

# Power supply

*”Freke” Power through module*



**Managed 16 channels of 12 VDC**

**System functions on module. Allows for MTCA system without MCH**

**Plug in module  
Single Wide, Dual Height**

**Support for dual MCH or operating without MCH**

## **General Design**

12 Volt DC Power input, max 600 Watt. Generates 3.3 Volt for all MMC and 16 channels of managed 12VDC. The management is done via I2C using IPMI commands. The module also handles filtering, conditioning, fuse. Works with single/dual MCH or as standalone device without any MCH present in the system. Dual I2C and serial interface in front.

## **Background**

RECAB is focused on the development of system management of ATCA and

*Freke - One of Odens two wolfs according the sagas of ancient Nordic asa gods*



with the AMC using I2C, it just use the hotswap pins in the backplane. If a backplane is used that routes the AMC IPMI management directly to the powermodule instead of the MCH module—No MCH is needed and AMC can still be managed using IPMI commands over I2C from the powermodule. New system application software can also be downloaded on to the board using serialport (RS232) via the RJ45 connector on the front of the module. As the IPMB bus on the powermodule also is connected to the fan unit It can also monitor temperature and handle fan speed. This allows it to also manage the environment in the system.

### IPMI exercise tool

This module also allows for a IPMI exercise tool to be used. With this tool the user can record and insert IPMI commands into any of the two I2C bussed in the system. This is a very useful feature for development, debugging and testing of a system.

### Input power and filtering

Input power 12 VDC is feed via D-sub in front panel. The module have protection vs. reversed polarity, high voltage and high current.

### Power output

On the board the input power is converted in 16 channels of 12VDC it also on module generated the 3.3Volt needed for the MMCs. All 12VDC channels are individually controlled by the management controller. Power channels have individual fuses. All output power is also individually checked for correct voltage and current level.

System management
32-bit ARM RISC processor 32KB SDRAM 512KB of Flash I2C device monitoring RS232 interface  IPMI v2.0
Front Panel
Power Input: D-sub miniature 7W2-type Connector. RS-232: RJ45 (3 pins Rx, Tx, GND) Dual I2C busses: RJ45 (5 Pins)
Compliance to standards
PICMG MicroTCA .0 R1.0  RoHS: Compliant  Designed to meet or exceed: - Safety: UL 1950, UL 94, CSA 22.2 No 950, EN 60950, IEC 950 - EMI/EMC: EN 55022 / EN 55024, EN 50081-1 / EN 6100-6-2
Power
600 Watt Power 12Volt DC Power
General
Dimensions: 181,5 x 73,5 x 30,5 mm (full hight, single wide) Weight: TBD Kg MTBF: 140 000 h @ 30 C / 86 F (Bellcore Issue 6)
Environmental
Operating temp.: 0 C to +60 C standard Storage temp.: -55 C to +95 C Climatic Humidity: non condensing 93% at 40 C (acc. to IEC 60068-2-78) Altitude: 15,240 m (50,000 ft.)



[www.recab.com](http://www.recab.com)

