

Features

- Super low noise DC voltage outputs
- Independent multi-channel voltage rail
- Power ON & Power OK signal
- High input regulation and high load regulation
- Mechanical compatible with Streacom FC-10 passive case
- ATX compatible connector pin assignment
- Very low standby power consumption

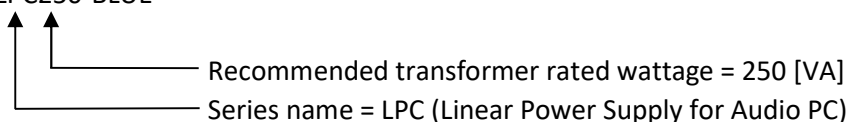
Applications

- Control & Audio PC
- Recording PC in Studio
- Audiophile Audio Server

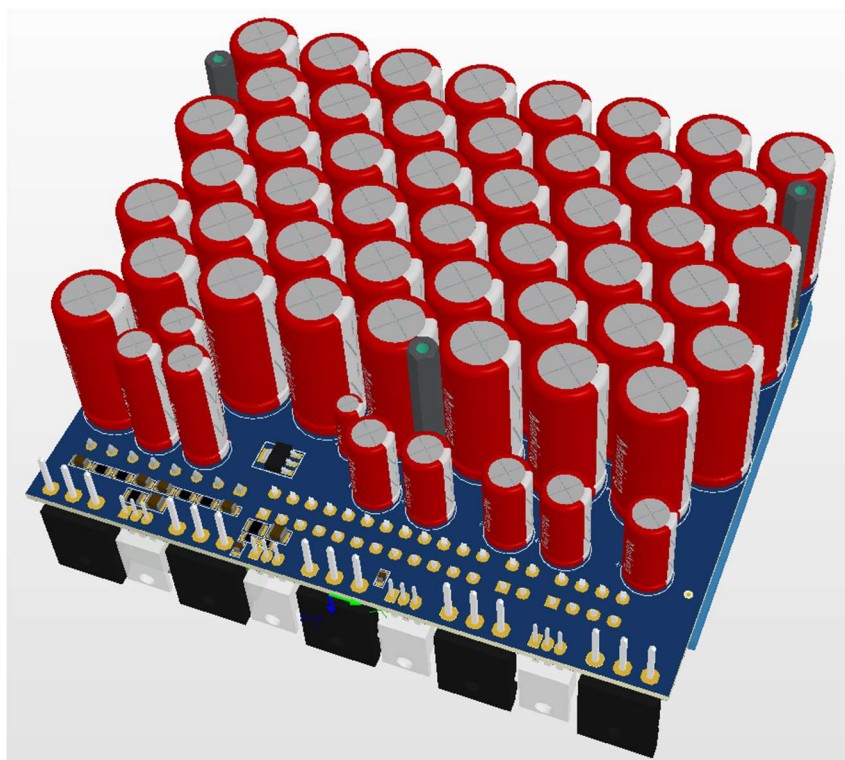
Description

LPC250-BLUE true linear power supply designed for audio PC. Mechanically fully compatible with Streacom FC-10 passive cooling case equipped by a micro-ATX mainboard, but it can be assembled into any other PC case with additional mounting plate and heatsink. The 250VA impregnated toroidal core transformer with multiple secondary windings guarantees high isolation between primer and seconder windings thanks to the shielding windings. The RC snubber and Schottky diodes ensure clean rectification and the high reliability 310.000µF aluminum electrolytic capacitor puffer bank allows smooth DC and high peak current for the regulators. The MOSFET output stages capable for 20A peak current are controlled by a low noise operational amplifier. The precision bandgap references ensure high initial accuracy and low temperature drift. An improved FR4 material and 4 layers printed circuit board (PCB) is populated on both side by SMD and THD components to optimize the signal path.

Model encoding example: LPC250-BLUE



SPECIFICATION								
INPUT	Voltage range	Primary: 220-240 VAC / Secondary: 2 x 12.5 VAC + 2 x 7.5 VAC						
	Frequency	50/60 Hz						
	Fuse	3.15 AT, 20 x 5 mm						
	Connector	IEC C14 inlet for primer / 5.08MM HORIZONTAL CABLE ENTRY PLUG						
OUTPUT	Part Number	LPC250-BLUE						
	Nominal Voltages	+12 V	+5 V	+3.3 V	+5 VSB	-12 V	+12 V	+5 V
	Rated Currents	12.5 A	10 A	8 A	3 A	1 A	2 A	2 A
	Protection	No overcurrent and no overvoltage protection						
	Noise	<2 μ V typical @ bandwidth: 20 Hz to 20 kHz						
	Initial Accuracy	<1% typical, 2% max (5% max @ +5 VSB and -12 V)						
	Temperature coefficient	<1 mV/C°						
	Line regulation	<-80 dB(V/V) @ 1 kHz						
	Load regulation	<-40 dB(V/A) @ 1 kHz						
	Connector type	Molex Mini-Fit #4.2mm, ATX 24pin, CPU 8 pin, EXT 4 pin						
	Connector pinouts	see cable-assembly drawings						
ENVIRONMENT	Working temperature	-10 C° to +40 C°						
	Working Humidity	20 to 90% RH, non-condensing						
OTHERS	Indicator	3pcs Blue LEDs, Standby / + Power ON / + Power OK						
	Working principle	Toroidal transformer, Schottky rectifier, Power MOSFET + opamp regulator						
	PCBA Dimension	120 x 72 x 140 mm [Width x Height x Depth] (with 40mm spacers)						
	PCBA Weight	900 grams (without transformer)						
	Transformer Dimension	Ø118 x 53 mm						
	Transformer Weight	2.200 grams						
PACKAGING	Material	Corrugated paper and foam						
	Box Content	<ul style="list-style-type: none"> • IEC inlet, fuse-holder + fuse • 250VA toroidal transformer with mounting kit • LPC250-BLUE Power Supply (PCB) Module • ATX24-24 mainboard cable, 400mm • ATX8-ATX8 CPU cable, 400mm • ATX4 – Molex (4 pin) cable for peripherals (USB, LAN cards), 200mm • Mounting screw with washer and self-locking nut • Mica wafer • Insulation ring for TO-220 devices 						
	Dimension	240 x 150 x 390 mm [Width x Height x Depth]						
	Weight	3.750 grams						



Pin assignment of the connectors:

CPU ATX-8	4	GND	+12VDC	8
	3	GND	+12VDC	7
	2	GND	+12VDC	6
	1	GND	+12VDC	5

EXT USB	2	GND	+12VDC	4
	1	GND	+5VDC	3

MOTHERBOARD ATX-24	12	+3.3VDC	GND	24
	11	+12VDC	+5VDC	23
	10	+12VDC	+5VDC	22
	9	+5VSB	+5VDC	21
	8	PWR_OK	NC	20
	7	GND	GND	19
	6	+5VDC	GND	18
	5	GND	GND	17
	4	+5VDC	PS_ON#	16
	3	GND	GND	15
	2	+3.3VDC	-12VDC	14
	1	+3.3VDC	+3.3VDC	13

TRANSFORMER	8	7.5VAC
	7	7.5VAC
	6	7.5VAC
	5	7.5VAC
	4	12.5VAC
	3	12.5VAC
	2	12.5VAC
	1	12.5VAC