

PFS1200-12-054xD Series

DC-DC Front End Power Supply

The PFS1200-12-054xD Series is a 1200 watt DC to DC power supply that converts DC input into a main output of 12 VDC for powering intermediate bus architectures (IBA) in high performance and reliability servers, routers, and network switches.

The PFS1200 Series meets international safety standards and displays the CE-Mark for the European Low Voltage Directive (LVD).

Key Features & Benefits

- High Efficiency, typ. 94% efficiency at half load
- Wide input voltage range: -40 to -72 VDC
- Always-On 3.3 V standby output (Option for 5 / 12 Vsb available)
- Hot-plug capable
- Parallel operation with active digital current sharing
- High density design: 45 W/in³
- Small form factor (WxHxL): 54.5 x 40.0 x 228 mm (2.15 x 1.57 x 8.98 in)
- I2C communication interface for control, programming and monitoring with Power Management Bus protocol and PSMI Protocol
- overvoltage and overcurrent protection
- 256 Bytes of EEPROM for user information
- 2 Status LEDs: OK and FAIL with fault signaling
- Hold up time enhancement



Applications

- High Performance Servers
- Routers
- Switches



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1. ORDERING INFORMATION¹

PFS	1200	-	12	-	054	X	D
Product Family	Power Level	Dash	V1 Output	Dash	Width	Airflow ²	Input
PFS Front-Ends	1200 W		12 V		54 mm	N: Normal R: Reverse	D: DC Input

¹ Refer to section 8.9 for further information on Standby Voltage selection
² N = Normal Airflow from Output connector to Input socket
 R = Reverse Airflow from Input socket to Output connector

2. OVERVIEW

The PFS1200 Series DC/DC power supply is a DSP controlled, highly efficient front-end power supply. It incorporates state of the art technology and adopts boost converter and full bridge LLC which use resonance soft-switching technology, synchronous rectification to reduce component stresses, thus providing increased system reliability and very high efficiency. With a wide input DC voltage range the PFS1200 Series maximizes power availability in demanding server, network, and other high availability applications. The supply is fan cooled and ideally suited for integration with a matching airflow path.

An active OR-ing device on the output ensures no reverse load current and renders the supply ideally suited for operation in redundant power systems.

The always-on standby output provides power to external power distribution and management controllers. It is protected with an active OR-ing device for maximum reliability.

Status information is provided with a front-panel LED. In addition, the power supply can be controlled and the fan speed set via the I2C bus. The I2C bus allows full monitoring of the supply, including input and output voltage, current, power, and inside temperatures. Cooling is managed by a fan controlled by the DSP controller. The fan speed is adjusted automatically depending on the actual power demand and supply temperature and can be overridden through the I2C bus.

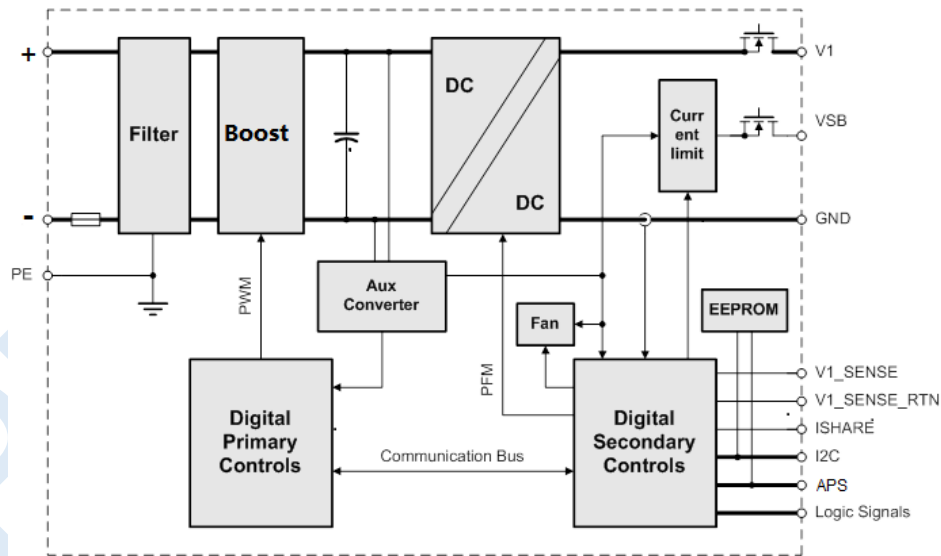


Figure 1. Block Diagram