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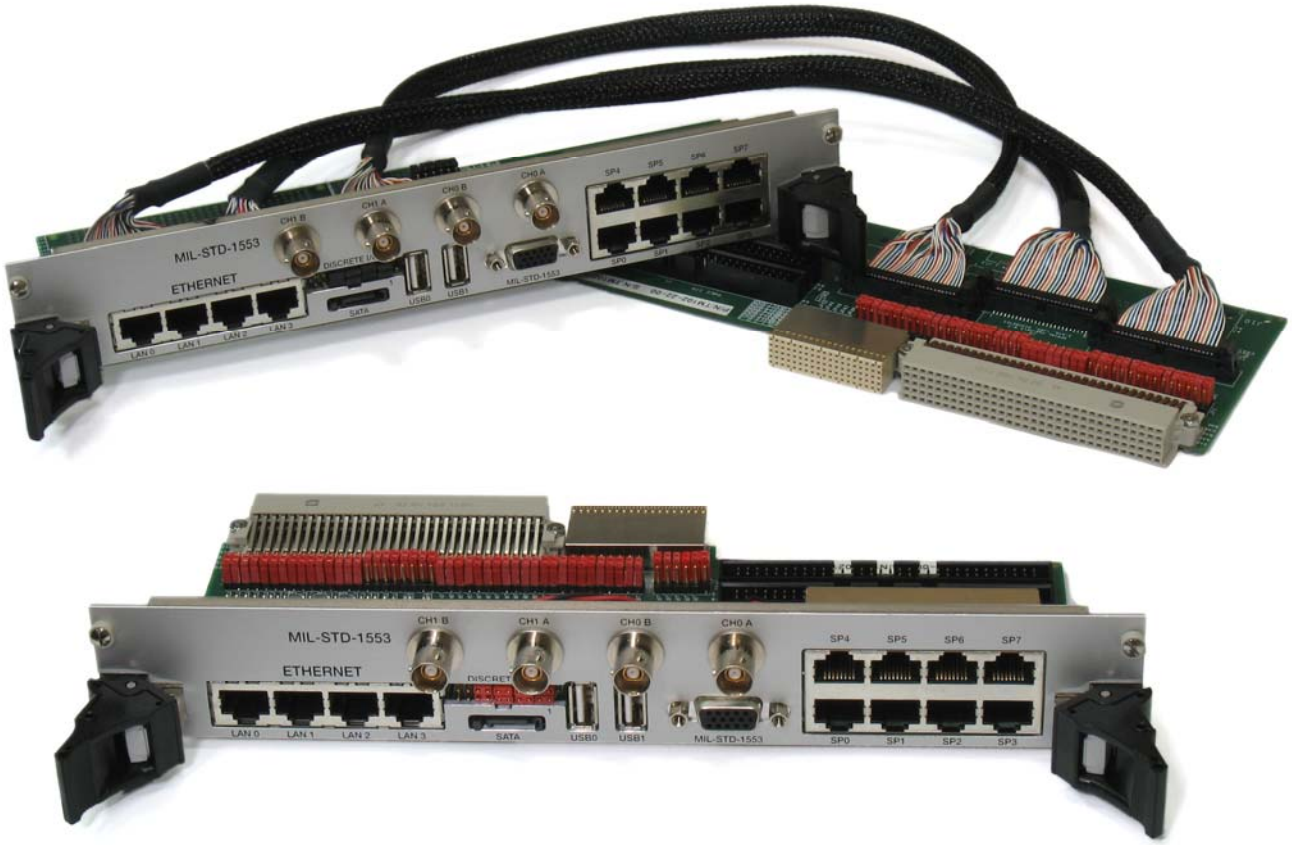
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Find the *Aitech Defense Systems TM102* at our website: *Click HERE*

TM102
Transition Module for the C102 VME SBC



- ***Transition Module for Use With Aitech's C102 Dual PowerPC® 7448 VME SBC***
- ***Provides Standard Connections for C102 I/O Interfaces***
- ***80 mm Rear Module Depth, Fully Compliant with IEEE 1101.11***
- ***No Active Components***
- ***Configuration Jumpers Available for I/O Routing Configuration***
- ***Two Versions Available:***
  - ***Complete Front Panel Kit, Including Front Plug-in Unit, Rear Backplane Adapter, and High-Quality Twisted-Pair Flat Cables***
  - ***Rear Plug-in Unit***
- ***Both Versions available in either Single-Slot or Double-Slot Configurations***

Aitech Defense Systems, Inc.
A member of the Ai-Rugged Group
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Tel: (888) Aitech-8 (248-3248) Fax: (818) 718-9787 e-mail: sales@rugged.com web: www.rugged.com

TM102 Transition Module

Aitech's TM102 transition module is designed as a supplement to the C102 Dual PowerPC® 7448 VME SBC, and intended for use in commercial air-cooled enclosures. The TM102 eliminates the need for harnessing and complex cabling fixtures when connecting to the C102.

The TM102 is available in both front plug-in kit and rear plug-in unit versions, and both versions come in both double-slot and single-slot configurations.

The front plug-in kit is for use with enclosures that support only front plug-in units, or for use with enclosures that support both front and rear plug-in units where the user requires front-panel access to the I/O connections. The TM102 rear plug-in unit is for use with enclosures that support both front and rear plug-in units where the user requires rear-panel access to the I/O connections.

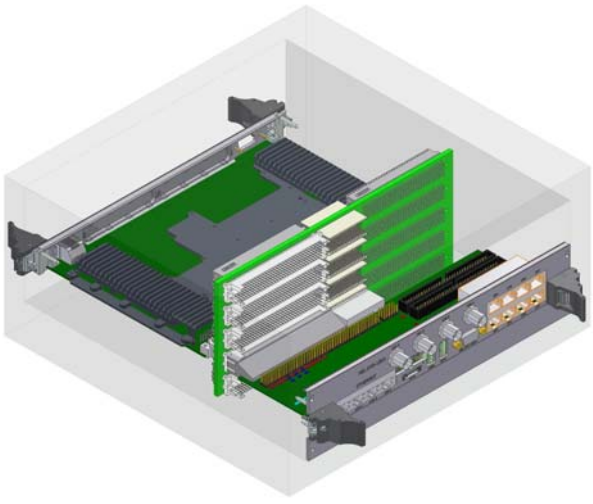
The TM102 is designed for use with enclosures with a rear module depth of 80 mm, and is fully compliant with the IEEE 1101.11 specification. The TM102 may be adapted for use with enclosures whose rear module depth is greater than 80 mm by adding an extender (not included).

The single-slot configuration provides access to the following C102 I/O channels: two Gigabit Ethernet ports, two Fast Ethernet ports, one Serial ATA port, two USB ports, two dual redundant MIL-STD-1553B ports (via a 15-pin D-type connector, which can be used together with an adapter that splits into four twinax connectors), two multi-protocol high-speed serial ports supporting RS-232/422/485 and two standard UART ports supporting RS-232/422/485, and 16 single-ended or 8 differential discrete I/O channels.

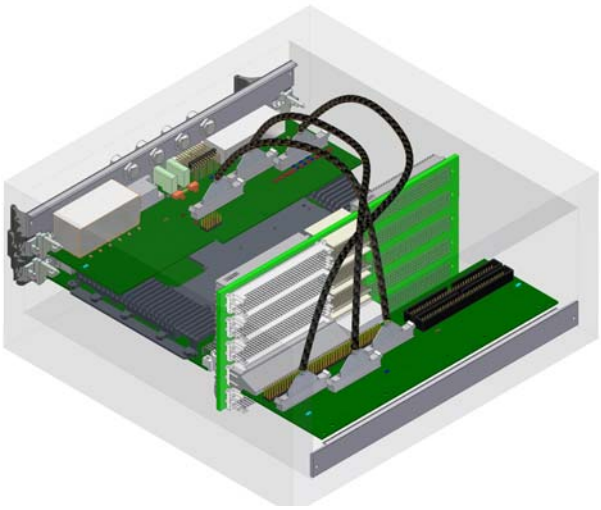
The double-slot configuration provides access to all C102 I/O channels: two Gigabit Ethernet ports, two Fast Ethernet ports, one Serial ATA port, two USB ports, two dual redundant MIL-STD-1553B ports (via four twinax connectors), six multi-protocol high-speed serial ports supporting RS-232/422/485 and two standard UART ports supporting RS-232/422/485, and 16 single-ended or eight differential Discrete I/O channels.

In addition, the TM102 provides a header for each of the C102's PMC sites, enabling attachment of cables to the PMC I/O.

The TM102 also provides jumpers to enable I/O routing for the C102 shared I/O pins as well as interface type customization for serial I/O interfaces.



Rear Plug-in Unit, Double-Slot Version



Front Plug-in Kit, Double-Slot Version

Functional Description

System Support

The TM102 is available in both front panel kit and rear plug-in unit versions.

All TM102 versions are designed for enclosures whose rear module depth is 80mm, as specified in IEEE 1101.11. The TM102 may be adapted for use with enclosures whose rear module depth is greater than 80 mm by adding an extender (not included).

The TM102 front panel kit consists of a front plug-in unit wired via high-quality twisted-pair flat cables to an I/O adapter connected to the backplane. The rear I/O adapter is assembled only with VME rear I/O connectors and flat cable headers. The transition module itself is assembled with flat cable headers and front panel standard I/O connectors.

The TM102 rear plug-in unit combines both the VME rear I/O connectors and the front panel standard I/O connectors on a single board. Both TM102 versions provide identical functionality.

Two configurations are available, single slot and double slot. The single slot transition module provides connectors to all C102 I/O interfaces with the exception of four serial I/O ports (only serial ports 0-3 are available). The MIL-STD-1553B channels are available via the 15-pin D-type connector. If twinax connectors are required, the 1553-SCBL D-type-to-twinax adapter box accessory (available separately) may be used.

The double slot transition module provides connectors for all C102 I/O interfaces. Four standard twinax connectors are available for the MIL-STD-1553B channels in addition to the 15-pin D-type connector.

I/O Connectors

The transition module provides standard connectors for all the C102 I/O interfaces. These connectors include the following:

- One Serial ATA port
- Two USB 2.0 type A connectors
- Four modular RJ45 jacks: two Fast Ethernet and two Gigabit Ethernet ports
- Four twinax jacks for the two dual redundant MIL-STD-1553B channels (double-slot configuration only)
- One 15-pin D-type connector for the two dual redundant MIL-STD-1553B channels (may be used with the 1553-SCBL D-type-to-twinax splitter cable)
- 20-pin 90° header for 16 discrete I/O channels (8 differential pairs)
- Four-by-two (four-by-one for the single slot version) modular block of RJ-45 jacks for the eight serial I/O ports

Configuration Jumpers

Since some of the C102 I/O signals share the same I/O pins at the P0/P2 I/O connectors, the TM102 transition module provides the option to route these signals according to the C102's I/O configuration.

These shared I/O signals may be routed to the high-speed and serial I/O flat cable headers as well as front panel connectors when the C102 SBC is configured to route its local resources to the shared I/O pins (Ethernet, USB, Serial I/O, or Discrete I/O). When the SBC is configured to route these shared I/O pins to the PMC I/O, the transition module may be configured to route these signals to the PMC I/O flat cable headers.

The SBC Serial I/O supports both RS-232 and RS-422. A single jumper is provided for each serial channel for interface mode configuration in RS-232 or RS-422.

When configured in RS-232 interface mode, one of the RJ-45 jack connections is tied to the ground. When configured in RS-422 mode all eight connections of the RJ45 modular jack are used for the differential signals (TxD, RxD, TxC and RxC).

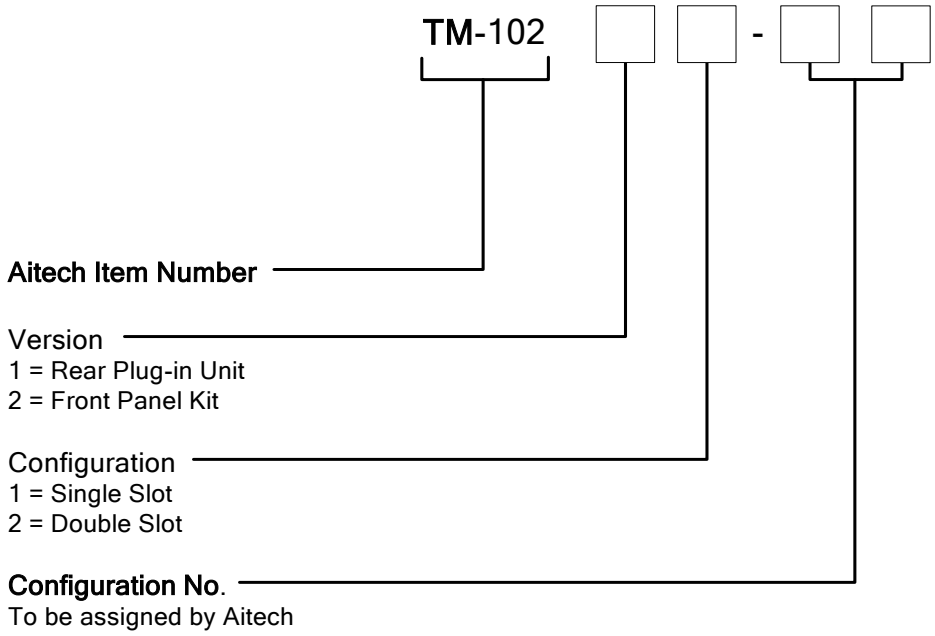
Mechanical Features

The TM102 fully complies with IEEE 1101.11.

Dimensions

- Backplane Adapter- per IEEE 1101.11 80mm depth type.
- Single-slot Transition Module – per IEEE 1101.1 Single slot front panel.
- Double-slot Transition Module – per IEEE 1101.1 Double slot front panel.

Ordering Information for the TM102



Example :TM102-11-00

To order the MIL-STD-1553B D-type connector-to-twinax adapter box accessory (for use with the single-slot configuration only), order part number TM1020-X1-00.

For more information about the TM102 or any Aitech product, please contact Aitech Defense Systems sales department at (888) Aitech-8 (248-3248).

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