VMEbus Modules

Data Sheets of TEWS' VMEbus Modules
About TEWS TECHNOLOGIES

TEWS TECHNOLOGIES is a leading solutions provider of embedded I/O and CPU products based on open architecture standards such as IndustryPack, PMC, XMC, CompactPCI, PCI, PCI Express, PCI Express Mini Card, VMEbus, PC104+, AMC, MicroTCA, and FMC.

TEWS has more than 40 years of experience designing and building turnkey 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.

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, Integrity, Linux, 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.
**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.

**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.

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.
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 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 CompactPCI, PCI, PCI Express, PCI Express Mini Card, VMEbus, PC104+, AMC, MicroTCA, FMC, XMC, and 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, Linux, QNX, Integrity and Windows are available.

For more information go to www.tews.com.
Application Information

The TVME200 is a 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.

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’ (TVME200-20R 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

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 TVME200-20R 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.
**Order Information**

**RoHS Compliant**
- **TVME200-10R** 6U 4 Slot IndustryPack Carrier, 50 pin ribbon cable connectors (stacked version)
- **TVME200-20R** 6U 4 Slot IndustryPack Carrier, 50 pin ribbon cable connectors (stacked version), P2-I/O for IP-C/D

For the availability of non-RoHS compliant (leaded solder) products please contact TEWS.

**Documentation**
- **TVME200-DOC** User Manual

**Software**
- **CARRIER-SW-42** VxWorks Software Support (Legacy and VxBus-enabled Software Support)
- **CARRIER-SW-65** Windows IP Carrier Software Support
- **CARRIER-SW-82** Linux IP Carrier Software Support
- **CARRIER-SW-95** QNX IP Carrier Software Support

For other operating systems please contact TEWS.

**Related Products**
- **TA305** Cable Kit for Modules with 50 pin ribbon cable connector
The Embedded I/O Company

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.

Routing 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.

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

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Order Information

RoHS Compliant
TVME201-10R 6U 4 Slot IndustryPack Carrier, HD50 connectors
For the availability of non-RoHS compliant (leaded solder) products please contact TEWS.

Documentation
TVME201-DOC User Manual

Software
CARRIER-SW-42 VxWorks Software Support (Legacy and VxBus-enabled Software Support)
CARRIER-SW-65 Windows IP Carrier Software Support
CARRIER-SW-82 Linux IP Carrier Software Support
CARRIER-SW-95 QNX IP Carrier Software Support
For other operating systems please contact TEWS.

Related Products
TA301 Cable Kit for Modules with HD50 Connector
The Embedded I/O Company

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 is 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.

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

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Order Information
RoHS Compliant
TVME202-10R  6U 4 Slot IndustryPack Carrier, 50pin 180° ribbon cable connectors

For the availability of non-RoHS compliant (leaded solder) products please contact TEWS.

Documentation
TVME202-DOC  User Manual

Software
CARRIER-SW-42  VxWorks Software Support (Legacy and VxBus-enabled Software Support)
CARRIER-SW-65  Windows IP Carrier Software Support
CARRIER-SW-82  Linux IP Carrier Software Support
CARRIER-SW-95  QNX IP Carrier Software Support

For other operating systems please contact TEWS.

Related Products
TA305  Cable Kit for Modules with 50 pin Ribbon Cable Connector
### 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.

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.

### 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  3U 2 Slot IndustryPack Carrier, 50pin ribbon cable connectors
TVME210-11R  6U 2 Slot IndustryPack Carrier, 50pin ribbon cable connectors

For the availability of non-RoHS compliant (leaded solder) products please contact TEWS.

Documentation
TVME210-DOC   User Manual

Software
CARRIER-SW-42 VxWorks Software Support (Legacy and VxBus-enabled Software Support)
CARRIER-SW-65 Windows IP Carrier Software Support
CARRIER-SW-82 Linux IP Carrier Software Support
CARRIER-SW-95 QNX IP Carrier Software Support

For other operating systems please contact TEWS.

Related Products
TA305   Cable Kit for Modules with 50 pin ribbon cable connector
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.

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
TVME211-10R 3U 2 Slot IndustryPack Carrier, 50pin ribbon cable connectors (stacked version)
TVME211-11R 6U 2 Slot IndustryPack Carrier, 50pin ribbon cable connectors (stacked version)

For the availability of non-RoHS compliant (leaded solder) products please contact TEWS.

Documentation
TVME211-DOC User Manual

Software
CARRIER-SW-42 VxWorks Software Support (Legacy and VxBus-enabled Software Support)
CARRIER-SW-65 Windows IP Carrier Software Support
CARRIER-SW-82 Linux IP Carrier Software Support
CARRIER-SW-95 QNX IP Carrier Software Support

For other operating systems please contact TEWS.

Related Products
TA305 Cable Kit for Modules with 50 pin ribbon cable connector
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 connectivity 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.

TEWS two Transition Modules, TVME001-TM and TVME002-TM are available for easy access to all IP I/O lines.
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
The Embedded I/O Company

Order Information
RoHS Compliant
TVME220-10R 6U 4 Slot IndustryPack Carrier, VME64x I/O on P0 and P2
For the availability of non-RoHS compliant (leaded solder) products please contact TEWS.

Documentation
TVME220-DOC User Manual

Software
CARRIER-SW-42 VxWorks Software Support (Legacy and VxBus-enabled Software Support)
CARRIER-SW-65 Windows IP Carrier Software Support
CARRIER-SW-82 Linux IP Carrier Software Support
CARRIER-SW-95 QNX IP Carrier Software Support
For other operating systems please contact TEWS.

Related Products
TVME001-TM 6U Transition Module for VME64x IndustryPack Carrier, 50pin 180° ribbon cable connectors
TVME002-TM 6U Transition Module for VME64x IndustryPack Carrier, HD50 connectors
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 TVME8240A, 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.
### 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  6U 4 Slot IndustryPack Expansion Card for VMEbus CPU's, IEEE1101 Handles
TVME230-11R  6U 4 Slot IndustryPack Expansion Card for VMEbus CPU's, standard handles

For the availability of non-RoHS compliant (leaded solder) products please contact TEWS.

Documentation
TVME230-DOC  User Manual

Software
CARRIER-SW-42  VxWorks Software Support (Legacy and VxBus-enabled Software Support)
CARRIER-SW-65  Windows IP Carrier Software Support
CARRIER-SW-82  Linux IP Carrier Software Support
CARRIER-SW-95  QNX IP Carrier Software Support

For other operating systems please contact TEWS.

Related Products
TA301  Cable Kit for Modules with HD50 Connector
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

RoHS Compliant

TVME001-TM-10R  6U Transition Module for VME64x IndustryPack Carrier, 50pin 180° ribbon cable connectors

For the availability of non-RoHS compliant (leaded solder) products please contact TEWS.

Documentation

TVME001-TM-DOC  User Manual
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
RoHS Compliant
TVME002-TM-10R 6U Transition Module for VME64x IndustryPack Carrier, HD50 connectors

For the availability of non-RoHS compliant (leaded solder) products please contact TEWS.

Documentation
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

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**Order Information**

**RoHS Compliant**
**TVME020-TM-10R**  6U Transition Module for VME64x PMC Carrier, 2 PIM Slots

For the availability of non-RoHS compliant (leaded solder) products please contact TEWS.

**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 typeconnector
- **TPIM003**  PIM I/O Module with HD68 SCSI-3 type connector, special pin assignment
- **TPIM005**  PIM I/O Module with HD68 SCSI-3 type connector for TPMC863/TPMC363
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.

**Application Information**

**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**

RoHS Compliant
TPIM001-10R PIM I/O Module, HD50 connector

For the availability of non-RoHS compliant (leaded solder) products please contact TEWS.

**Documentation**

TPIM001-DOC 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.

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
RoHS Compliant
TPIM002-10R   PIM I/O Module, HD68 connector

For the availability of non-RoHS compliant (lead solder) products please contact TEWS.

Documentation
TPIM002-DOC   User Manual

TEWS TECHNOLOGIES GmbH keeps the right to change technical specification without further notice.
All trademarks mentioned are property of their respective owners.

Issue 1.0.1
2017-08-31
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

RoHS Compliant
TPIM003-10R PIM I/O Module, HD68 connector, special pin assignment

For the availability of non-RoHS compliant (leaded solder) products please contact TEWS.

Documentation

TPIM003-DOC User Manual

TEWS TECHNOLOGIES GmbH keeps the right to change technical specification without further notice.

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Issue 1.0.1
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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-10R, TVME020-TM-10R 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 TPMC862/TPMC863 or TPMC362 /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

RoHS Compliant

TPIM005-10R  PIM I/O Module, HD68 connector, for TPMC863/TPMC363

For the availability of non-RoHS compliant (leaded solder) products please contact TEWS.

Documentation

TPIM005-DOC  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 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) TPIM006-10R: 758081 h

Order Information
RoHS Compliant
TPIM006-10R  PIM I/O Module for Quad 10/100/1000 Ethernet PMC

For the availability of non-RoHS compliant (lead solder) products please contact TEWS.

Documentation
TPIM006-DOC  User Manual