picoPSU-120-WI-25

12-25V, 120Watt
ATX Power Supply

Quick Installation Guide

Version 1.0b
P/N picoPSU-120-WI-25

Introduction

The picoPSU-120-WI-25 is a small yet powerful and fully compliant ATX power supply designed to power a wide variety of motherboard from a single 12-25V unregulated power source.

The picoPSU-120-WI-25 is the only "plug-in" wide input range power supply solution for general purpose low power motherboards. **Compatible with most VIA C3/C7 CPUs M/B and with Pentium-M / Core Duo boards**, picoPSU-120-WI-25 provides cool, 100% silent power for your system. The PICOPSU-120-WI-25 has many advantages over a regular power supply:
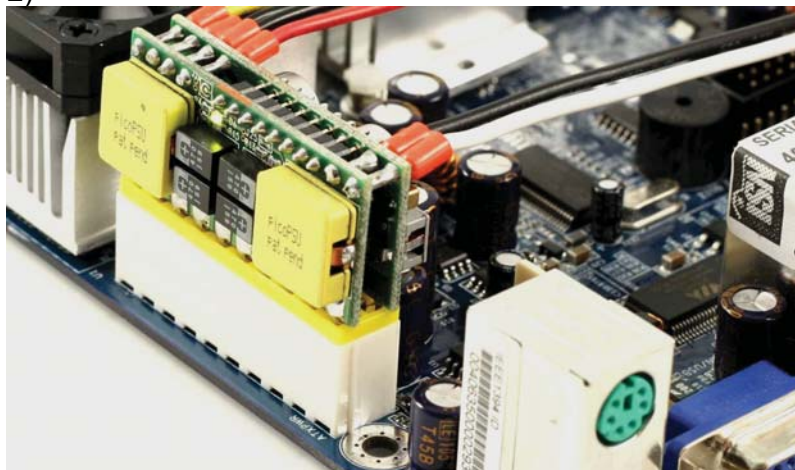
-Smallest ATX PSU to date
-100% silent operation
-Low heat dissipation with combined efficiency over 94%
-Plugs directly into the motherboard's power connector, no cable mess

Quick installation Instructions

The PICOPSU-120-WI-25 has been specifically designed for the Mini-ITX form factor, thus eliminating the need for ATX power cables. It is also 1U compliant – height will not exceed the 1U formfactor.

1) After the picoPSU module was 'snapped in', hook the hard drive power or floppy power to your floppy/hard drives. If more hard drives or floppy connectors are needed, use a HDD/floppy "Y" splitter cable.

2)

2) Connect a 12-25VDC power adapter (peak should not exceed 26.5V) to the input connector.

3) Turn on the PC using the motherboard ON/OFF switch

Typical configuration

The picoPSU-120-WI-25 has been tested with all mini-ITX board under virtually any disk/floppy/CDROM/PCI configuration.

Removing the picoPSU-120-WI-25

In order to remove the picoPSU you must release the power connector latch and then remove the unit. Gently lift the picoPSU out from the ATX connector, by grabbing from the picoPSU PCB, not from components or the wire harness.

Specifications, picoPSU-120-WI-25, 120Watts DC-DC ATX PSU

Power Ratings (Max Load = 120 Watts)

Volts (V)	Max Load (A)	Peak Load (A)	Regulation %
5V	6A	8A	+/- 1.5%
5VSB	1.5A	2A	+/- 1.5%
3.3V	6A	8A	+/- 1.5%
-12V	0.1A	0.1A	+/- 5%
12V	6A	8A	+/- 3%
At max load, forced air ventilation is required. For fanless operation and/or high V(In) de-rate the combined output of the 3.3, 5V and 12V rails by ~20-40%. Peak load should not exceed 60 seconds.			

Efficiency Ratings, 3.3 and 5V rail @ 16V input

CH1=5V	Efficiency (%)	CH2=3.3V	Efficiency (%)
1A	86%	1A	85%
3A	94%	3A	93%
5A	96%	5A	95%
8A	93%	8A	91%

Input Requirements: 12-25V un-regulated, min=2A, max=10A (load dependent).

Max Input Voltage supported by TVS clamp=26.5V. NOTE: Above 26.5V, the TVS protection diode will clamp and burn the input fuse.

Size: 44.5mm(L) * 20mm(W) * 30mm (H) (1U compliant)

Weight: 70gramms, including cable harness, 35 grams without cable harness.

DC-Jack: Female, panel mount, 2.5*5.5*10 mm.

Connectors
Molex 39-01-2200, two 3.5" drive power connector, 1 floppy.

Overload protection
Over load protection will be effected when either of the loads (+5V & +3.3V) exceeds 140% Max Load.

Turn-on Delay
After turning on, at least 10 ms will be needed for the rise of +5VSB output voltage (measured from 10% to 95%) to reach its peak.

Remote ON/OFF control
Logic level is LOW - Output voltage is enabled (PS_ON pin)
Logic level is HIGH - Output voltage is disabled (PS_ON pin)

Operating environment: Temperature: -40 to 65 degree centigrade.
NOTE: Unit temperature can reach up to 85C on the surface.

Relative Humidity: 10 to 90 percent, non-condensing.

Efficiency, MTBF: 95%. MTBF=100K hours at 55Celsius.

Shipping and storage: Temperature -40 to +90 degree centigrade.
Relative humidity 5 to 95 percent, non-condensing

Warranty
1 Year Limited Warranty statement. Warranty is void if maintenance or calibration is performed by end-user or by use in conjunction with power modules not provided by mini-box.com.

Support
Email: support@mini-itx.com
Web Site: http://www.mini-itx.com