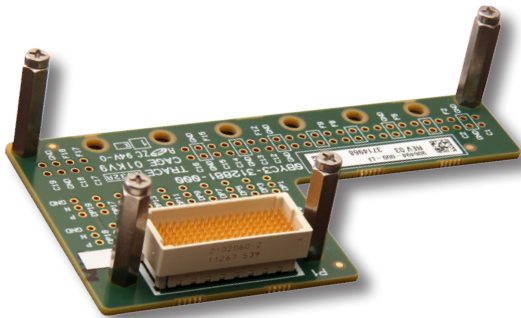


RIM Modules

RTM Options for Mezzanine I/O



Key Features

- Generic RIM modules providing access to XMC Pn6 I/O signals on Curtiss-Wright RTM modules
- RIM modules available supporting both low speed and high speed differential signaling

Applications

- For systems needing breakout I/O from XMC mezzanine cards mounted on VPX modules
- For customers requiring their own cabling solutions

Overview

In today's market, customers are looking to maximize their I/O capabilities without adding extra hardware. The use of PMC or XMC mezzanine modules provides this ease of expansion.

While I/O from a single board computer (SBC) in a development system can be accessed through the Rear Transition Module (RTM), I/O originating from a mezzanine card is often much more difficult to access in a lab or development environment. Many Curtiss-Wright RTM modules provide a simple expansion connector, permitting easy breakout of front mezzanine module I/O signals using an RTM Interface Module, or RIM.

A RIM module mounted on the RTM enables easy access to the mezzanine I/O signals. Curtiss-Wright offers two RIM module variants for this purpose – a low speed variant and a high speed variant. Both variants support 3U and 6U RTM designs and attach to the RTM through a VITA 61 XMC connector which directly maps to the front module's XMC Pn6 I/O connector.

While many Curtiss-Wright modules already have custom-designed RIMs to break out specific I/O signals to pre-defined connectors, other custom solutions or mezzanines that do not have breakout RIMs can use either of these variants.

Both variants can be used on the following Curtiss-Wright RTMs, as well as any 3rd party RTM that supports Pn6 module I/O:

- RTM3-131
- RTM3-716
- RTM6-1958
- RTM3-1258-1xxx

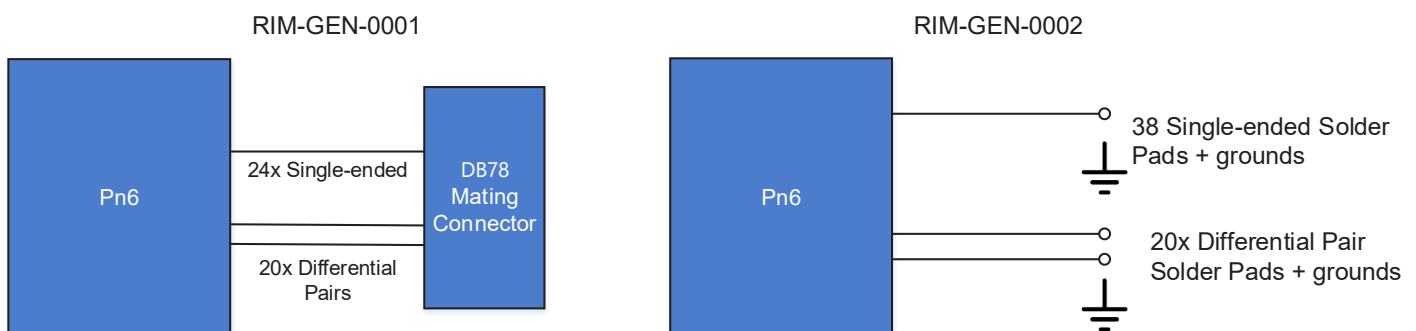


Figure 1: RIM-GEN-0001 and RIM-GEN-0002 block diagrams

Low Speed RIM

Part number: RIM-GEN-0001

This RIM variant supports low-speed signaling with non-impedance controlled tracking requirements. It breaks out 64 of the 78 XMC signals from the RTM VITA 61 connector to a 78 pin D connector. The RIM-GEN-0001 supports VITA 46.9 X24s+X8d+X12d pin mapping.

NOTE: Not all XMC breakout signals are available on the 78 pin D connector. Pn6 single ended pins C1-C7 and F1-C7 are not available. For applications which need access to these pins, use RIM-GEN-0002.

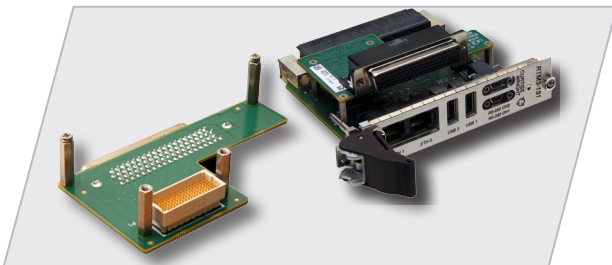


Figure 2 (not to scale): RIM-GEN-0001 (left) RTM with RIM-GEN-0001 installed (right)

High Speed RIM

Part number: RIM-GEN-0002

This RIM variant supports high speed signaling and breaks out all 78 XMC signals from the VITA 61 connector as follows:

- 20 differential pairs (X8d+X12d) impedance controlled routing to differential pairs going to 2 mm headers, with a ground for each.
- 38 single-ended (X38s) and ground signals brought to 0.1” solder-able pads
- Holes provided for tie-downs

The RIM-GEN-0002 supports the full VITA 46.9 X38s+X8d+X12d pin mapping. Customers can create their own cable solution to meet their specific requirements.

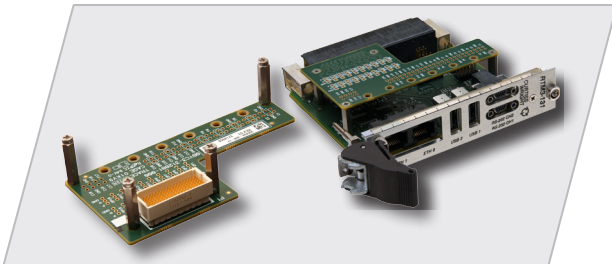


Figure 3 (not to scale): RIM-GEN-0002 (left) RTM with RIM-GEN-0002 installed (right)

Custom RIM Modules

For customers who wish to create their own custom RIM module, please contact Curtiss-Wright.

Ordering Information

The RIM modules are ordered with the following part numbers. Please contact the factory for more information.

TABLE 1		Ordering information
PART NUMBER	DESCRIPTION	
RIM-GEN-0001	<ul style="list-style-type: none"> › Intended for low speed signaling with non-impedance controlled tracking requirements › 78 pin D connector supports X24s+X8d+X12d signals › Use mating connector TE 5748477-1 or equivalent 	
RIM-GEN-0002	<ul style="list-style-type: none"> › Generic interface with differential pair routing for high speed signals › 0.1” solder pads supports X38s+X8d+X12d signals 	

XMC module specific RIMs

The following RIM modules are available and support specific XMC mezzanine modules.

TABLE 2		XMC module specific RIMs
PART NUMBER	XMC MODULE	DESCRIPTION
RIM-120-0001	XMC-120	Supports XMC-120 breakout of Ethernet to RJ45, USB to type A receptacles, SATA, Serial RS-232, DIO and video to DMS-59
RIM-274-0001	XMC-274	Supports XMC-274 breakout of HD-SDI and analog video signals

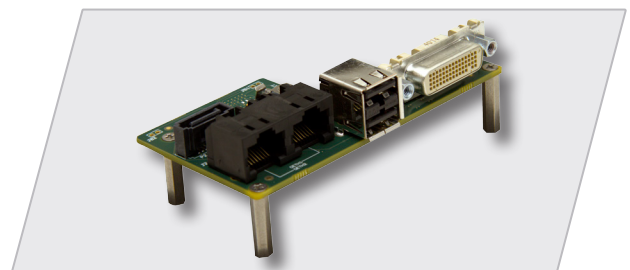


Figure 4: Module-specific RIM: RIM-120 for the XMC-120 Mezzanine Module