

## 1. Description

The IATX-80-X1 is a compact ATX output power supply with a built in AC inlet for embedded applications. It utilizes a thermally efficient U chassis design.

Output Voltage	Mini. Output Current	Rated Output Current	Max output Current <sup>(Note 1)</sup>	Line Regulation	Load Regulation	Ripple & Noise p-p <sup>(Note 2)</sup>	Initial Setting Accuracy <sup>(Note 3)</sup>
<b>+5V</b>	0.2A	5A	8A	1%	2%	50mV	5.08V to 5.13V
<b>+12V</b>	0A	1.5A	4A	1%	4%	120mV	11.4V to 12.6V
<b>-12V</b>	0A	0.5A		1%	5%	120mV	-11.4V to -12.6V
<b>+3.3V</b>	0A	4A	6A	1%	4%	50mV	3.10V to 3.50V
<b>+5Vsb</b>	0A	1A		1%	4%	120mV	4.80V to 5.20V

**Total Output Power:** 80W at 50°C environment temperature <sup>(Note 4)</sup>.

Note: 1) The maximum total combined output power on the +3.3V and +5V rails is 40W.

2) Measured by a 20MHz bandwidth limited oscilloscope when each output is connected with a 10μF Electrolytic Capacitor and a 0.1μF Ceramic Capacitor.

3) The +5V output is set between 5.08V to 5.13V by variable resistor with output at 60% rated load. Remaining outputs are factory set.

4) Total maximum load cannot exceed 80W with 8.6 CFM forced air-cooling and 60W convection cooling.

5) With input voltage set below 100V (90-99V), an accessory heat sink (min. 440 cm<sup>2</sup>) is recommend.

## 2. Input Specification

Parameter	Conditions/Description	Min.	Nom.	Max.	Units
Input Voltage-AC	Continuous input range.	90	115/230	264	VAC
Input Frequency	AC input.	47		63	Hz
Hold Up Time	Nominal AC Input Voltage (230VAC), rated load.	20			ms
Input Current	Nominal AC Input Voltage (115VAC/230VAC), rated load.			2/1	A
Inrush Current	Nominal AC Input Voltage (115VAC/230VAC), one cycle at 25°C.			30/60	A
Input Protect	Non-user serviceable internally located AC input line fuse.				

## 3. Output Specification

Parameter	Conditions/Description	Min.	Nom.	Max.	Units
Efficiency	Rated load, 115VAC. Varies with distribution of loads among output.		75		%
Minimum load			See Description		
Ripple & Noise	Rated load, 20MHz bandwidth		See Description		
Output Power	Continuous output power.		See Description		
Line Regulation	Less than ±1% at rated load with ±10% changing in input voltage.		See Description		
Load Regulation	Measured by changing the output load +/-40% from 60% rated load, and keep other output is at 60% rated load.		See Description		
Turn-on Delay	Time required for initial output voltage stabilization	0.3		4	Sec

**IATX-80U-X1**
**80 Watts**

#### 4. Interface Signals and Internal Protection

Parameter	Conditions/Description
Power On/Off	The power supply will be turned on when the power On/Off pin is connected to secondary Ground.
Power Good Signal	When power is turned on, the power good signal will go high 100ms to 500ms after all output DC voltages are within regulation limits.
Power Fail Signal	The power fail signal will go low at least 1 mS before any of the output voltages fall below the regulation limits.
Over Voltage Protection	Built in over voltage protection circuit will auto-recover and prevent damage to external circuits. The trigger point is set @ 6.5-8.5V at +5V.
Over Load Protection	Fully protected against output overload and short circuit. Automatic recovery upon of removal of overload condition.

#### 5. Safety Approvals, EMI and EMS Specification

Parameter	Conditions/Description	Min.	Nom.	Max.	Units
Safety Approvals	UL, UL 60950-1				
	CB, IEC 60950-1			Pending	
	TUV, EN 60950-1 : 2001				
Hold Up Time	Nominal AC Input Voltage (230VAC), rated load.	20			mS
Radiation	EN 55022 / CISPR 22 & FCC Part 15	B			Class
Conduction	EN 55022 / CISPR 22 & FCC Part 15	B			
EMS	IEC 61000-4-2, 8KV air discharge and 6KV contact discharge	3			Level
	IEC 61000-4-3, 3V/M	2			
	IEC 61000-4-4, 2KV line & PE	3			
	IEC 61000-4-5, 2KV	3			
	IEC 61000-4-6, 10V	3			
	IEC 61000-4-8, 10A/M	3			
	IEC 61000-4-11				

#### 6. Environment Specification

Parameter	Conditions/Description	Min.	Nom.	Max.	Units
Operating Temperature	De-rate linearly above 50°C by 2.5% per °C At 100% load:	0		50	°C
	to a maximum temperature of 70°C At 50% load:			70	
Storage Temperature		-40		+70	°C
Relative Humidity	Non-condensing.	5		95	%RH
Altitude	Operating			10K	Feet
	Non-operating			40K	

#### 7. Mechanical Specification

Parameter	Conditions/Description				
Dimension	180 x 52 x 39 mm, Tolerance +/- 0.4mm.				
Connector	CN1 --- AC input: IEC 60320 / C14 inlet.				
	CN3 --- DC output: Molex 5273-12A or equivalent.				
	CN5 --- DC output: Molex 5045-03A.				
Pin Assignment	CN3 Pin	1. 3.3V	4. GND	7. +5V	10. PG/PF
		2. 3.3V	5. GND	8. +5V	11. +12V
		3. GND	6. GND	9. +5V	12. -12V
	CN5 Pin	1. +5Vsb	2. GND	3. PS on/off	

◆ Dimension

180 x 52 x 39 mm (L x W x H)

