



NAT-PM-DC48

The **NAT-PM-DC48** a hot swappable, fully redundant, and highly efficient Power Module in single full-size form factor, and thus ideally suited for all air cooled ATCA and MTCA applications.

Input power from two -48VDC sources is converted to 16 independent 12V channels for payload power and 3.3V for management power, supporting up to 12 AMCs, 2 Cooling Units, and 2 MCHs. Both inputs offer features such as input protection, input isolation, inrush control, input OR-ing, EMI filtering, holdup circuit, and high efficiency conversion.

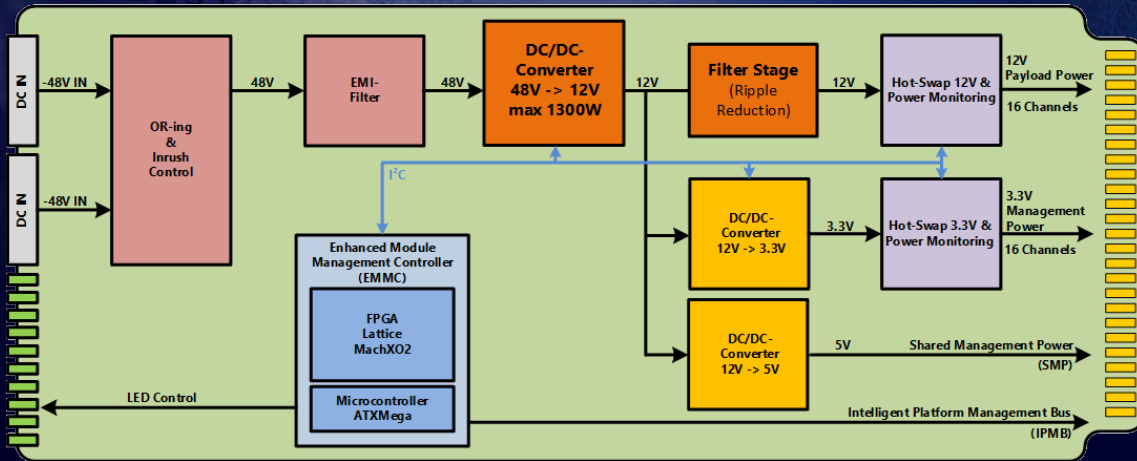
Due to its superior DC/DC conversion unit, the **NAT-PM-DC48** can provide a maximum output power of up to 1300W (ordering option). With this output power, the **NAT-PM-DC48** is the first commercially available MTCA power module being able to supply a MTCA system under worst case conditions with power, using only a single power-module:

=> 12x AMC + 2x MCH + 2x CU, each 80W resulting in 16x 80W

=> 1280W total power demand

Furthermore, a 12V output filtering stage has been implemented into the design, offering a 12V ripple voltage below 10mVpp (0-20MHz Bandwidth, peak-to-peak), making this module a good choice for noise sensitive applications.

The **NAT-PM-DC48** supplies backup power for other Power Modules (Shared Management Power, SMP) in the system, and includes an Enhanced MMC (EMMC) supporting an Intelligent Platform Management Bus (IPMB) to enable communication with the Carrier Manager. The Optical Load Indicator continuously displays the level of power utilization of the whole system.



Key Features

- Single, full-size form factor
- 16 channels of payload and management power
- Hot-swappable, fully redundant
- Total power distribution of up to 860W/ 1300W (ordering option)
- 6% conversion efficiency at full power (min.)
- 2% conversion efficiency at half power (min.)
- Output over-voltage and short-circuit protection
- Input under-voltage shutdown
- Over-temperature protection

Front Panel Connectivity

- Dual -48V Power Input A/B
- Optical Load Indicator
- Status / Fault / Hot-Swap

12V Power Subsystem

- Max. power/channel: 80W / 6.6A@12V
- Fast trip current limit: 8.3A
- Max. inrush current: 19.4A
- Accuracy 12V: +2% / -2%
- Max. ripple @ 6.6A: <10mV

3.3V Power Subsystem

- Max. channel current: 180mA
- Fast trip current limit: 300mA
- Accuracy 3.3V: +5% / -0%
- Max. ripple @ 180mA: <20mV