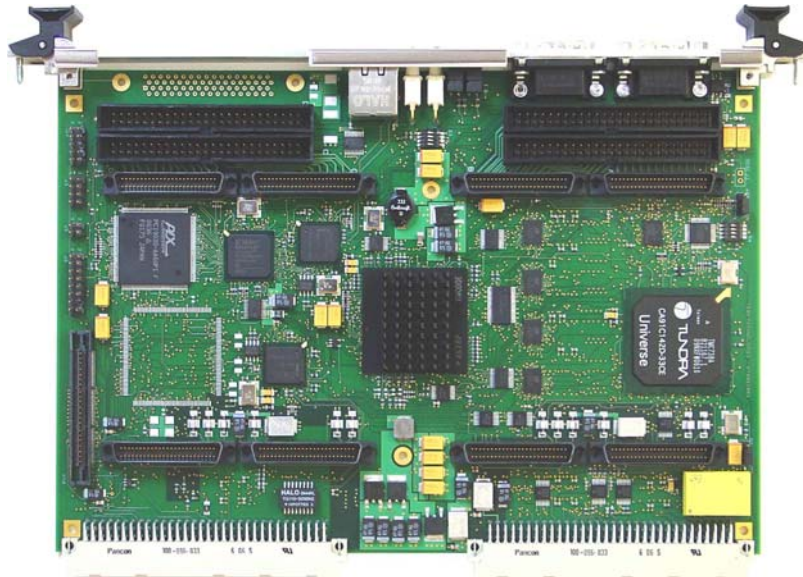
#### Software

- CARRIER-SW-25** Integrity Software Support
- CARRIER-SW-42** VxWorks Software Support (Legacy and VxBus-enabled Software Support)
- CARRIER-SW-65** Windows XP/XPE/2000 Software Support
- CARRIER-SW-72** LynxOS IP Carrier Software Support
- CARRIER-SW-82** Linux IP Carrier Software Support
- CARRIER-SW-95** QNX 6 IP Carrier Software Support
- For other operating systems please contact TEWS.

#### Related Products

- TA301** Cable Kit for modules with HD50 connector

## TVME8240A High Performance PowerPC based IndustryPack® Carrier



### Application Information

The TVME8240A VMEbus CPU board is based on the high integrated MPC8245 Power PC microprocessor with an MPC603e CPU core, a powerful Memory controller and PCI interface.

The TVME8240A provides 4 IndustryPack slots with front I/O, NVRAM/RTC, Fast Ethernet, and FLASH memory.

The combination of an MPC8245 processor and IndustryPack slots provide a powerful CPU and a modular I/O solution for applications in process control, telecommunication, medical systems and traffic control.

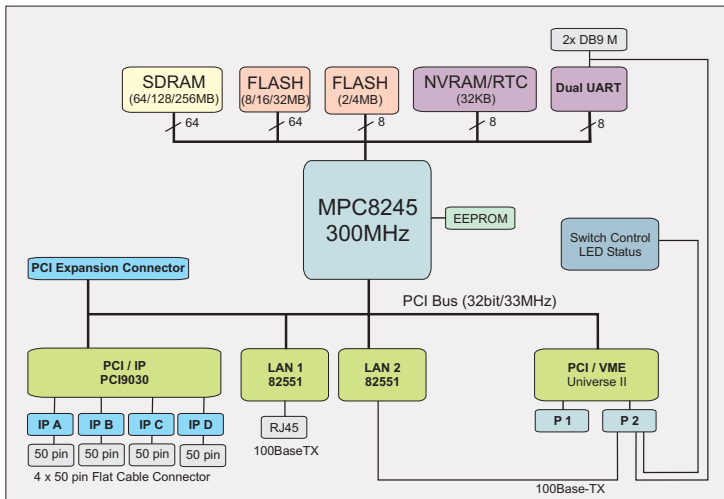
Software support for the TVME8240A CPU board is available for VxWorks, Linux, LynxOS, and OS-9. A PMON Bug Monitor is installed on the TVME8240A.

For First-Time-Buyers the Engineering Documentation TVME8240A-ED is recommended. The Engineering Documentation includes TVME8240A-DOC, schematics and data sheets of TVME8240A.

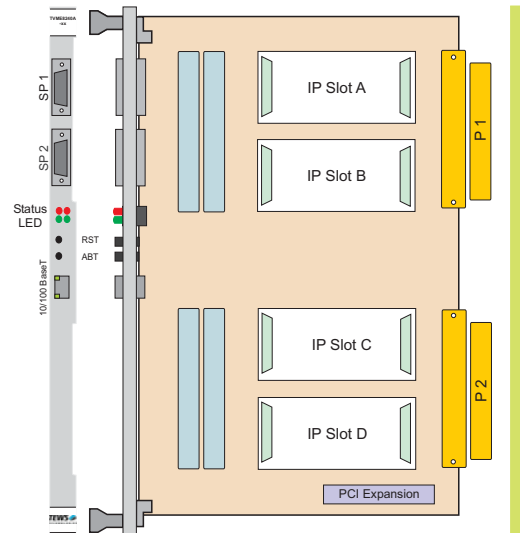
### Technical Information

- MPC8245 CPU: 300 MHz PowerPC 603e Core, 16 KB / 16 KB L1-Cache, four programmable timers
- 64 MB or 256 MB SDRAM (64 bit wide)
- 2 MB boot FLASH memory (firmware) (4 MB max option)
- 8 MB or 32MB FLASH memory (64 bit wide)
- Four IndustryPack slots (front panel I/O / double sized modules supported)
- PCI Expansion Connector (33 MHz, 32 bit PCI / supports TVME230 IP Expansion Card or Motorola PMC-Span)
- 10/100 Mbit/s Ethernet interface with 32 bit PCI DMA
- 32 KB NVRAM and TOY clock with exchangeable battery
- One asynchronous full modem RS232 port, one asynchronous simple RS232/RS422 port (programmable)
- On board debug monitor
- A32/D32/BLT64 VME bus Master/Slave interface with system controller function, high performance DMA supports VMEbus D64 and 32 bit PCI local bus memory burst, 4-Level requester, 7-Level interrupter and 7-Level VME bus interrupt handler
- Operating temperature range 0°C to 55°C forced air cooling.

### TVME8240A



Block Diagram



Board Layout

### Order Information

#### RoHS Compliant

**TVME8240A-11R**

MPC8245-300 MHz, 64 MB SDRAM, 2 + 8 MB Flash, Fast Ethernet front & back I/O, 4 IndustryPack slots with front panel I/O, Standard Handles

**TVME8240A-21R**

MPC8245-300 MHz, 256 MB SDRAM, 2 + 32 MB Flash, Fast Ethernet front & back I/O, 4 IndustryPack slots with front panel I/O, Standard Handles

#### None RoHS Compliant

TVME8240A-11

None RoHS compliant version of TVME8240A-11R

TVME8240A-21

None RoHS compliant version of TVME8240A-21R

#### Documentation

**TVME8240A-DOC**

User Manual, includes documentation for PMON Bug Monitor

**TVME8240A-ED**

Engineering Documentation (TVME8240A-DOC, schematics, assembly drawing, data sheets)

#### Software

**TVME8240A-SW-10**

OS-9 Board Support Package

**TVME8240A-SW-40**

VxWorks Board Support Package (includes VxWorks IP Carrier Software Support)

**TVME8240A-SW-70**

LynxOS Board Support Package (includes LynxOS IP Carrier Software Support)

**TBSP001-SW-80**

Linux Board Support Package (includes Linux IP Carrier Software Support)

For other operating systems please contact TEWS.

#### Related Products

**TVME230**

PCI Expansion Card for 4 IndustryPacks, IEEE1101 Handles or Standard Handles

## TVME8300 High Performance PowerPC based IndustryPack® Carrier

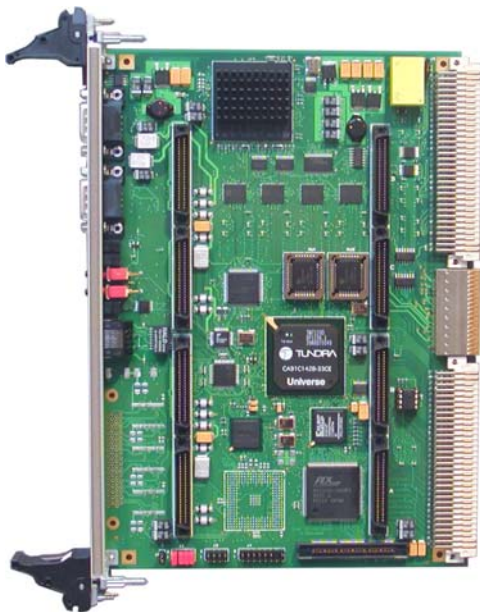
### Application Information

The TVME8300 VMEbus CPU board is based on the high integrated MPC8245 Power PC microprocessor with a G2 MPC603e CPU core, a powerful Memory controller and PCI interface.

The TVME8300 provides four IndustryPack slots with VME64x backplane I/O, Fast Ethernet, FLASH memory, and NVRAM/RTC.

The combination of the MPC8245 processor and the IndustryPack slots provides a powerful CPU and a modular I/O solution for applications in process control, telecommunication, medical systems and traffic control.

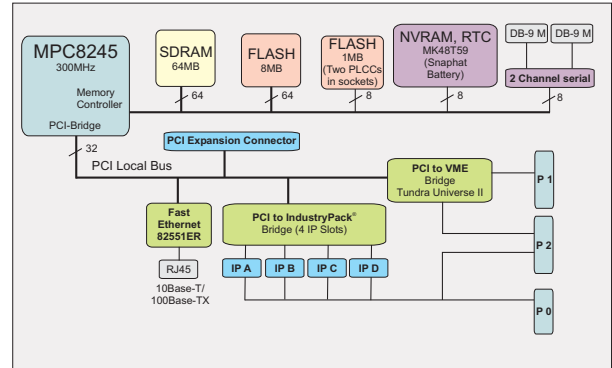
Software support for the TVME8300 CPU board is available for VxWorks, Linux, and LynxOS. A PMON Bug Monitor is installed on the TVME8300.



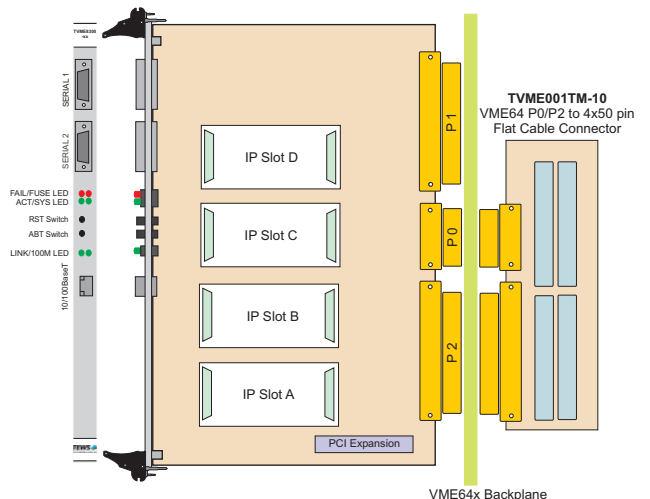
For First-Time-Buyers the Engineering Documentation TVME8300-ED is recommended. The Engineering Documentation includes TVME8300-DOC, schematics and data sheets of TVME8300.

Two Transition Modules are available for easy access to all IP I/O lines from the VME64x P0 and P2 connector. The TVME001-TM provides four 50 pin ribbon cable connectors without front panel and the TVME002-TM provides four HD50 SCSI-2 type connectors located in the EMI front panel.

### Technical Information



- MPC8245 CPU: 300 MHz PowerPC G2 Core, 16 KB / 16 KB L1-Cache, four programmable timers
- 64 MB SDRAM
- Two 32-pin PLCC/CLCC sockets for up to 1 MB firmware FLASH memory
- 8 MB FLASH memory
- Four IndustryPack slots (VME64x backplane I/O)
- PCI Expansion Card Connector (e.g. for TVME230 IP Expansion Card or Motorola PMC-Span)
- Fast Ethernet interface (32 bit PCI DMA)
- 8 KB NVRAM/RTC (exchangeable battery)
- Two asynchronous RS232 ports
- On board debug monitor
- A32/D32/BLT64 VME bus Master/Slave interface with system controller function, high performance DMA supports VMEbus D64 and 32 bit PCI local bus memory burst, 4-Level requester, 7-Level interrupter and 7-Level VME bus interrupt handler
- Operating temperature range 0°C to 55°C forced air cooling



## The Embedded I/O Company

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### Order Information

#### RoHS Compliant

**TVME8300-10R** MPC8245-300 MHz, 64 MB SDRAM, 1 + 8 MB Flash, Fast Ethernet, IndustryPack backplane I/O, IEEE1101 Handles

#### None RoHS Compliant

TVME8300-10 None RoHS compliant version of TVME8300-10R

#### Documentation

**TVME8300-DOC** User Manual, includes documentation for PMON Bug Monitor

**TVME8300-ED** Engineering Documentation (TVME8300-DOC; Schematics; Assembly Drawing; Data sheets)

#### Software

**TVME8300-SW-40** VxWorks Board Support Package (includes VxWorks IP Carrier Software Support)

**TVME8300-SW-70** LynxOS Board Support Package (includes LynxOS IP Carrier Software Support)

**TBSP001-SW-80** Linux Board Support Package (includes Linux IP Carrier Software Support)

For other operating systems please contact TEWS.

#### Related Products

**TVME001-TM** Transition Module for VME64x, all IP I/O lines accessible via four 50 pin ribbon cable connectors, no front panel

**TVME002-TM** Transition Module for VME64x, all IP I/O lines accessible via four HD50 SCSI-2 type connectors mounted in 6U EMI front panel

**TVME230** PCI Expansion Card for 4 IndustryPacks, IEEE1101 Handles or Standard Handles

### TVME8400 PowerPC based CPU Board with two PMC Slots

#### Application Information

The TVME8400 VMEbus CPU board is based on the high integrated MPC8245 Power PC microprocessor with a G2 MPC603e CPU core, a powerful Memory Controller and PCI interface.

The TVME8400 provides two PMC slots (32 bit, 33 MHz PCI) with VME64x P2 backplane I/O mapping according to ANSI/VITA 35-2000, Fast Ethernet, FLASH memory, System Memory, NVRAM/RTC and a PCI Expansion Connector (32 bit, 33 MHz PCI).

TVME8400-x1 board options additionally provide the VME P0 connector for full PMC-2 back-I/O support.

The TVME8400 may also be used as a passive or active PMC carrier for the VMEbus (including PMC interrupt handling).



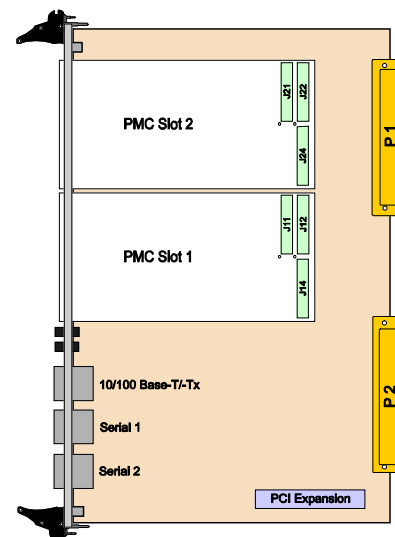
The combination of the MPC8245 processor and the PMC slots plus the PCI Expansion capability provides a powerful CPU and a modular I/O solution for applications in process control, telecommunication, medical systems and traffic control.

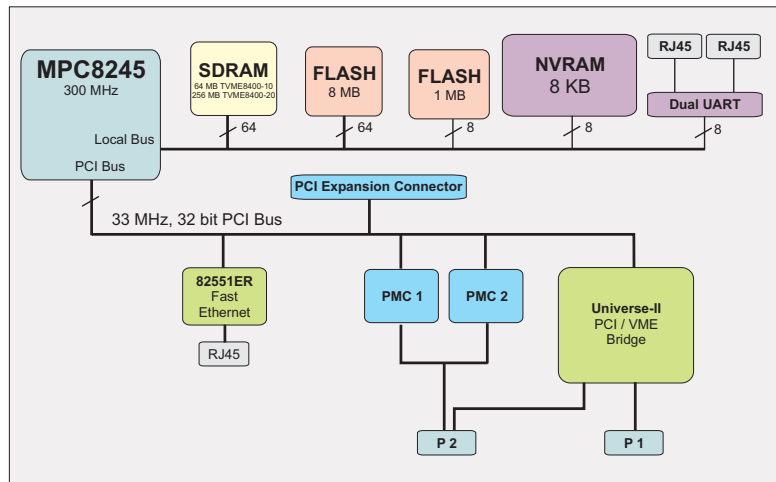
Software support for the TVME8400 CPU board is available for VxWorks, Linux, and LynxOS. A PMON Bug Monitor is installed on the TVME8400.

For First-Time-Buyers the Engineering Documentation TVME8400-ED is recommended. The Engineering Documentation includes user manual, schematic, assembly drawing and data sheets.

#### Technical Information

- MPC8245 CPU: 300 MHz PowerPC G2 Core, 16 KB / 16 KB L1-Cache, four programmable timers
- TVME8400-1x: 64 MB SDRAM (64 bit wide)  
TVME8400-2x: 256 MB SDRAM (64 bit wide)
- Two 32-pin PLCC sockets for up to 1 MB firmware FLASH memory
- 8 MB FLASH memory (64 bit wide)
- Two PMC Slots (32 bit, 33 MHz PCI) with VME64x P2 I/O (64 I/O lines for PMC-1, 46 I/O lines for PMC-2)
- TVME8400-x1 board options for full PMC-2 I/O support utilizing the VME P0 connector
- PCI Expansion Card Connector (32 bit, 33 MHz PCI, e.g. for using TVME230 IP Expansion Card or Motorola PMC-Span)
- Fast Ethernet interface (32 bit PCI DMA)
- 8 KB NVRAM/RTC (exchangeable battery)
- Two asynchronous RS232 ports
- On board debug monitor
- A32/D32/BLT64 VME bus Master/Slave interface with system controller function, high performance DMA, supports VMEbus D64 and 32 bit PCI local bus memory burst, 4-Level requester, 7-Level interrupter and 7-Level VME bus interrupt handler
- Operating temperature range:  
TVME8400-xx: 0°C to 55°C (forced air cooling)  
TVME8400-xx-ET: -40°C to +85°C (forced air cooling)





Block Diagram TVME8400

## Order Information

### RoHS Compliant

<b>TVME8400-10R</b>	MPC8245-300 MHz, 64 MB SDRAM, 1 + 8 MB Flash, Fast Ethernet, 2 PMC Slots with VME64x P2 I/O, IEEE1101 Handles, Operating temperature range: 0°C to 55°C (forced air cooling)
<b>TVME8400-11R</b>	Same as TVME8400-10R but with additional VME P0 connector for full PMC-2 back-I/O support
<b>TVME8400-20R</b>	Same as TVME8400-10R but with 256 MB SDRAM
<b>TVME8400-21R</b>	Same as TVME8400-10R but with 256 MB SDRAM and additional VME P0 connector for full PMC-2 back-I/O support
<b>TVME8400-10R-ET</b>	Same as TVME8400-10R but operating temperature range -40°C to +85°C (forced air cooling)
<b>TVME8400-11R-ET</b>	Same as TVME8400-11R but operating temperature range -40°C to +85°C (forced air cooling)
<b>TVME8400-20R-ET</b>	Same as TVME8400-20R but operating temperature range -40°C to +85°C (forced air cooling)
<b>TVME8400-21R-ET</b>	Same as TVME8400-21R but operating temperature range -40°C to +85°C (forced air cooling)

### None RoHS Compliant

TVME8400-10	None RoHS compliant version of TVME8400-10R
TVME8400-11	None RoHS compliant version of TVME8400-11R
TVME8400-20	None RoHS compliant version of TVME8400-20R
TVME8400-21	None RoHS compliant version of TVME8400-21R
TVME8400-10-ET	None RoHS compliant version of TVME8400-10R-ET
TVME8400-11-ET	None RoHS compliant version of TVME8400-11R-ET
TVME8400-20-ET	None RoHS compliant version of TVME8400-20R-ET
TVME8400-21-ET	None RoHS compliant version of TVME8400-21R-ET

### Documentation

<b>TVME8400-DOC</b>	User Manual, includes documentation for PMON Bug Monitor
<b>TVME8400-ED</b>	Engineering Documentation (User Manual, Schematic, Assembly Drawing, Device Documentation)

### Software

<b>TVME8400-SW-40</b>	VxWorks Board Support Package
<b>TVME8400-SW-70</b>	LynxOS Board Support Package
<b>TBSP001-SW-80</b>	Linux Board Support Package

For other operating systems please contact TEWS.

### Related Products

<b>TVME020-TM</b>	2 Slot PIM Carrier 6U VME64x Rear I/O Transition Module
<b>TVME230</b>	PCI Expansion Card for 4 IndustryPacks, IEEE1101 Handles or Standard Handles

## TVME001-TM Transition Module for VME64x Back I/O

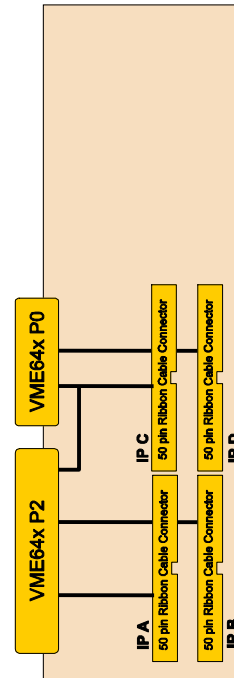
### Application Information

The TVME001-TM is a Transition Module for use with VME64x backplanes, providing easy and concise access to the I/O lines of back I/O IP carriers.



It brings all 200 IP I/O lines from the VME64x P0 and P2 connectors out to four 50 pin ribbon cable connectors. The routing between the VME64x P0 and P2 connectors and the 4 ribbon cable connectors is ANSI/VITA 4.1-1996 compliant.

The operating temperature ranges is -40°C and +85°C.



### Technical Information

- Form Factor: VME64x Rear Transition Module
- I/O Routing:
  - ANSI/VITA 4.1-1996 compliant I/O mapping (P0 and P2)
  - I/O lines are accessible via four 50 pin ribbon cable connectors
- No front panel
- Operating temperature: -40°C to +85°C

### Order Information

**TVME001-TM-10R** Transition Module, I/O lines accessible via four 50 pin ribbon cable connectors, no front panel

**TVME001-TM-10** None RoHS compliant version of TVME001-TM-10R

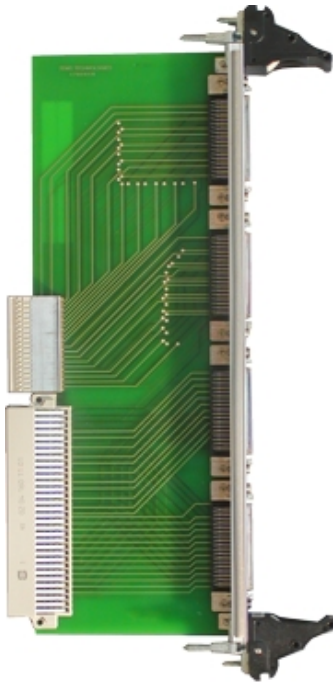
**TVME001-TM-DOC** User Manual

## TVME002-TM Transition Module for VME64x Back I/O

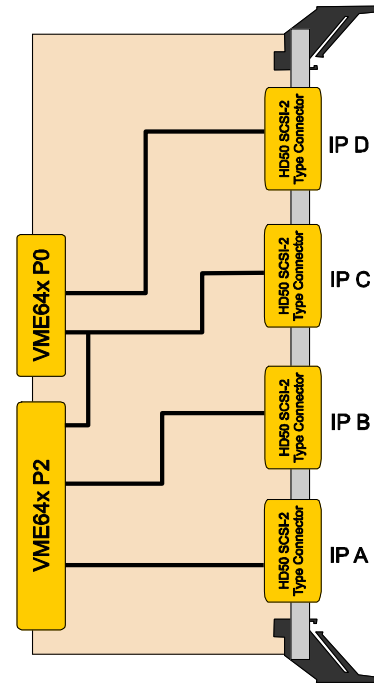
### Application Information

The TVME002-TM is an 80mm, 6U Transition Module for use with VME64x backplanes, providing easy access to the I/O lines of back I/O IP carriers.

It brings all 200 IP I/O lines from the VME64x P0 and P2 connectors out to four 50 pin SCSI-2 type connectors located in the EMI front panel. The routing between the VME64x P0 and P2 connectors and the 4 HD50 SCSI-2 type connectors in the EMI front panel is ANSI/VITA 4.1-1996 compliant.



The operating temperature ranges between -40°C and +85°C.



### Technical Information

- Form Factor: VME64x 6U Rear Transition Module
- I/O Routing:
  - ANSI/VITA 4.1-1996 compliant I/O mapping (P0 and P2)
  - I/O lines are accessible via four HD50 SCSI-2 type connectors
- EMI front panel
- Operating temperature: -40°C to +85°C

### Order Information

- TVME002-TM-10R** 80mm, 6U Transition Module, I/O lines accessible via four HD50 SCSI-2 type connectors mounted in EMI front panel
- TVME002-TM-10 None RoHS compliant version of TVME002-TM-10R

**TVME002-TM-DOC** User Manual

## TVME020-TM

## VME64x Rear I/O PIM Carrier

### Application Information

The TVME020-TM is a VME64x Rear I/O 2 Slot PIM Carrier Transition Module to be used with 6U VME64x PMC carrier boards.

The TVME020-TM conforms to the ANSI/VITA 35-2000 PMC to VME-P2/VME64x-P2 I/O mapping.

According to the ANSI/VITA 35-2000 PMC to VME-P2/VME64x-P2 I/O mapping, there are 64 I/O signals for PMC1 available at VME-P2/VME64x-P2 connector rows a + c, and 46 I/O signals for PMC2 available at VME64x-P2 connector rows z + d.

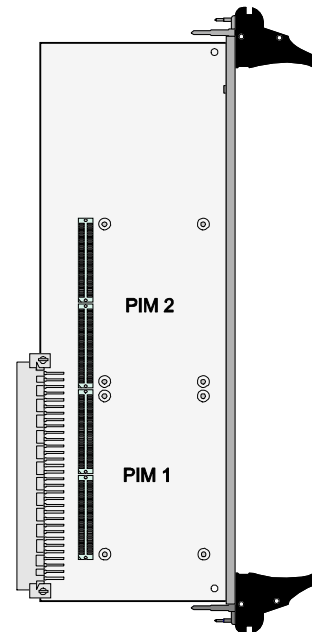
With the TVME020-TM all the 64 PMC1 I/O lines are available at PIM slot 1, and all the 46 PMC2 I/O lines are available at PIM slot 2.

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



### Technical Information

- Form Factor: 6U VME64x Rear I/O Transition Module (233 mm x 80 mm)
- 2 PIM Slots
- ANSI/VITA 35-2000 PMC to VME-P2/VME64x-P2 I/O mapping supported
- PIM slots:
  - 64 PMC1 I/O lines on PIM slot 1
  - 46 PMC2 I/O lines on PIM slot 2
  - +5V and +3.3V power supply at the PIM slots
- EMI front panel
- Operating temperature: -40°C to +85°C



**Order Information**

**RoHS Compliant**

**TVME020-TM-10R** VME64x Rear I/O 2 Slot PIM  
Carrier

**None RoHS Compliant**

TVME020-TM-10 None RoHS compliant version  
of TVME020-TM-10R

**Documentation**

**TVME020-TM-DOC** User Manual

**Related Product**

**TPIM001** PIM I/O Module with HD50 SCSI-2 type  
connector

**TPIM002** PIM I/O Module with HD68 SCSI-3 type  
connector

**TPIM003** PIM I/O Module with HD68 SCSI-3 type  
connector

**TPIM004** PIM I/O Module with 4 RJ45 connectors

**TPIM005** PIM I/O Module with HD68 SCSI-3 type  
connector

## TPIM001 PIM I/O Module with 50 pin Connector

### Application Information

The TPIM001 is a standard single-width PIM I/O module to be used with any PIM carrier. It offers easy access to the PMC back I/O lines of PMC carrier with back I/O.

The TPIM001 distributes the lower 50 I/O lines of the PMC to a standard 50 pin SCSI-2 type connector located in the EMI front panel.

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

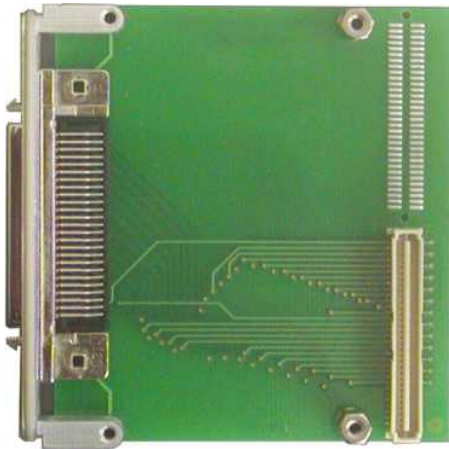
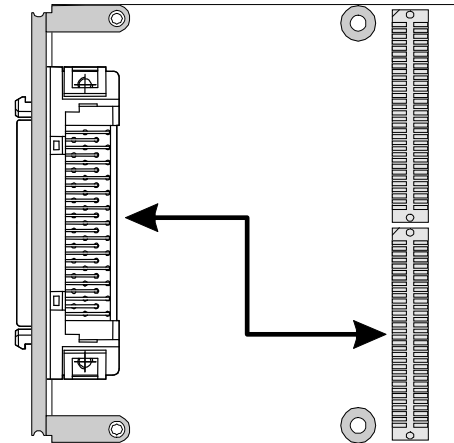


Figure: TPIM001-10

### Technical Information

- Standard single-width PIM I/O Module
- Board size: 69 mm x 74 mm
- I/O lines 1 to 50 are routed to a HD50 SCSI-2 type connector in the front panel
- EMI Front Panel
- Operating Temperature: -40°C to +85°C



### Order Information

<b>TPIM001-10R</b>	PIM I/O Module with HD50 SCSI-2 type connector
TPIM001-10	None RoHS compliant version of TPIM001-10R
<b>TPIM001-DOC</b>	User Manual

**TPIM002 PIM I/O Module with 68 pin Connector****Application Information**

The TPIM002 is a standard single-width PIM I/O module to be used with any PIM carrier. It offers easy access to the PMC back I/O lines of PMC carrier with back I/O.

The TPIM002 distributes all PMC back I/O lines to a 68 pin SCSI-3 type connector located in the EMI front panel.

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

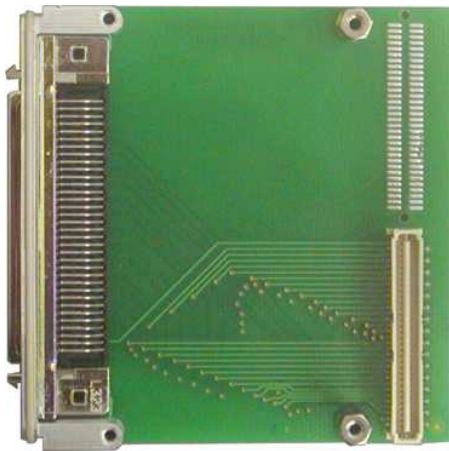
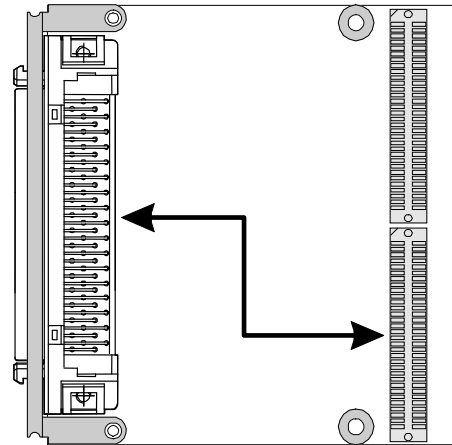


Figure: TPIM002-10

**Technical Information**

- Standard single-width PIM I/O Module
- Board size: 69 mm x 74 mm
- I/O lines are routed to a HD68 SCSI-3 type connector in the front panel
- EMI Front Panel
- Operating Temperature: -40°C to +85°C

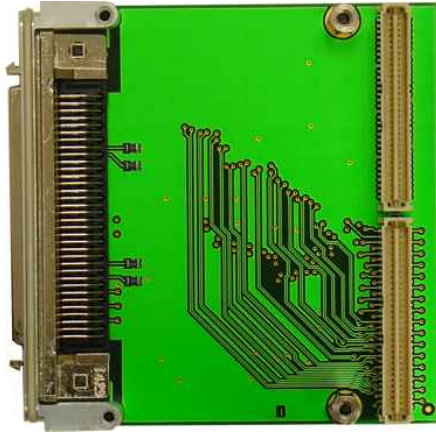
**Order Information**

<b>TPIM002-10R</b>	PIM I/O Module with HD68 SCSI-3 type connector
TPIM002-10	None RoHS compliant version of TPIM002-10R
<b>TPIM002-DOC</b>	User Manual

## TPIM003 PIM I/O Module with 68 pin Connector

### Application Information

The TPIM003 is a standard single-width PIM I/O module to be used with any PIM Carrier like TEWS' TCP020-TM, TVME020-TM or others. It offers easy access to the PMC back I/O lines of PMC carriers with back I/O like TEWS' TCP260 or TVME8400.



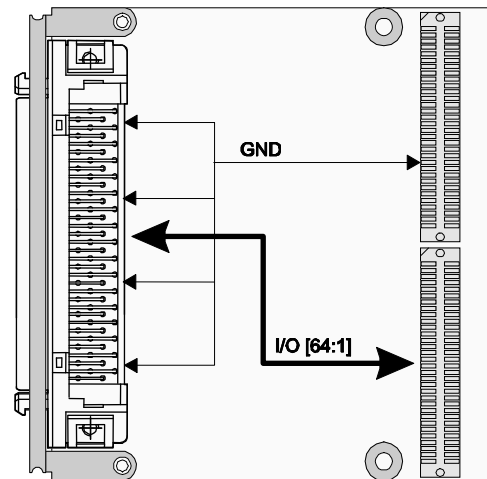
The TPIM003 distributes all 64 PMC back I/O lines to a 68 pin SCSI-3 type connector located in the EMI front panel. Additional GND pins are inserted by solder jumpers at pin 9, 26, 43 and 60 of the 68 pin SCSI-3 type connector. The routing and I/O signal mapping of the TPIM003 is optimized for differential pair routing.

The TPIM003 recreates the PMC front I/O signal mapping in its 68 pin SCSI-3 type connector when used with e.g. the TPMC460, TPMC630 or TPMC868. Refer to the TPMC Data Sheets to find out if the TPIM003 recreates the PMC front I/O signal mapping in its 68 pin SCSI-3 type connector.

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

### Technical Information

- Standard single-width PIM I/O Module
- Board size: 69 mm x 74 mm
- I/O lines are routed to a HD68 SCSI-3 type connector in the front panel
- EMI Front Panel
- Operating Temperature: -40°C to +85°C



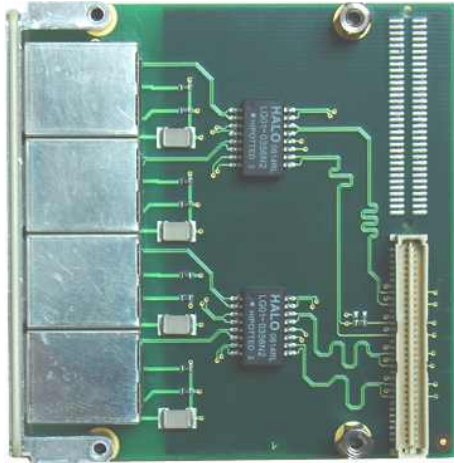
### Order Information

- |                    |  |
|--------------------|--|
| <b>TPIM003-10R</b> | PIM I/O Module with HD68 SCSI-3 type connector for e.g. TPMC460, TPMC630 and TPMC868 |
| <b>TPIM003-10</b>  | None RoHS compliant version of TPIM003-10R   |
| <b>TPIM003-DOC</b> | User Manual  |

# TPIM004 PIM I/O Module for Quad Ethernet PMCs

### Application Information

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.

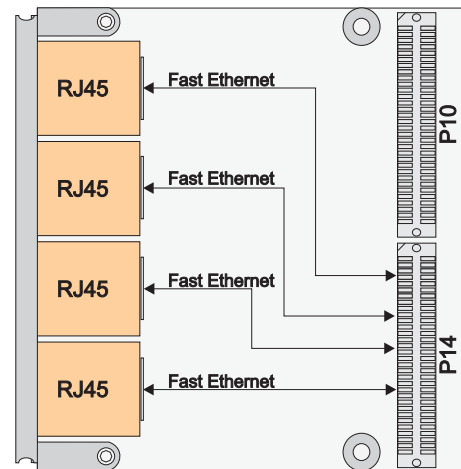


The TPIM004 provides access to the Fast Ethernet Ports of TEWS' Fast Ethernet PMCs with Back I/O like the TPMC882-1x or the TPMC382. Refer to the TPMC Data Sheets to find out, if the TPIM004 can be used with the corresponding PMC.

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

### Technical Information

- Standard single-width PIM I/O Module
- Board size: 69 mm x 74 mm
- I/O lines are routed to RJ45 connectors in the front panel
- EMI Front Panel
- Operating Temperature: -40°C to +85°C



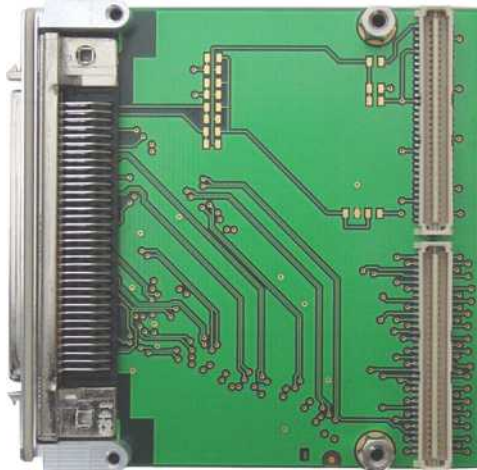
### Order Information

- TPIM004-10R** PIM I/O Module with 4 RJ45 connectors for e.g. TPMC382, and TPMC882
- TPIM004-10 None RoHS compliant version of TPIM004-10R
- TPIM004-DOC** User Manual

## TPIM005 PIM I/O Module with 68 pin connector

### Application Information

The TPIM005 is a standard single-width PIM I/O module to be used with any PIM Carrier like TEWS' TCP020-TM, TVME020-TM or others. It offers easy access to the PMC back I/O lines of PMC carriers with back I/O like TEWS TCP260 or TVME8400.



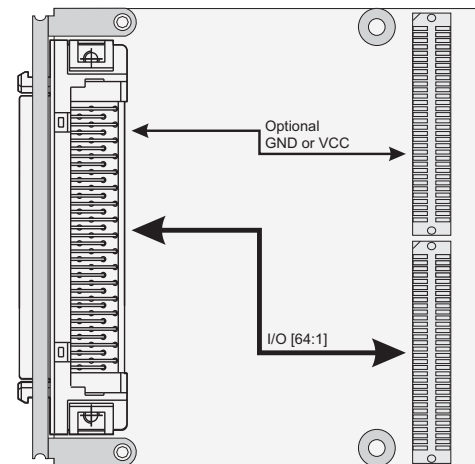
The TPIM005 distributes all 64 PMC back I/O lines to a 68 pin SCSI-3 type connector located in the EMI front panel. The routing and I/O signal mapping of the TPIM005 is optimized for differential pair routing.

The TPIM005 recreates the PMC front I/O signal mapping in its 68 pin SCSI-3 type connector when used with the TPMC863 or TPMC363. Refer to the TPMC Data Sheet to find out if the TPIM005 recreates the PMC front I/O signal mapping in its 68 pin SCSI-3 type connector.

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

### Technical Information

- Standard single-width PIM I/O Module
- Board size: 69 mm x 74 mm
- I/O lines are routed to a HD68 SCSI-3 type connector in the front panel
- EMI Front Panel
- Operating Temperature: -40°C to +85°C



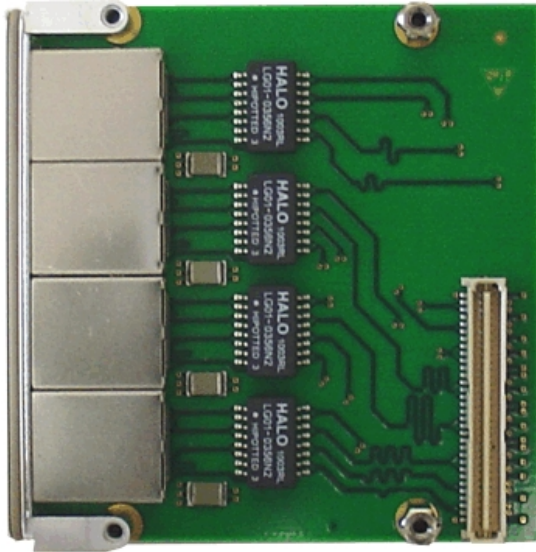
### Order Information

- |                    |  |
|--------------------|--|
| <b>TPIM005-10R</b> | PIM I/O Module with HD68 SCSI-3 type connector |
| TPIM005-10         | None RoHS compliant version of TPIM005-10R     |
| <b>TPIM005-DOC</b> | User Manual                                    |

## TPIM006 PIM I/O Module for Gigabit Ethernet PMCs

### Application Information

The TPIM006 is a standard single-width PIM I/O module to be used with any PIM carrier like TEWS' TCP020, TVME020 or others. It offers easy access to the PMC back I/O lines of PMC carriers like TEWS' TCP260 or TVME8400.



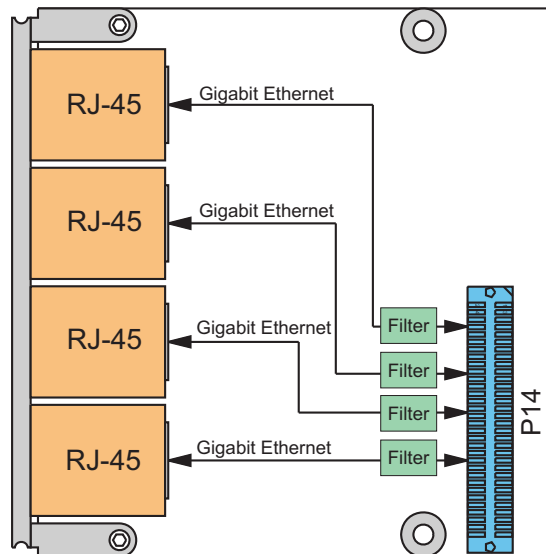
The TPIM006 distributes the Ethernet signals of the TEWS' Gigabit Ethernet modules with back I/O to RJ-45 connectors located in the front panel of the PIM module.

The TPIM006-10 reproduces the front I/O signal mapping of TEWS four channel 10/100/1000 Mbit/s Ethernet adapter PMCs in its RJ-45 connectors when used with the TPMC885-11R or TPMC385-10R for example.

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

### Technical Information

- Form Factor: Standard single-width PIM I/O module conforming to VITA 36 – 199X Draft 0.1
  - Board size: 69 mm x 74 mm
- I/O lines routed to RJ45 connectors in the front panel
- EMI Front Panel
- Operating temperature: -40°C to +85°C
- MTBF (MIL-HDBK217F/FN2 GB 20°C)  
TPIM006-10: 758081 h



### Order Information

#### RoHS Compliant

**TPIM006-10R** PIM I/O module for four channel Gigabit Ethernet PMCs, extended temperature range

#### None RoHS Compliant

**TPIM006-10** None RoHS compliant version of TPIM006-10R

#### Documentation

**TPIM006-DOC** User Manual