



Amity Labs designed and built one of the first large bitcoin mines in Oregon, USA. Being engineers and computer scientists by background, we understand the technical challenges of large-scale mining, and we know how to solve them. We mine - and we also provide our mining expertise to you.

Power supplies are a good example. When we started mining, we discovered that existing power supplies suffered from significant reliability and operational issues (fragile breakout boards, melting ATX cables and connectors, low-quality converter cores, awkward ergonomics...etc).

As a result, we ended up designing our own PSU solution, described in more detail below. After using our own PSUs for several years, we launched them on the market in early 2017 – and we want to thank our many fans out there for making this a success! Amity Labs PSUs power 15 MW of capacity as of October 2017.

The Amity Labs PSU Solution

We carefully choose some of the best server cores available, to which we solder a heavy-gauge, high-temperature distribution harness and control circuitry. The soldered joint provides absolutely minimal electrical resistance, high mechanical strength, and helps dissipate the heat from the PSU through the body of the harness. All voltage points are insulated with dielectric, rock-hard epoxy. The materials used are selected for long-term resilience under high heat, and for low flammability. The resulting power supply assembly is:

- **Ready to Plug-and-Mine:** There is no need to screw around with wire strippers and DIN terminals. Our “universal” harness is designed to simply plug into any miner out there.
- **Heavy-duty:** Our cores are based on server PSUs that have shown outstanding years-long resilience under 24/7/365 harsh mining conditions. These are not quick and cheap overseas ATX clones.
- **Robust:** Our harnesses are engineered to carry the heavy DC currents safely and reliably. There are no flimsy, exposed breakout boards or sub-par PCIe cables.
- **Efficient:** The server cores we use are gold-rated or better, carefully tested, and recognized as best-in-class by the industry. Unlike many imports, the cores are rated for RF and electrical grid compliance.
- **Practical:** Every aspect of our designs - from the length of cables to the positions of fans, controls, or sockets - has been refined in actual practice so as to provide convenience and effective use. You’ll never need to duck under the hot rack side and poke your fingers in live circuitry to turn on our PSUs.

All the work is done in Oregon, USA. The Amity Labs “soldered/insulated harness” approach has proven so effective in large scale use that it’s being patented, and helps us provide a generous warranty for all our PSUs.

Amity Labs PSU List (November 2017)

This roster can change rapidly in response to miner batches released and other industry factors.

<i>Model</i>	<i>Antminer Application</i>	<i>Max Power</i>	<i>Efficiency</i>	<i>Voltage</i>	<i>Form</i>
AMP3000X2	Two (x2) S9 / S7 / D3	2980 Watt	94%	220	“Fanbrick”
AMP2880X2	Two (x2) S9 / S7 / D3	2880 Watt	88-90%	220	“Fanbrick”
AMP3000L3	Three (x3) L3+	2980 Watt	94%	220	“Fanbrick”
AMP2880L3	Three (x3) L3+	2880 Watt	88-90%	220	“Fanbrick”
AMP3120X2	Two (x2) T9 / S9 / S7 / D3	3160 Watt	92%	220	“Fanbrick”
AMP2450X1	One (x1) T9/ S9 / S7 / D3	2450 Watt	95%	220	“Blade”
AMP2450L2	Two (x2) L3+ / D3	2450 Watt	94%	220	“Blade”
AMP2400L2	Two (x2) L3+ / D3	2400 Watt	94%	220	Compact
AMP2400T1	One (x1) T9/ S9 / S7 / D3	2400 Watt	93%	110/220	Compact
AMP1975X1	One (x1) T9/ S9 / S7 / D3	1975 Watt	93%	110/220	“Fanbrick”
AMP1100L1	One (x1) L3+	1020 Watt	92%	110/220	Compact
AMP1200L1	One (x1) L3+ / D3	1200 Watt	92%	110/220	Compact
AMP1400X1	One (x1) S9 / S7 / L3+ / D3	1400 Watt	94%	220	Compact
AMP1400Y1	One (x1) S9 / S7 / L3+ / D3	1400 Watt	92%	277 3P	Compact
AMP1400S1	One (x1) S9 / S7 / L3+ / D3	1400 Watt	92%	220	Compact
AMP1500X1	One (x1) S9 / S7 / L3+ / D3	1500 Watt	92%	220	Compact
AMP1600X1	One (x1) S9 / S7 / L3+ / D3	1600 Watt	94%	110/220	Compact
AMP1850X1	One (x1) S9 / S7 / L3+ / D3	1850 Watt	94%	110/220	Compact
AMP5600X4	Four (x4) S9 / S7 / L3+	5600 Watt	88%	220	“Tank”
AMP4800L4	Four (x4) L3+ / D3	4800 Watt	94%	220	“Fanbrick”

Efficiency on the “80Plus” Scale: 96% = titanium, 94% = platinum, 92% = gold, 90% = silver.

Popular Amity Labs PSU Models



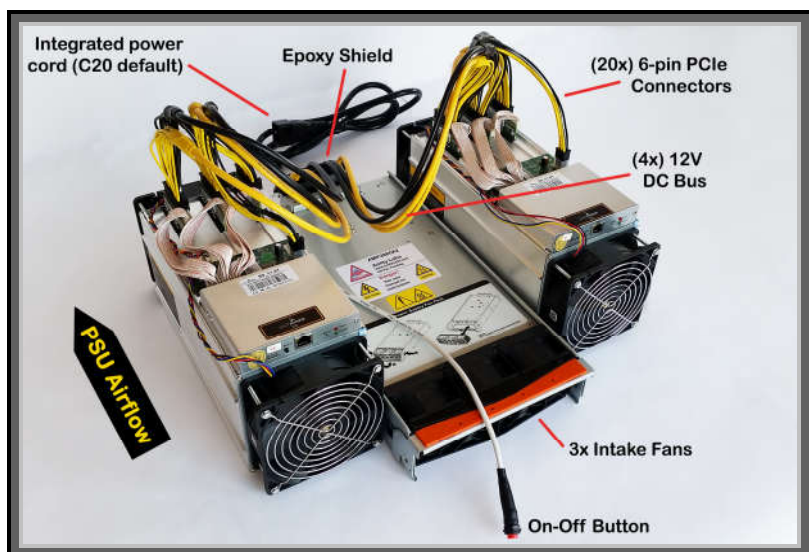
AMP3000X2

Max output: 2980 Watt
Efficiency: 94% (platinum 80-plus rated)
Use: (2x) Antminer S9/D3/L3+ or A741
AC input: 200-240V, C20 7ft power cord
PCIe connectors: (20x) 6-pin (200W/ea)
DC bus: (4x) 24 inch 8AWG (780W/ea)
Insulation: 200 deg C silicone for wiring, dielectric epoxide resin for all hot points.
Fan: 3x 60mm, ~100 cfm total
Core: Delta, CE/UL/N listed, PF=0.99.
Operating temperature: 95 deg F
Size: 18" x 8" x 3.5" x 13 lbs



AMP1400X1

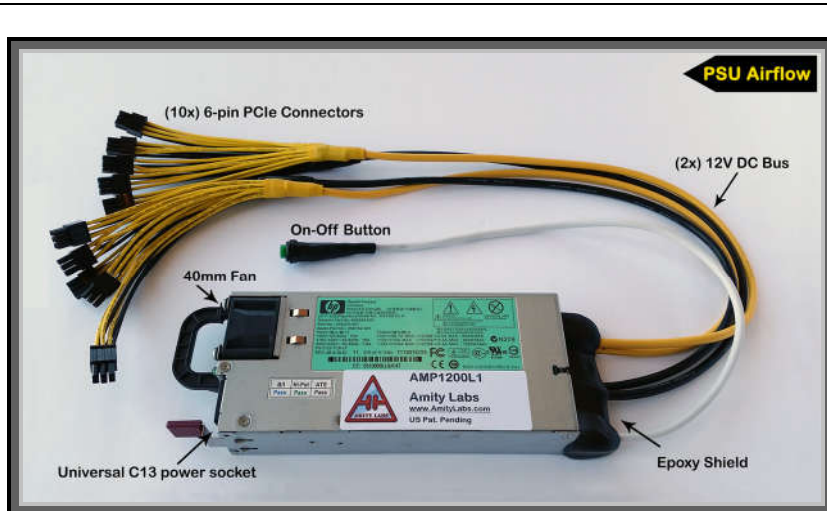
Max output: 1400 Watt
Efficiency: 94% (platinum 80-plus rated)
Use: (1x) Antminer S9/D3/L3+ or A741
AC input: 200-240V, C14 socket
PCIe connectors: (10x) 6-pin (200W/ea)
DC bus: (2x) 24 inch 8AWG (780W/ea)
Insulation: 200 deg C silicone for wiring, dielectric epoxide resin for all hot points.
Fan: 1x 40mm
Core: Delta, CE/UL/N listed, PF=0.99.
Operating temperature: 90 deg F
Size: 10" x 4" x 1.5" x 3 lbs



AMP2880X2

Max output: 2880 Watt
Efficiency: ~88-90%
Use: (2x) Antminer S9/D3/L3+ or A741
AC input: 200-240V, C20 7ft power cord
PCIe connectors: (20x) 6-pin (200W/ea)
DC bus: (4x) 24 inch 8AWG (780W/ea)
Insulation: 200 deg C silicone for wiring, dielectric epoxide resin for all hot points.
Fan: 3x 60mm, ~100 cfm total
Core: Astec, CE/UL/N listed, PF=0.99.
Operating temperature: 95 deg F
Size: 18" x 8" x 3.5" x 15 lbs

Popular Amity Labs PSU Models



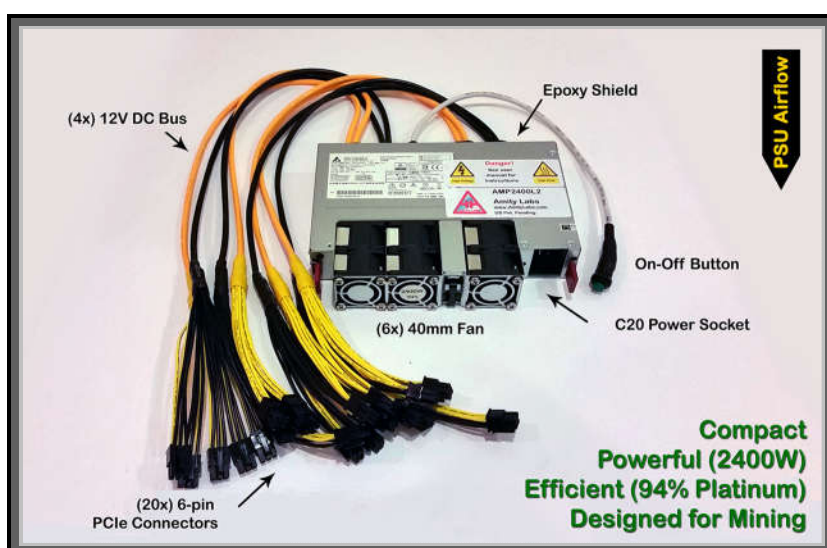
AMP1200L1

Max output: 1200 Watt
Efficiency: 92% (gold 80-plus rated)
Use: (1x) Antminer L3+/A741/D3 (220V)
AC input: 110-240V, C14 socket
PCIe connectors: (10x) 6-pin (200W/ea)
DC bus: (2x) 24 inch 10AWG (600W/ea)
Insulation: 200 deg C silicone for wiring, dielectric epoxide resin for all hot points.
Fan: 1x 40mm
Core: Delta, CE/UL/N listed, PF=0.99.
Operating temperature: 90 deg F
Size: 10" x 4" x 1.5" x 3 lbs



AMP2450L2

Max output: 2450 Watt
Efficiency: 94% (platinum 80-plus rated)
Use: (2x) Antminer L3+ /D3/A741
AC input: 200-240V, C20 7ft power cord
PCIe connectors: (20x) 6-pin (200W/ea)
DC bus: (2x) 24 inch 10AWG (600W/ea)
Insulation: 200 deg C silicone for wiring, dielectric epoxide resin for all hot points.
Fan: 1x 40mm
Core: Delta, CE/UL/N listed, PF=0.99.
Operating temperature: 95 deg F
Size: 30" x 2.5" x 2.5" x 10 lbs



AMP2400L2

Max output: 2400 Watt
Efficiency: 94% (platinum 80-plus rated)
Use: (2x) Antminer L3+ /D3/A741
AC input: 200-240V, C20 socket
PCIe connectors: (20x) 6-pin (200W/ea)
DC bus: (4x) 24 inch 10AWG (600W/ea)
Insulation: 200 deg C silicone for wiring, dielectric epoxide resin for all hot points.
Fan: 6x 45mm,
Core: Delta, CE/UL/N listed, PF=0.99.
Operating temperature: 95 deg F
Size: 10" x 8" x 1.5" x 7 lbs

PSU General Notes

Universal Harness/PCIe Connectors: Amity Labs PSUs feature our universal harness, providing x10 PCIe connectors per miner. The PCIe connector implementation is engineered for high currents (18A 200Watt @12VDC), long reach (24-30 inches), convenient ergonomics, and is also suitable for non-Bitmain machines with low PCIe connector counts, and other custom applications.

Sockets/Power Cords: Compact PSUs have a standard C14 socket built-in (with the exception of the AMP2400 series, which features a C20 socket). Blade/fanbrick PSUs come with an integrated 7.5-foot long heavy-gauge C20 power cord, engineered to support their heavy current draw. We also provide a variety of metered and non-metered PDUs, and modular “plug and mine” rack solutions.

Custom Modifications: We can customize your PSUs to your exact requirements, such as:

- Longer/shorter power cords
- Different plugs
- Longer/shorter harnesses
- More harnesses per power supply
- Different type of control buttons (e.g. electronic instead of mechanical switches)
- Temperature gauges
- Intake filters

Please note that customization requests are subject to technical and safety limitations.

GPU Mining: Our PSUs support GPU mining, and our harnesses provide the long reach necessary for GPU mining rigs. However the PSUs do not provide an ATX output for the motherboard. They also feature 6-pin PCIe connectors (all pins are power carriers as per the PCIe v2.0 specification). If your GPUs require an 8-pin connection, our PSUs can be used by grounding the two extra non-current carrying pin sockets on the GPU.

Other Miners: The universal harness provides x10 high-current PCIe connectors per Antminer, and allows our PSUs to power virtually any minor or legacy miner, as shown in the table below.

<i>Model</i>	<i>Wattage</i>	<i>PCIe Connectors</i>	<i>Equivalent Antminer</i>
Avalon A741	1150	6	D3
Avalon A6	1100	4	D3
Panda Miner B5+	800	7	L3+
Panda Miner B3+	1250	7	S9
Antminer R4	850	7	L3+
Antminer T9	1400-1600	10	n/a
Spondoolies SP20	1100-1250	4	S9
Ebit E9	890	4	L3+
Antminer S5	590	4	L3+
Antminer L3	400	5	½ L3+
Antminer S3	350	4	½ L3+
KNC Neptune Cube	200-300	1	1/3 L3+

Lead Times: Due to high demand, large orders require advance booking and lead time that can vary between 5 to 10 days or more, depending on order quantity.

More Info: Contact Power@AmityLabs.com or Ted@ThePlayChannel.com for technical information - and please stay tuned for our upcoming web site and Facebook pages.