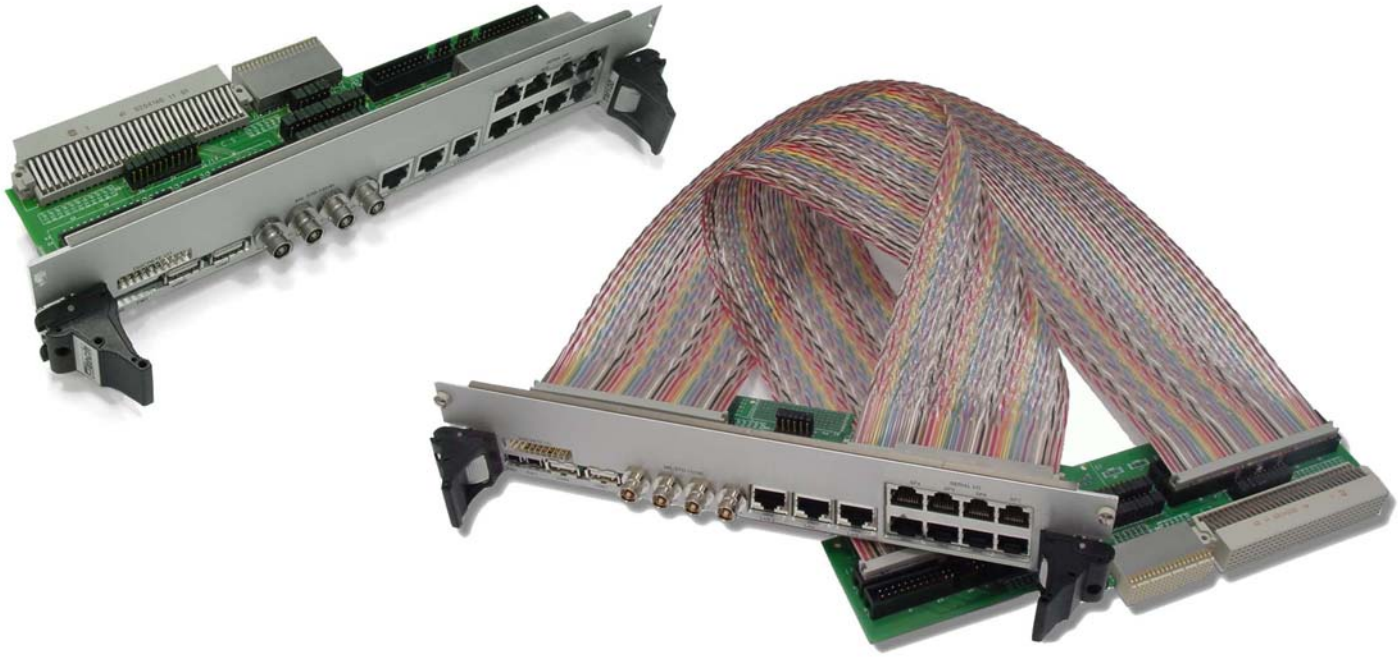
TM100
Transition Module for the C100 VME SBC



- ***Provides Standard Connection for the C100, C101, and C103 G4+ PowerPC® VME SBC I/O Interfaces***
- ***60mm Module Depth Fully Compliant with IEEE 1101.11***
- ***Supports Both Front Only and Front/Rear Plug-in Units Subracks***
- ***Direct Rear Plug-in Unit for Subracks Supporting Rear I/O Plug-in Units***
- ***Complete Two Unit Kit (Rear Backplane Adapter Unit and Front Panel Transition Module Unit) With Cables for Subracks Supporting Front Plug-in Units Only***
- ***High Quality Twisted Pair Flat Cables for Transition Module and Rear I/O Adapter Connection***
- ***Double Slot Transition Module Providing All C100, C101, and C103 I/O Interfaces***
- ***Single Slot Transition Module Providing Most C100, C101, and C103 I/O Interfaces***
- ***Includes no Active Components***
- ***Configuration Jumpers Available for I/O Routing Configuration***

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TM100 Transition Module

Aitech's TM100 is provided as a complement to the C10x G4+ PowerPC® VME SBC.

The transition module provides standard direct connection to all the C10x I/O interfaces and is intended for use in commercial air-cooled chassis. The TM100 eliminates the need for any harnessing and complex cabling fixtures in order to connect to the C10x.

The TM100 transition module fully complies with the IEEE 1101.11 specification and supports subracks capable of front and rear plug-in units as well as subracks capable of front plug-in units only. Two kits are available supporting rear plug-in and front plug-in attachment.

The same module with different assembly options is used as the rear I/O adapter connecting to the C10x rear I/O at the backplane as well as the transition module providing all I/O connectors at the front/rear panel.

I/O connectors include: a Gigabit Ethernet port, two Fast Ethernet ports, two IEEE1394a (FireWire) ports, two USB ports, two dual redundant MIL-STD-1553B ports, eight serial I/O ports (four ports only in the single slot version) and 16 single-ended / 8 differential Discrete I/O channels.

In addition, the transition module provides a header for each of the PMC sites of the C10x allowing attachment of cables to the PMC I/O.

Two slot size options are available for the transition module – single slot and double slot. The double slot transition module provides all C10x I/O interfaces while the single slot transition module provides all C10x I/Os with the exception of four serial ports.

The transition module also provides jumpers to allow I/O routing for the C10x shared I/O pins as well as interface type customization for serial I/O interfaces.

The following figures illustrate the TM100 location in the system. These illustrations include both the rear plug-in and front-plug in configurations.

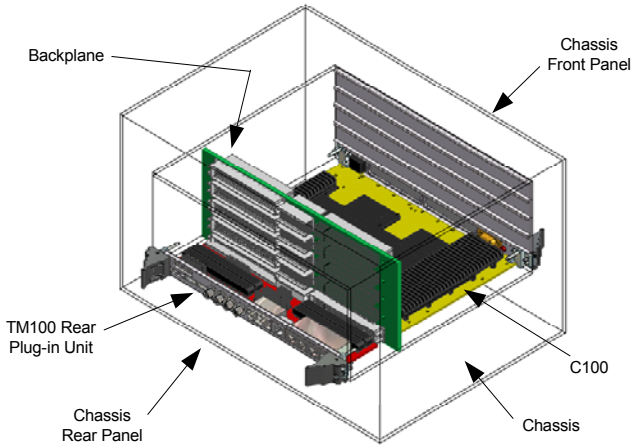


Figure 1. TM100 KIT Rear Plug-in Configuration

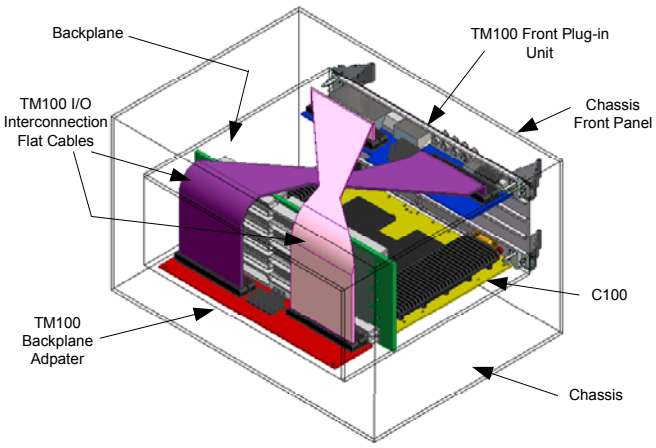


Figure 2. TM100 KIT Front Plug-in Configuration

Functional Description

System Support

The TM100 supports both front/rear plug-in units subracks as well as subracks capable of front plug-in units only.

When using subracks capable of rear plug-in units installation, a single transition module kit is needed. In such case, it performs both as the rear I/O adapter at the backplane and the I/O connectors panel. Additional standard expansion units may be used to connect the transition module to the rear of the backplane when subracks are deeper than 60mm.

When using subracks capable of front plug-in units a complete kit is mandatory. This kit includes two transition module units (in different assembly configuration) and two high quality twisted pair flat cables.

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.

Two form factor transition modules are available, single slot and double slot. The single slot transition module provides connectors to all C10x I/O interfaces with the exception of four serial I/O ports (only serial ports 0-3 are available). The double slot transition module provides connectors for all 10X I/O interfaces.

I/O Connectors

The transition module provides standard connectors for all the 10X I/O interfaces. These connectors include the following:

- Two IEE1394a 4-wire connectors
- Two USB 2.0 type A connectors
- Three modular RJ45 jacks for the two Fast Ethernet and Gigabit Ethernet ports
- Four TWINAX jacks for the two dual redundant MIL-STD-1553B channels
- 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 RJ45 jack block for the eight serial I/O ports

Configuration Jumpers

Since some of the 10X I/O signals share the same I/O pins at the P0/P2 I/O connectors, the TM100 transition module provides the option to route these signals accordingly.

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 SBC is configured to route its local resources to the shared I/O pins (Ethernet, USB, IEEE1394a, 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 RJ45 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).

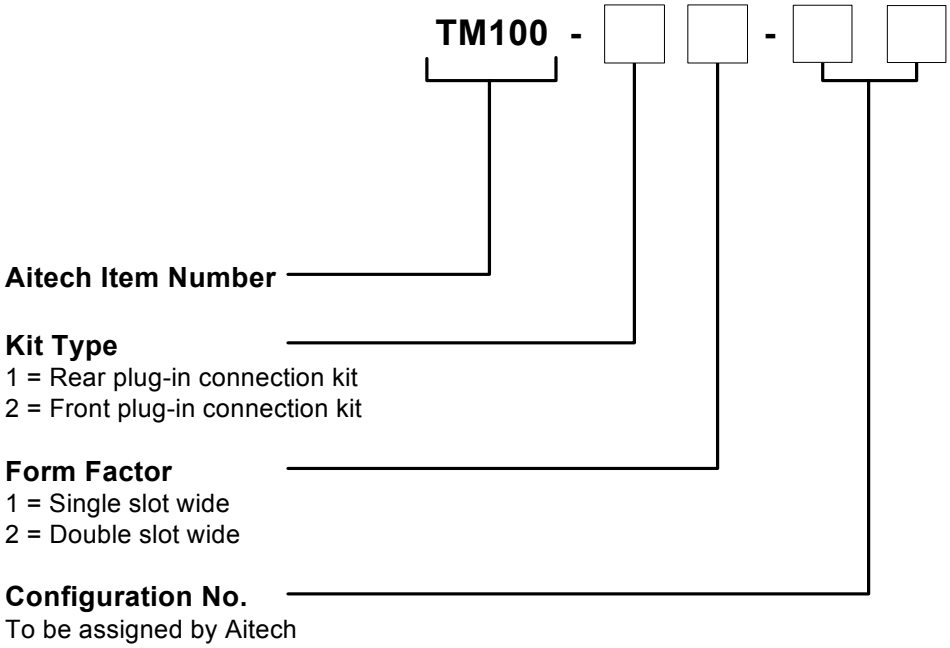
Mechanical Features

The TM100 fully complies with IEEE 1101.11.

Dimensions

- Backplane Adapter- per IEEE 1101.11 60mm 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 TM100



Example: TM100-11-00

For more information about the TM100 or any Aitech product, please contact Aitech Defense Systems sales department at (888) Aitech-8 (248-3248).

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