

MicroTCA chassis with RTM for Physics applications



- Front slots conform to MicroTCA specification PICMG MicroTCA.0 R1.0
 - 1 x MCH slot Single Full-size
 - 6 x AMC slots Double Mid-size
- Rear slots according to PICMG Physics WG1
 - 6 x RTM slots Double Mid-size
- Industrial type 300 Watts AC power supply, front pluggable Double Full-size
- NAT Power switch module as plug-on module on the backplane to switch AMC power through the MCH
- Speed controlled fans
- Air Flow: bottom air intake, top air exhaust
- Two chassis can be mounted side-by-side for 19"-cabinet installation
- Chassis dimensions:
 - Width: 217.72 mm (ca. 42HP)
 - Height: 221.45 mm (5U)
 - Depth: 373.30 mm

Order number

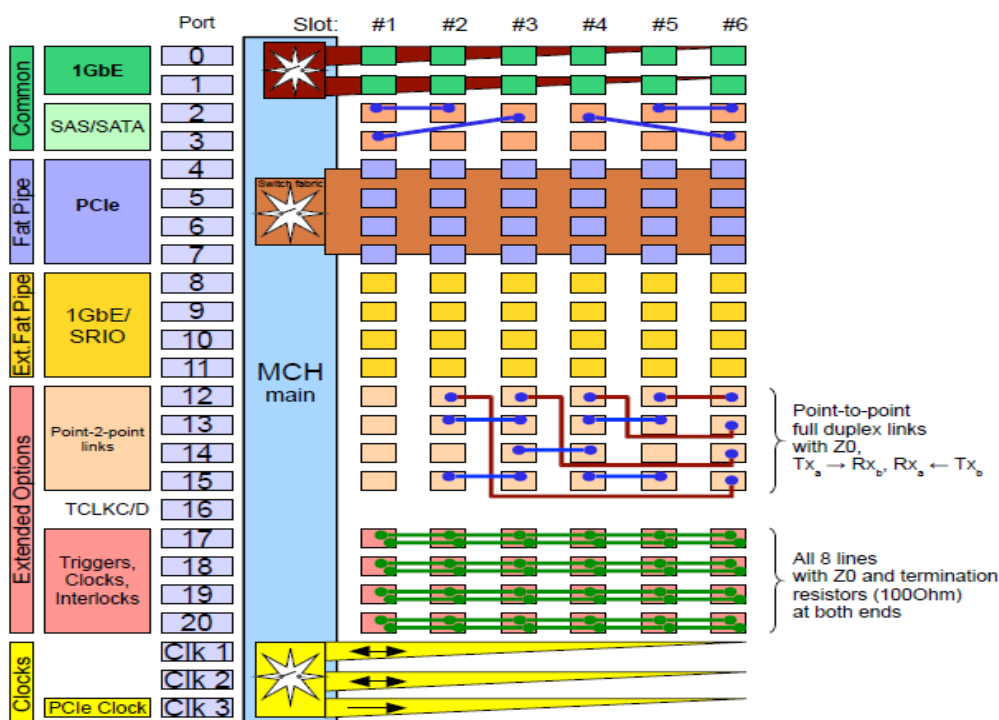
The order number is 11850-019.

Delivery comprises: subrack, backplane, power supply, NAT Power Switch Module, slot fillers, fans, air filter front and rear

Intended use of the chassis

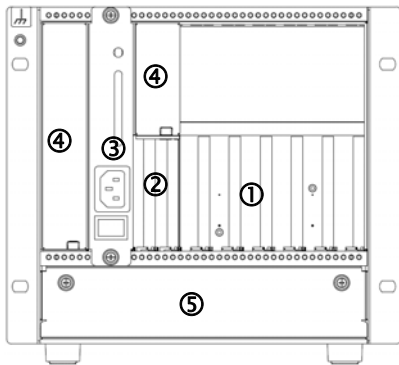
The primary intention of this chassis is to prove the concept of the Rear Transition Modules (RTM) for a MicroTCA chassis which was developed in the PICMG Physics WG1. It also provides full IPMI management capabilities so it is perfectly suited to test all management aspects of AMC and RTMs. The chassis provides speed controlled fans for low acoustic noise in a laboratory environment. The fan speed can be set manually by entering commands on the MCH console.

Backplane Topology



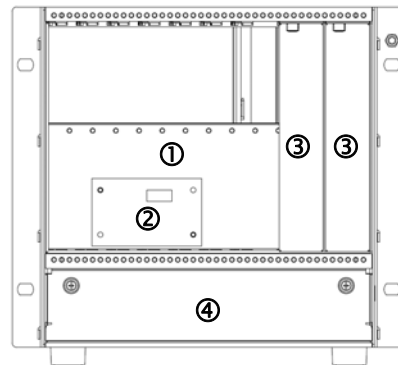
Chassis Components

Front view:



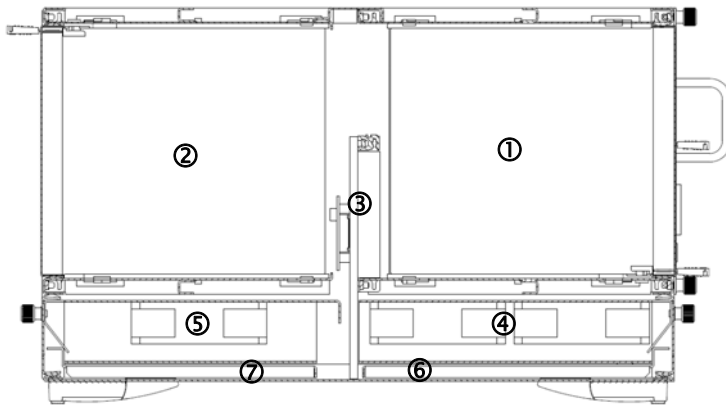
- 1 – MicroTCA Backplane
- 2 – MCH slot
- 3 – 300 Watts AC power supply
- 4 – Slot covers
- 5 – Removable fan cover for air filter replacement

Rear view:



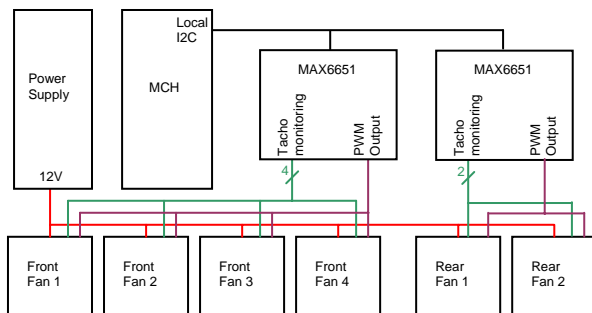
- 1 – MicroTCA Backplane
- 2 – NAT Power Switch Module
- 3 – Slot covers
- 4 – Removable fan cover for air filter replacement

Side view:



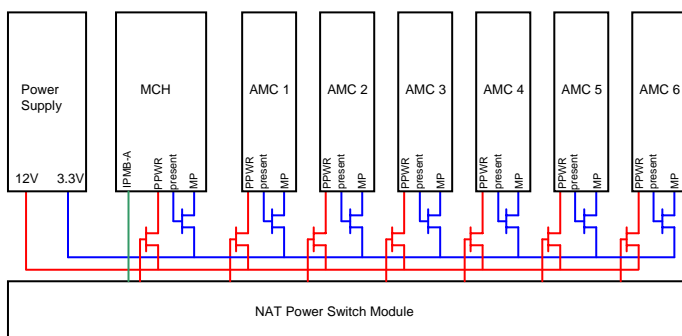
- 1 – Front AMC card cage
- 2 – Rear RTM card cage
- 3 – MicroTCA Backplane
- 4 – 4 x fans for AMC cooling (not removable)
- 5 – 2 x fans for RTM cooling (not removable)
- 6 – Removable AMC air filter
- 7 – Removable RTM air filter

Fan Control



The speed of the fans is controlled by two MAX6651 fan controller chips on the backplane which is connected to the local I2C bus of the MCH. In order to read and set the fan speed, the MCH needs to support the MAX6651 chip. Currently, the MCHs from NAT and Kontron do support this functionality. If a MCH does not support this functionality, the fans run at full speed. The fan speed can be set by manually entering commands on the MCH console.

Power Supply



The chassis provides an AC-input 300 Watts Industrial type front pluggable power supply. A NAT Power Switching Module on the backplane communicates with the MCH via the single IPMB-A to enable power to the MCH and AMC slots.

The communication between MCH and Power Switching Module has been tested with the MCH from NAT, contact Schroff for more Information on other MCHs.

Simplified drawing, presence and enable signals not shown