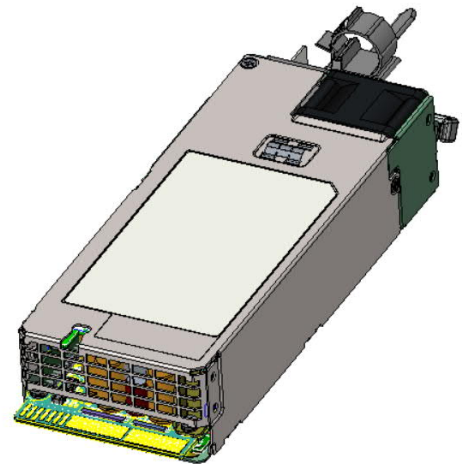
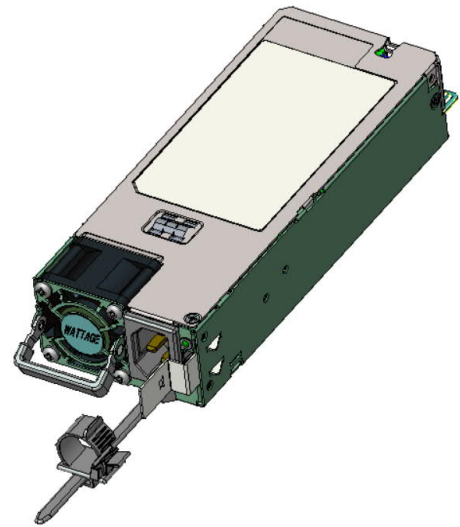


## LITEON Server Power Supply Titanium 1600W

### Features:

- 80 PLUS® Titanium
- Holdup Time:  $\geq 10\text{ms}$
- AC Input Range 90Vac ~ 264Vac
- DC Input Range 180Vdc ~ 310Vdc
- Output Voltage 12 Vdc
- N+N (N=2 max) Redundant power supply with Hot plug, current sharing
- Self-cooling with fan speed control / One Bi-color LED indicators
- PMBus Compliant 1.5
- Protection include OCP, OVP, UVP, OTP and Brownout
- 1600W is in 73.5mm (W) x40mm (H) x 185mm (L)
- Altitude: 5,000 meters
- Operating Temperature: 0°C ~ 55°C
- Compliance EMC IEC/EN 61000
- EMI Class A, -6dB margin
- Safety Certificates: IEC/EN 60950-1, IEC/EN62368-1



### Electrical Specifications:

Parameter	Description	Parameter	Description
Input Voltage	AC input 90Vac ~ 264Vac DC input 180Vdc ~ 310Vdc	Main Output Voltage (12VDC)	12.2Vdc $\pm$ 5%
		ST Output Voltage	12.0Vdc $\pm$ 5%
iTHD	Input voltage: 115Vac / 208Vac / 230Vac 240Vac with 50 / 60 Hz frequency < 20% @10% load; < 7% @20% load < 5% @50% load; < 3.5% @100% load	12VDC Current Rating	131.2A @ 180Vac~264Vac 82A @ 90Vac~132Vac
Power Factor	Input voltage: 115Vac / 208Vac / 230Vac 240Vac with 50 / 60 Hz frequency 0.9 @10% load; 0.96 @20% load 0.98 @50% load; 0.99 @100% load	Capacitive Load	2,200uF ~ 50,000uF
		SB Current Rating	3A
Efficiency	80 PLUS® Titanium 90% @10% load; 94% @20% load	Power Rating	1600W@230Vac. 1600W@240Vdc & 270Vdc.

# LITEON Server Power Supply Titanium 1600W

	96% @50% load; 91% @100% load		1000W@115Vac.
Redundant	N+N Redundant, N=2 maximum	Hold Up Time	10ms

Protection			
Parameter	Description	Parameter	Description
12VDC OCP @ High Line	Current is above 157.4A for 10s, or Current is above 183.7A for 52ms, or Current is above 196.8A for 3ms, or Current is above 209.9A for 2.2ms @>200Vac input (Latch mode)	SB OCP	3.5A~4.5A
12VDC OCP @ Low Line	Current is above 98.4A for 10s, or Current is above 114.8A for 52ms, or Current is above 123A for 3ms, or Current is above 131.2.4A for 2.2ms @>100Vac input (Latch mode)	SB OVP	Voltage is above 13.5V~15V
12VDC OVP	Voltage is above 13.5V~15V (Latch Mode)	SB UVP	Voltage is below 11V~10V
12VDC UVP	Voltage is below 10.9V ~ 10V (Latch Mode)	Over Temperature	Ambient Temperature (Auto recovery mode)
Input Brownout	Voltage is below 70Vac or 155Vdc (Auto recovery mode)	Input OVP	Voltage is above 300Vac or 310Vdc (Auto recovery mode)

Control Signal / Indicate Signal / LED			
Parameter	Description	Parameter	Description
PSON_L	Input signal PSON_L = LOW to turn on 12VDC	PMBus	Version 1.5 I2C interface with 100KHz
		ALERT_L	Output signal ALERT_L = LOW to indicate WARNING event (Event Programmable)
PWOK_H	Output signal PWOK_H = High to indicate the 12VDC existence	LED	1Hz Blink Green → AC present / Only 12VSB
			2Hz Blink Green →FW updating
			0.33Hz Blink Green (1s OFF,2s Green) → CR mode
			1Hz Blink Orange → warning Event
			Orange Solid → Fault protection
			Green Solid → 12VDC active mode
ACOK_H	Output signal ACOK_H = High to indicate Input existence	ASP	Resistor to set PSU address (Support 4 units address)

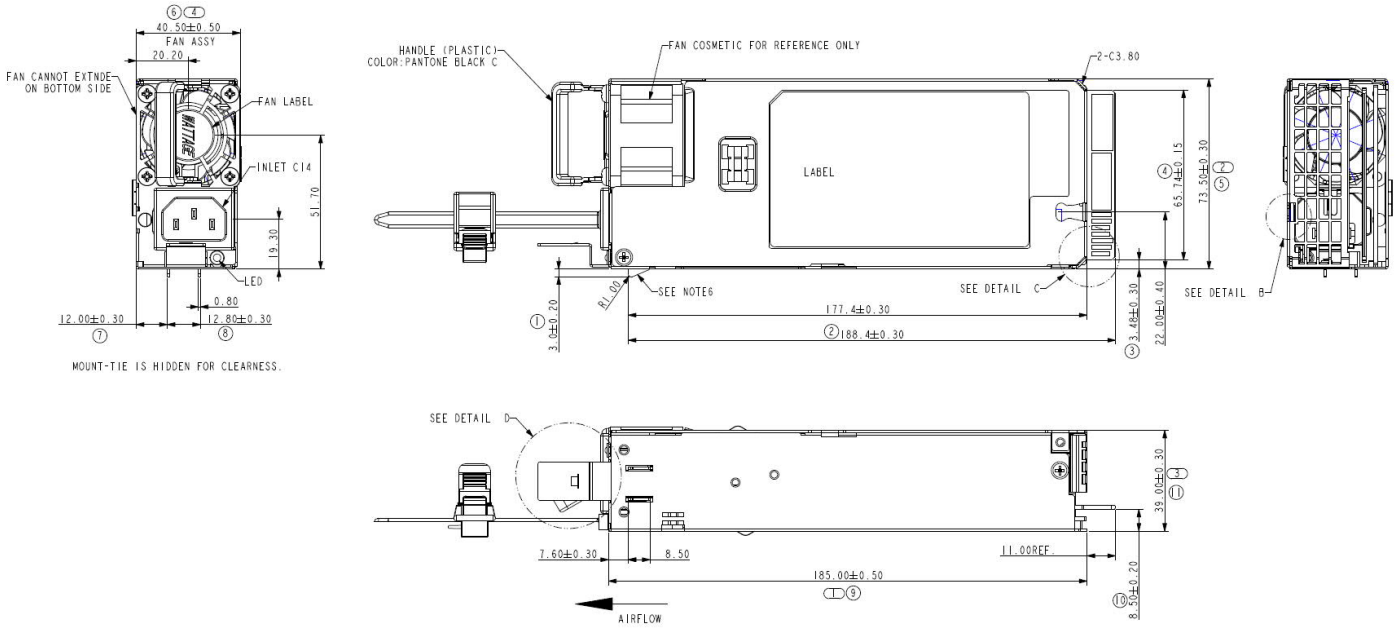
# LITEON Server Power Supply Titanium 1600W

Environment / Reliability			
Parameter	Description	Parameter	Description
Operation Temp.	0°C ~ 55°C	MTBF	200K hours at rated 100% load 230Vac input, 55°C ambient. temp.
Operating Humidity	5% ~ 90%	ECAP Life	7 years at rated 100% load 230Vac input, 35°C ambient. temp.
Storage Temp.	-40°C ~ 85°C	Air Flow	Normal Mode, From DC to AC
Storage Humidity	5% ~ 95%	Fan Life	5 years at 80% rated load, 55°C ambient. temp.
Operating Altitude	5000 meters		

Safety Approvals IEC/EN 60950-1, IEC/EN62368-1 and UL/CSA62368-1 2nd Ed.		
Insulation safety rating	Input / Output	Reinforce
	Input / Case	Basic
	Output / Case	Functional
Hi-pot strength	Input / Output	1500 Vac/1min leakage current< 10mA
	Input / Case	1500 Vac/1min leakage current< 10mA
Touch Current		1.0mA
EMC Requirements		
Radiated Emissions CISPR 22/ EN55022/ FCC Part 15		Class A / -6dB
Conducted Emissions CISPR 22/ EN55022/ FCC Part 15		Class A / -6dB
EN61000-3-2 Harmonics (AC Rated Input Current <=16A per phase)		Class A
EN61000-3-3 Voltage Fluctuations and Flicker (AC Rated Input Current <=16A per phase)		Pst<=1.0 & Plt <= 0.65, dc<=3.3%, dmax<=4%, time <=500ms when d(t)>3.3%
IEC61000-4-2 ESD		±8kV Contact / ±15kV Air
IEC61000-4-3 Radiated Immunity		Performance Criteria A required
IEC61000-4-4 EFT (5kHz and 100kHz repetition rates), EN55024		0.5kV, Performance Criteria A required. 2kV, Performance Criteria B required
EC61000-4-5 Surge and EN55024		±2.0 kV/2ohm CM, ±2.0 kV/2ohm DM, Criteria A
IEC61000-4-6 Conducted Immunity and EN55024		Performance Criteria A required.
IEC61000-4-11 Voltage dips, short interruptions and voltage variations immunity tests		Requirements for Voltage Dips and Short Interruptions as specified in EN55024, CISPR 24, EN300386, and EN61000-6-1.

## LITEON Server Power Supply Titanium 1600W

### Dimension:



### Connector

Input AC Inlet Socket

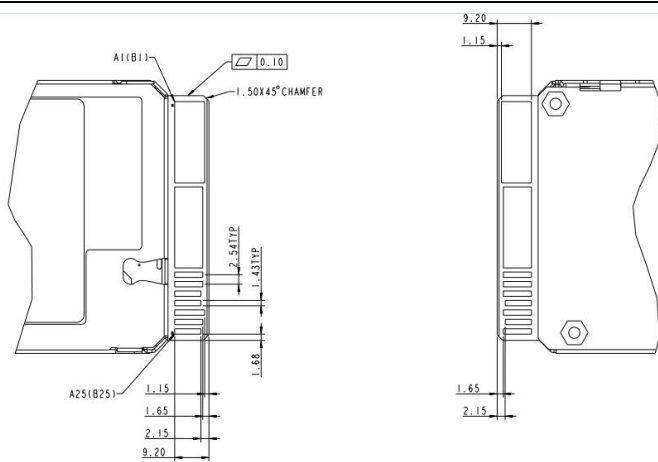
C14

Output DC connector

Gold Finger

Pin definition of Gold Finger

Matching Connector IS AMPHENOL GPCE FX361411XHR or Equivalent.



PIN	SIGNAL NAME	PIN	SIGNAL NAME
A1~A9	GND	B1~B9	GND
A10~A18	+12V	B10~18	+12V
A19	SDA	B19	A0
A20	SCL	B20	A1
A21	PSON	B21	12VSB
A22	SMB-ALERT	B22	CR_1
A23	RETURN_S	B23	12LS
A24	+12VRS	B24	-PS_PRESENT
A25	PWOK	B25	VIN_GOOD

TOLERANCE OF ALL DIMENSIONS ARE ± 0.25 MM UNLESS OTHERWISE SPECIFIED