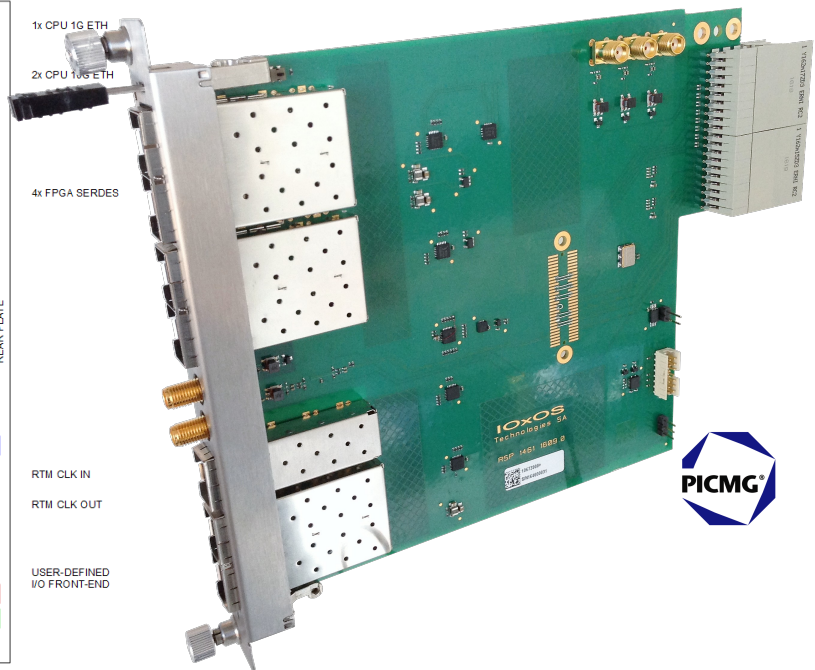
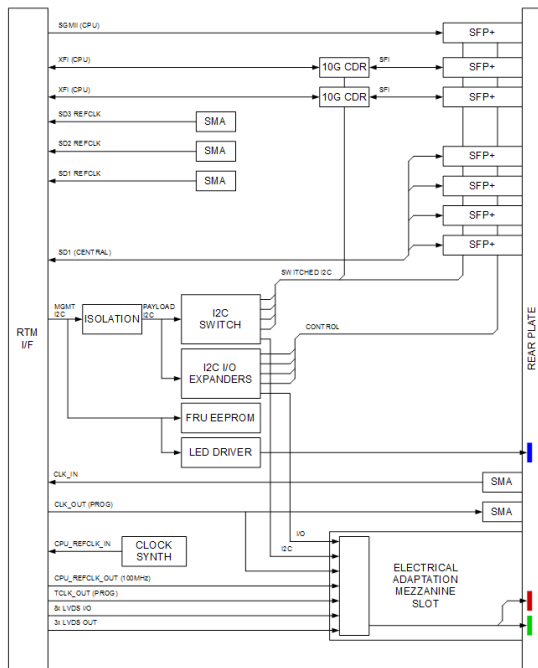


RSP_1461 Communication Extender μ RTM

Building a Comprehensive MTCA.4 Ecosystem

Data Sheet



Key Features

- MTCA.4 mid-size double-width μ RTM form factor
- I/O Expander companion for IFC_1410 Intelligent FMC Carrier
- Seven SFP+ ports:
 - ✓ One 1G Ethernet link connected to AMC CPU
 - ✓ Two 10G Ethernet links connected to AMC CPU
 - ✓ Four user-defined SerDes directly routed to AMC Central FPGA
- I2C expander for SFP+ configuration
- Clock resources:
 - ✓ One SMA front panel connector for reference clock input
 - ✓ One SMA front panel connector for reference clock output
 - ✓ Three onboard SMA connectors for additional clock references
 - ✓ One onboard clock synthesizer
- Custom I/O mezzanine for user-defined application featuring:
 - ✓ 8 LVDS I/O directly routed to AMC Central FPGA
 - ✓ 3 LVDS Outputs directly routed to AMC Central FPGA
 - ✓ 100MHz reference clock output
 - ✓ Programmable clock output
 - ✓ I2C interface
- DESY D1.4-compliant RTM interface
- Total integration within EPICS ecosystem

Overview

IOxOS Technologies unveils the RSP_1461, a Rear Transition Module featuring seven SFP+ ports and clock resources to expand the I/O and synchronization capabilities of the [IFC_1410 Intelligent FMC Carrier](#). This μ RTM is part of a comprehensive MTCA.4 ecosystem based on:

- MTCA.4 line of AMCs and μ RTM modules, including CPUs, FMC carriers, Fast Digitizers and communication extenders
- High-end set of ADC and DAC modules in FMC form factor
- FPGA Design Kits for faster integration and customization
- EPICS support

An extensive EPICS ecosystem of open source tools, libraries and applications is growing around these MTCA.4 and FMC COTS, with the invaluable collaboration of the Paul Scherrer Institut (PSI) in Switzerland, aiming to support the physics community in the development of efficient distributed real-time platforms for precision instrumentation and state of the art accelerator control systems.

Ordering Information

Article Reference	Product Description
RSP_1461-A0	MTCA.4 Communication Extender μ RTM
IFC_1410-A0	MTCA.4 NXP T2081 Single Board Computer AMC with Xilinx Kintex UltraScale XCKU40
TOSCAIII_FDK-SP	TOSCA III FPGA Design Kit – Starter Package (10 licenses + 3-days hands on workshop)
TOSCAIII_FDK-DP	TOSCA III FPGA Design Kit – Development Package (10 additional licenses)