

picoPSU-80-WI-32

**12-32V, 80watt
ATX Power Supply**

www.short-circuit.com

Quick Installation Guide

Version 1.0d

P/N **picoPSU-80-WI-32**

Introduction

The **picoPSU-80-WI-32** is a small yet powerful and fully compliant ATX power supply designed to power a wide variety of motherboard from a single 12-32V unregulated power source.

The **picoPSU-80-WI-32** is the only “plug-in” wide input range power supply solution for general purpose low power motherboards.

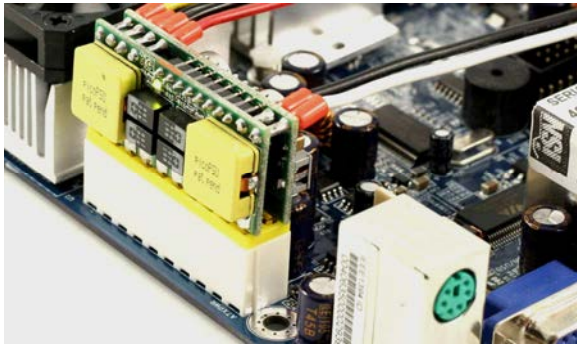
Compatible with most VIA CPUs M/B and with Atom, Pentium-M / Core Duo boards, picoPSU-80-WI-32 provides cool, 100% silent power for your system. The **PICOPSU-80-WI-32** has many advantages over a regular power supply:

- Smallest ATX PSU to date
- 100% silent operation
- Low heat dissipation with combined efficiency over 93%
- Plugs directly into the motherboard's power connector, no cable mess

Quick installation Instructions

The **PICOPSU-80-WI-32** 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) Connect a 12-32VDC power adapter (peak should not exceed 34V) to the input connector.

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

Typical configuration

The **picoPSU-80-WI-32** has been tested with all mini-ITX board under virtually any disk/floppy/CDROM/PCI configuration.

Removing the picoPSU-80-WI-32

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-80-WI-32, DC-DC ATX PSU

Power Ratings (max load, peak load)

Volts (V)	Max Load (A)	Peak Load (A)	Regulation %
5V	6A	7A	+/- 1.5%
5VSB	1.5A	2A	+/- 1.5%
3.3V	6A	7A	+/- 1.5%
-12V	0.1A	0.1A	+/- 5%
12V	4A	6A	+/- 3%
At max load, forced air ventilation is required. For fanless operation and/or V(In)>=24V de-rate the combined output of the 3.3, 5V and 12V rails by ~20-40% in order to prevent excessive temperatures. Peak load should not exceed 60 seconds. Combined output power should not exceed 80watts.			

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

CH1=5V	Efficiency (%)	CH2=3.3V	Efficiency (%)
1A	86%	1A	85%
3A	94%	3A	93%
4A	95%	4A	94%
6A	92%	6A	91%

Input Requirements: 12-32V un-regulated, min=2A, max=10A (load dependent).

Max Input Voltage supported by TVS clamp=34V. NOTE: Above 34V, the TVS protection diode will start clamping.

Size: 44.5mm(L) * 25mm(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 short-circuit.com.

Support

Email: support@short-circuit.com

Web Site: <http://www.short-circuit.com>