



±12V DC Input Industrial PC ATX 2.01 & 2.2 Switching Mode Power Supply

Series	Model No.	Output Watts	Input Voltage	Input Voltage range	Polarity reverse protection
12	STC-12750	750 W continuous	±12V DC	±9V ~ ±18V DC	Not Protected
	STC-12650	650 W continuous	±12V DC	±9V ~ ±18V DC	Not Protected

* H version (Black color chassis)

ENVIRONMENTAL CONDITIONS:

- Cooling: Forced Air-cooling, 80x80x25 mm Fan x 2 pc / STC-12650
- Cooling: Forced Air-cooling, 80x80x38 mm Fan x 1 pc / STC-12750
- Fan type: DC type, 2 x Ball Bearing, 6200 rpm / STC-12650
- Fan Noise Level: 40 dBA (DELTA fan brand Official Data at 4000 rpm, 46.62 CFM) @ Full Load
- Fan Noise Level tested: 8 dBA @ Distance 1m (DELTA fan brand 4000 rpm, 46.62 CFM) @ Full Load
- Fan brand: DELTA, NMB, SUNON, SUNON IP68 (for H version) with the same specification
- Optional Fan R.P.M. Control card
- Operating Temp.: 0°C~+50°C Full Load
- Operating Temp.: / H version -30°C~+60°C Full Load
- Output Power: 100% @ 50°C, 70% @ 60°C, 50% @ 70°C
- Output Power: / H version 100% @ 60°C, 70% @ 65°C, 50% @ 70°C
- Operating Humidity: 20%~85% RH (Non condensing)
- Operating Humidity: / H version 95% RH Non condensing
- Storage Temperature: -40°C~+80°C
- Storage Humidity: 10%~90% RH. (Non condensing)
- Operating Altitude: 10M Below Sea level to 3000M Above Sea level

DC INPUT CHARACTERISTICS:

- Input connector type: 200A/300V UL Approved Gold Plated Brass 2 Pin 12.5mm Screw Terminal
- Input Current: 48.75A/97.5A(**650W**) 54A/108A(**750W**) @Full Load High Line & Low Line
- Inrush Current: Less than 90A Cold start @25°C ambient

IDLE CURRENT:

- Input +12V DC: 0.25A

DC OUTPUT CHARACTERISTICS:

Output Voltage	Regulation			Output Current				Ripple & Noise		
	Load	Line	Cross	750W		650W				
				Min.	Max.	Min.	Max.			
+5V	±5%	±1%	±5%	0A	30A	0A	30A	50mV		
+12V				0A	52A	0A	45A	120mV		
+3.3V				0A	22A	0A	30A	50mV		
-12V	±8%			0A	0.3A	0A	1A	120mV		
+5VSB	±5%			0A	2.5A	0A	3.5A	50mV		
The output current of combined load on +3.3 V & +5V DC output shall not exceed				40		40		A		
Maximum continuous total DC output power shall not exceed				750		650		Wattage		

OVERALL PERFORMANCE:

- ▶ Efficiency: 65% typical @12V DC Full Load / **STC-12650**
70% typical @12V DC Full Load / **STC-12750**
77% typical @14V DC Full Load / **STC-12750**
- ▶ Hold up time:
- ▶ Rise time:
- ▶ Power Good Signal: TTL Compatible signal, on delay 100~500ms, off delay 1ms min.
- ▶ Short Circuit Protection (SCP): All output equipped with SCP (shutdown and latch off)
- ▶ Over Power Protection (OPP): Peak power protected to 130%±10% of continuous rated power (shutdown and latch off)
- ▶ Over Voltage Protection (OVP): +3.3V@4.5V, +5V@6V, +12V@15.6V

RELIABILITY:

- ▶ MTBF: >90,000 hours @max. Load, 12V DC & 25°C ambient
- ▶ Safety Standards: Meet IEC60950-1, EN60950-1
- ▶ Safety Approved:
- ▶ EMI Compatibility (EMC): EN55032:2015/AC:2016, CISPR32:2015, EN61000-3-2:2014, EN61000-3-3:2013, EN55024:2010 +A1:2015

ISOLATION:

- ▶ INPUT and OUTPUT are isolated by transformers and optical couplers
- ▶ Dielectric Withstand: INPUT to OUTPUT: 500V DC for 60 seconds
- ▶ Dielectric Withstand: INPUT to FRAME GROUND: 500V DC for 60 seconds
- ▶ Leakage Current: <0.005µA @ 12V DC

Output Device Connector Specific:

- ▶ ATX 24 Pins x 1 Molex 29-01-2240 or equivalent
- ▶ HDD, DVD 4 Pins x 2 Molex 8981-04P or equivalent
- ▶ FDD 4 Pins x 1 AMP 171822-4 or equivalent / **STC-12650**
- ▶ FDD 4 Pins x 2 AMP 171822-4 or equivalent / **STC-12750**
- ▶ Serial ATA x 4 Molex 675820000 or equivalent / **STC-12650**
- ▶ Serial ATA x 8 Molex 675820000 or equivalent / **STC-12750**
- ▶ CPU EPS 8 Pins x 1 Molex 39-01-2080 or equivalent / **STC-12650**
- ▶ CPU EPS 8 Pins x 2 Molex 39-01-2080 or equivalent / **STC-12750**
- ▶ PCIe 6 + 2 pin x 2 **STC-12650**
- ▶ PCIe 6 + 2 pin x 4 (Max 8 sets) **STC-12750**

Standard Output Cable Length:

550 mm / 21.65 Inches

PCB specific:

▶ 2 Layer	STC-12650
▶ 6 Layer	STC-12750
▶ Copper:	3 Oz each layer
▶ Thickness:	1.6 mm
▶ Material:	FR4
▶ PCB material origin:	Taiwan

Power Chassis Dimension:

184(L) x 150(W) x 86(H) mm / 7.24(L) x 5.9(W) x 3.39(H) Inches

Net Weight:

3.5 kg / 7.716 lbs	STC-12650
4 kg / 8.816 lbs	STC-12750

Gross Weight:

4 kg / 8.818 lbs	STC-12650
4.4 kg / 9.698 lbs	STC-12750

Packing Detail:

4 PCs / GW 15.6 kg	STC-12650
4 PCs / GW 17.6 kg	STC-12750

Measurement of Carton:

36 x 35 x 51 cm
0.066 m3 / 2.33 Cuft