

High Voltage Power Module Pluggable to NAT RTM Power Supply Carrier

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In the paper we want to present High Voltage Power Module (HVPM) pluggable to Micro Telecommunication Computing Architecture generation four (MTCA.4) based Rear Transition Module (RTM) Power Supply Carrier (PSC) and its possible applications. The idea is to have a possibility to power supply RTM cards that demands specific voltages above 12VDC. The HVPM module is composed of high voltage dc/dc bricks and onboard diagnostics. The dc/dc power modules are designed to make up conversion from 48VDC input voltage to demand +/-100VDC output voltage. The 48VDC input voltage is generated by the PSC using 220VAC input voltage. The onboard diagnostics allow monitoring temperature of the modules, output power, voltage as well as current consumption when operated under load condition. The HVPM is pluggable to RTM PSC and communicates with the carrier using standard i2c bus communication protocol. The HVPM maintenance can be obtained using debug serial console available directly from the carrier or using the MicroTCA Carrier Hub (MCH) installed on the front of the standard MTCA.4 crate.

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