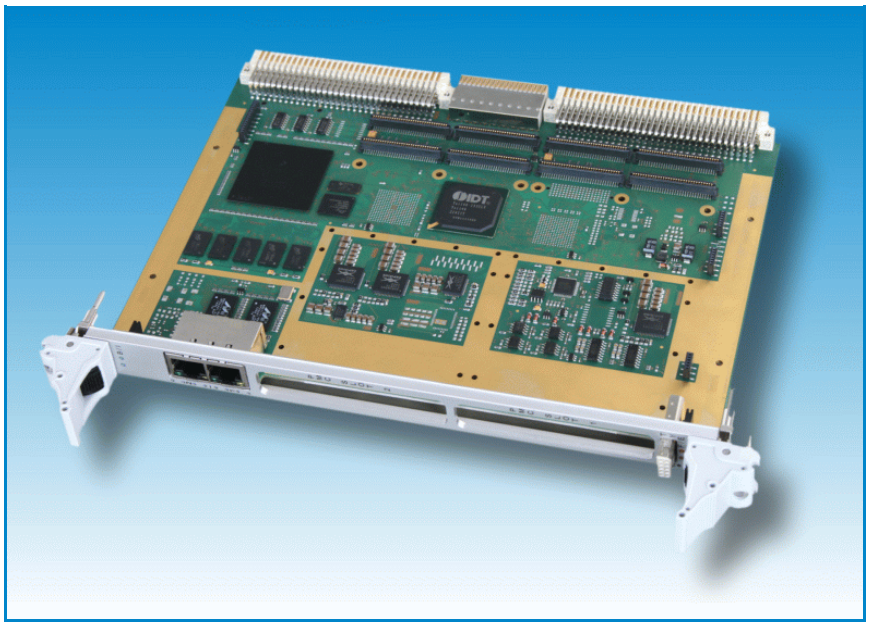
# VME-PMC-CADDY/2plus

## Intelligent VME-Carrier Board for two 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*
- *2 Gbit Ethernet ports, 2 RS-232 serial ports with access via the front panel*

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

- *Design for low power consumption and easy cooling*
- *Approved in many industrial applications*
- *Standard interfaces and form factors according to IEEE 1386.1-2001 and IEEE 1014 Rev. D*
- *PPMC according to VITA™ 32*
- *RTC buffered by ELDC or 5 V VMEbus Standby*
- *BSPs are available for VxWorks® and Linux®*

***Easy Expansion of VMEbus Systems***

- *Add up to 2 PMC boards to your system*
- *Connect to the field with P0/P2-I/O, signals routed acc. to VITA 35 (P4V2-64ac, P4V0-64)*
- *Insert 2 single size or 1 double size PMC module*
- *Onboard 3.3 V voltage generation*

*(This product is in life cycle stage end-of-life.)*

***VME-PCI Link***

*The VMEbus unit VME-PMC-CADDY/2plus 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 1386.1-2001 (except the standard I/O pin routing)). It is possible therefore to insert all PMC modules, that use 3.3 V signalling.*
*In addition to the connectors for the PMC-address/data and control signals, every slot of the VME-PMC-CADDY/2plus has an I/O-connector which applies the I/O-signals of the PMC modules to VMEbus connectors P0 and P2.*

*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 256 MByte DDR2 RAM ECC and a 128 Mbyte Flash (NOR) as memory, the VME-PMC-CADDY/2plus uses a 400 MHz Freescale MPC 8349 microcontroller to configure the PMC modules and the VME-PCI bridge.*

***Interfaces***

*Two Gbit Ethernet ports and two serial configuration interfaces are easily accessible via the front panel.*
*The serial interfaces are designed as RS-232 interfaces.*

***Front Panel***

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

***Software***

*BSPs are available for VxWorks and Linux. BSPs for other operating systems are available on request*




*esd electronic system design gmbh*
*Vahrenwalder Str. 207*
*30165 Hannover / Germany*
*Phone: +49 (0) 511 3 72 98-0*
*Fax: +49 (0) 511 3 72 98-68*
*E-mail: info@esd.eu*

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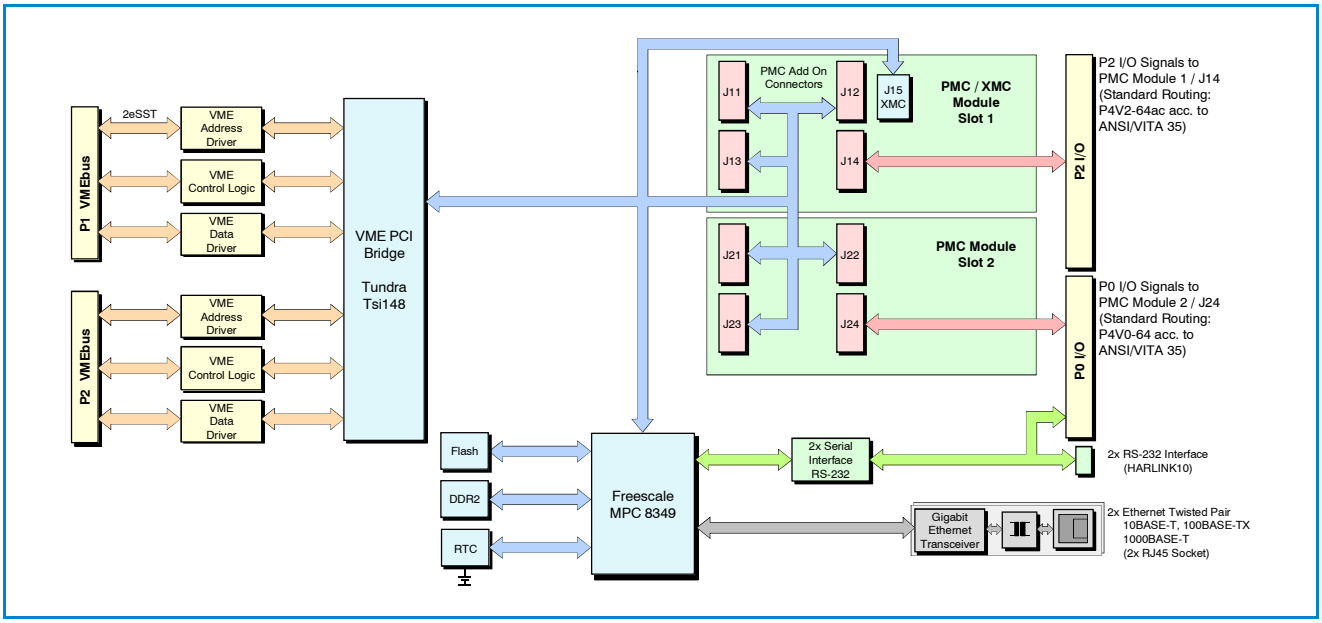


### Technical Specifications:

| VMEbus: | |
|---|---|
| Controller | TUNDRA Tsi148 |
| VMEbus access | - Legacy protocols to protect existing VME investment<br>- VME64 extensions<br>- 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 1386.1-2001 |
| Size | Two single size modules |
| VME PCI Bridge | Tundra Tsi148,<br>32/64 bit at 33/66 MHz |
| Voltage level | 3.3 V (signal level) only |
| **CPU:** | |
| Microcontroller | Freescale MPC 8349, 400 MHz |
| Memory | 256 Mbyte DDR2 RAM ECC,<br>128 Mbyte Flash (NOR) |
| Configuration | Via 2x RS-232 serial interface |

| General: | |
|---|---|
| Temperature | 0...50 °C |
| Humidity | Max. 90 %, non-condensing |
| Connector types | P1, P2: VMEbus (160 pins)<br>P0: PMC I/O signals<br>J11, J12, J21, J22: PMC address/data<br>J13, J23: PCI 64 signals<br>J14, J24: PMC I/O signals |
| Voltage option | Onboard 3.3 V generation |
| Board size | 160 mm x 233 mm |
| VME dimensions | 6 U height, 4 HP width |

### Order Information:

| Hardware | | Order No. |
|---|---|---|
| VME-PMC-CADDY/2plus | VMEbus base board for two single PMC modules, P0/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.1915.05 |

| Software Support | | |
|---|---|---|
| VME-PMC-CADDY/2plus VxWorks BSP | VxWorks BSP | V.1917.58 |
| VME-PMC-CADDY/2plus Linux BSP | Linux BSP | V.1917.57 |




esd electronic system design gmbh
Vahrenwalder Str. 207
30165 Hannover / Germany
Phone: +49 (0) 511 3 72 98-0
Fax: +49 (0) 511 3 72 98-68
E-mail: info@esd.eu