

# **picoPSU-120**

**12V, 120Watt ATX Power Supply**

## **Quick Installation Guide**

Version 1.0a  
P/N picoPSU-120



## Introduction

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

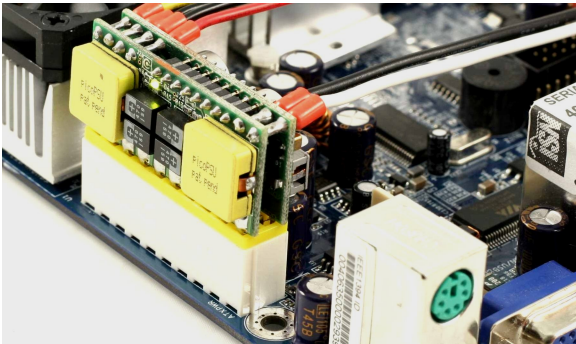
The PICOPSU-120 is the only snap power supply solution for general purpose motherboards. Compatible with an entire range of mini-ITX, UATX or full size ATX motherboards the picoPSU-120 provides cool, silent power for system. The PICOPSU-120 has many advantages over a regular power supply:

- Smallest ATX PSU to date
- 100% silent operation
- Low heat dissipation with efficiency over 95%
- Plugs directly into the motherboard's power connector, no cable mess

## Quick installation Instructions

The PICOPSU-120 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 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 VDC power adapter (or any 12V source) to the DC-to-DC connector, center pin / white wire is positive (+).

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

### **Typical configuration**

The picoPSU-120 has been tested with all mini-ITX board under virtually any disk/floppy/CDROM/PCI configuration. Additionally, the PICOPSU-120 can power P4 boards. Some P4 boards require a P412V connector. Please check <http://www.mini-box.com> for a cable harness adapter or solder a P4 cable harness into the 12V, 5V and GND pads on your ATX connector.

### **Removing the picoPSU-120**

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, 120Watts DC-DC ATX Power Supply**

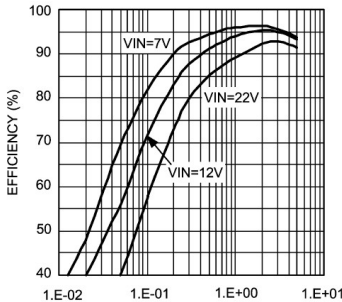
Power Ratings (Max Load = 140 Watts)

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	0.05A	0.1A	+/- 5%
12V	7A	10A	Switched input

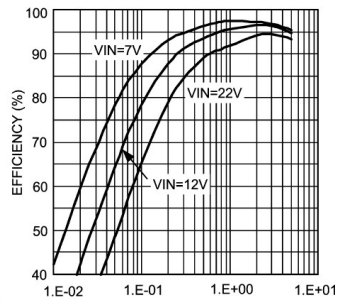
Total combined output of the 3.3 and 5V rail should not exceed 40Watts under fanless operation. Peak Load should not exceed 60 seconds.

**Efficiency Ratings**

Efficiency vs Load Current  
Ch.2 = 3.3V, Ch.1 = Off



Efficiency vs Load Current  
Ch.1 = 5V, Ch.2 = Off



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

**Weight:** 57gramms, including cable harness, 27 Gramms 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. P4-12V 4 pin header adapter sold separately.

**Overload protection**

Over load protection will be effected when either of the loads (+5V & +3.3V) exceeds > 200% Max Load.

**Turn-on Delay**

After turning on, at least 20 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: -20 to 85 degree centigrade.

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

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

**Shipping and storage:** Temperature -40 to +90 degree centigrade.

Relative humidity 5 to 95 percent, non-condensing

**Certifications:** EN55024, EN55022 Class B (CE certification), Australia/New Zealand (using CISPR 22, EN55022), Japan (VCCI: using CISPR 22, ANSI C63.4), United States (FCC Part 15, Subpart B, Class B), Canada (ICES-003 using CISPR 22, ANSI C63.4)