



# VME-PMC-CADDY/2

## Intelligent VME-Carrier Board for PMC Modules

### High Bandwidth - VME64/PCI64

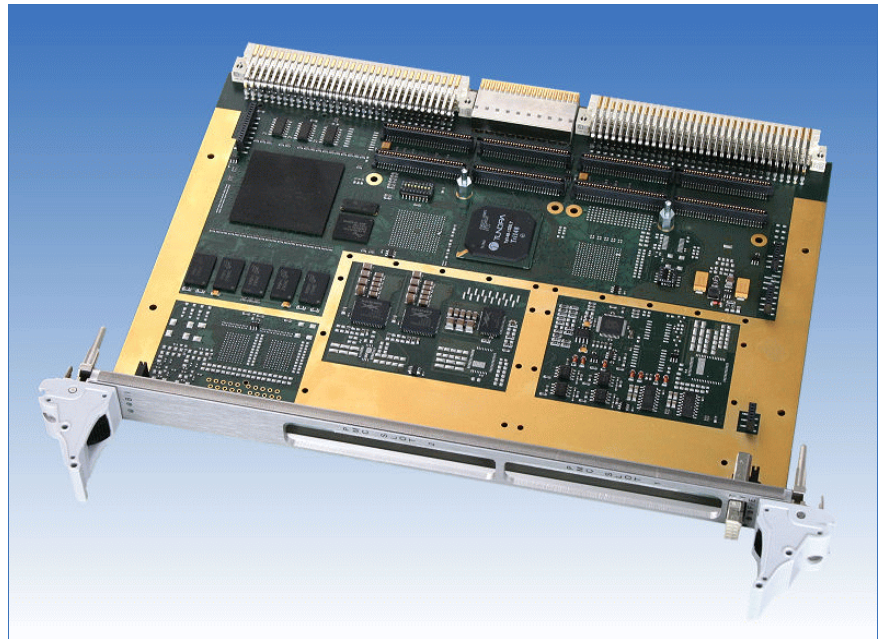
- Powerful VME-PCI bridge Tundra Tsi148
- 4-level VME arbiter and address space up to A64/D64
- VME64-extension connector
- Master or slave functionality
- 2eVME and 2eSST fast protocol
- PCI 64 bit at 66 MHz, 3.3 V only

### Reliable Design - Easy to Handle and Cost Effective

- Design for low power consumption and easy cooling
- Wide temperature range with conduction cooled or extended temperature range version
- Approved in many industrial applications
- Standard interfaces and form factors according to IEEE P1386-2001 and IEEE 1014 Rev. D
- PPMC according to VITA™ 32
- Software libraries available

### Easy Expansion of VMEbus Systems

- Add up to 2 PMC boards to your system
- Connect to the field with P2-IO, signals routed acc. to VITA 35 (P4V2-64ac, P4V0-64)
- Insert 2 single size or 1 double size PMC module
- Use options for P2 pin assignment and 3.3 V supply



### VME-PCI Link

The VMEbus unit VME-PMC-CADDY/2 is a VME64-base board which can carry up to two PMC modules of normal size. For the VMEbus connection the VME-PCI bridge Tsi148 by Tundra is used.

### VMEbus Interface

The Tsi148 is designed in a way that the board can either operate as slave or as master on the VMEbus. If the board operates as master, it supports a 4-level arbiter.

The VMEbus interrupt can be applied to any of the seven interrupt-request lines. The board is connected to the VMEbus by two 160-pin VG-connectors (complementary to DIN41612) for VME64 systems.

An active VMEbus-interrupt request and a VMEbus access onto the board are indicated by LEDs in the front panel

### PMC Slots

Both PMC slots are designed according to the standard IEEE Std 1386-2001 (except the standard I/O pin routing)). It is possible therefore to insert all PMC modules, that use 3.3 V signalling only.

In addition to the connectors for the PMC-address/data and control signals, every slot of the VME-PMC-CADDY/2 has an I/O-connector which applies the I/O-signals of the PMC modules to VMEbus connector P2. Two different P2 pin assignments are available: In the standard configuration each P2-pin is only connected to one I/O-pin of the PMC-modules acc. to VITA 35 (P4V2-64ac, P4V0-64).

In the option '32P' the pin assignment is acc. to IEEE Std 1386-2001, Table 8. This pin assignment offers the connection of the two PMC-modules via P2, because several PMC-I/O-signals are shorted at P2.

### CPU

Equipped with a 128 MByte DDR2 RAM ECC and a 4 Mbyte Flash (NOR) as memory, the VME-PMC-CADDY/2 uses a 400 MHz Freescale MPC 8349 microcontroller to configure the PMC modules and the VME-PCI bridge. Two serial configuration interfaces are designed as RS-232 interfaces.

### Front Panel

The front panel of the VME-PMC-CADDY/2 has two cutouts for the front panels of the PMC modules. A blank cover for unused slots is included.

### Software

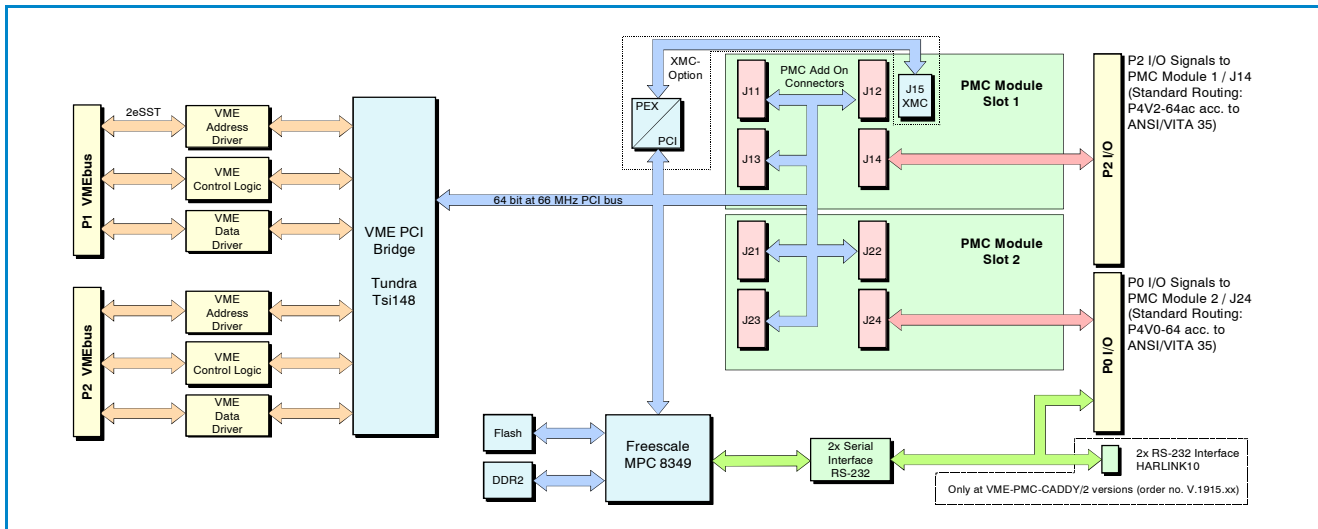
Example libraries for the initialization of the board in C-Source-Code for VxWorks® is available for a fee on a disk (MS-DOS format). Drivers for further operating systems are available on request. Please state your operating system with the version number when you order.

### Options

On request slot 1 is available with XMC (J15) interface according to VITA 42.3 standard. Please contact our sales team ([sales@esd.eu](mailto:sales@esd.eu)) for further information.

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## Intelligent VME-Carrier Board for PMC Modules



### Technical Specifications:

VMEbus:	
Controller	TUNDRA Tsi148
VMEbus access	- Legacy protocols to protect existing VME investment - VME64 extensions - 2eVME and 2eSST protocols
Base address	Geographical addressing
Address modifier	Standard supervisory and nonprivileged data access, extended supervisory and non-privileged data access, short supervisory and nonprivileged access
VMEbus standard	IEEE 1014 Rev. D
VMEbus connector	160-pole VG connector (complementary to DIN 41612), acc. to VME64 extension standard
LEDs	LEDs in the front panel indicate VMEbus interrupt and VMEbus access
PMC/XMC Slots:	
Standard	IEEE Std 1386-2001
Size	Two single size modules
VME PCI Bridge	Tundra Tsi148, 32/64 bit at 33/66 MHz
Voltage level	3.3 V (signal level) only
Voltage option	Optional onboard 3.3 V generation
XMC option	Slot 1 optional with XMC (J15) interface according to VITA 42.3 standard
CPU:	
Microcontroller	Freescale MPC 8349, 400 MHz
Memory	128 Mbyte DDR2 RAM ECC, 4 Mbyte Flash (NOR)
Configuration	Via 2x RS-232 serial interface
General:	
Temperature	Standard: 0...50 °C (Order no.: V.1915.02/.11) -40...+75 °C (Order no.: V.1915.03 /.13) Conduction Cooled: -40...+75 °C (Order no.: V.1915.04)

General (continued):		
Humidity	Max. 90 %, non-condensing	
Connector types	P1, P2: VMEbus (160 pins) J11, J12, J21, J22: PMC address/data J13, J23: PCI 64 signals J14, J24: PMC I/O signals	
Board size	160 mm x 233 mm	
VME dimensions	6 U height, 4 HP width	
Order Information:		
Hardware	Order No.	
VME-PMC-CADDY/2	VMEbus base board for two single PMC modules, P2-pin assignment acc. to VITA 35 (P4V2-64ac, P4V0-64), (no interconnection between PMC modules), no XMC, 3.3V supply for PMC fed from VMEbus	V.1915.02
VME-PMC-CADDY/2-T	as V.1915.02, but for extended V.1915.03 temperature range: -40...+75 °C	
VME-PMC-CADDY/2-32P2	VMEbus base board for two single PMC modules, P2-pin assignment acc. to IEEE Std 1386-2001, Table 8 (interconnection between 16 pins of the PMC-modules), no XMC, 3.3V supply for PMC fed from VMEbus	V.1915.11
VME-PMC-CADDY/2-T-32P2	as V.1915.11, but for extended V.1915.13 temperature range: -40...+75 °C	
VME-PMC-CADDY/2-CC	as V.1915.02, but conduction cooled, extended temperature range: -40...+75 °C	V.1915.04
Software Support		
VME-PMC-CADDY/2 VxWorks LIB	VxWorks library (other operating systems on request)	V.1915.98