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PSU GUIDE Q2/2025













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PSU stands for **POWER SUPPLY UNIT** and plays a decisive and vital role in every PC configuration since it is „the heart“ of your PC.

The installed components of your PC have different levels of power (electricity) consumption, voltages, efficiencies and connectors which are managed & serviced by the **POWER SUPPLY UNIT.**

Therefore, it is important to choose the right **POWER SUPPLY UNIT** for your PC, based on the intended applications to be run.

Applications could include: Gaming, mining, workstation/servers, office PCs, home PCs, POS systems, etc…



POWER SUPPLY UNITs come in different formats, pending on the chassis format they are to be installed into. Most popular ones include:

- **ATX** ➔
  Size: 140 mm (160mm) x 150 mm x 86 mm
  Wattages: 350W – 1450W

- **SFX** ➔
  Size: 125 mm x 100 mm x 64 mm
  Wattages: 250W –650W

- **TFX** ➔
  Size: 175 mm x 85mm x 64 mm
  Wattages: 250W – 400W

- **External Power Adapter**
  Wattages: 85W & 120W



SFX format



TFX format



ext. format



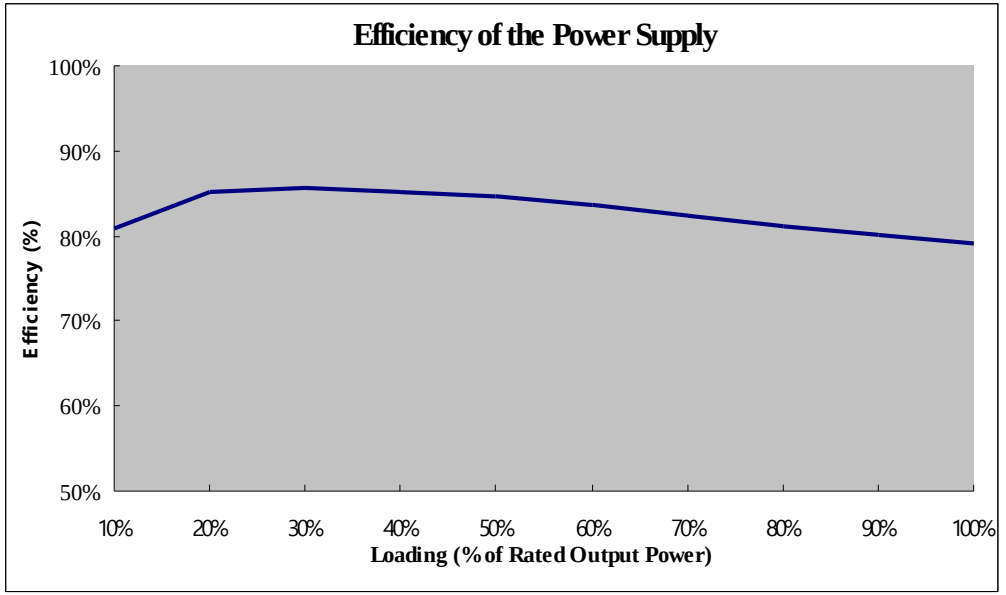
ATX format

EFFICIENCY DEFINITION:

Products are defined as “EFFICIENT”, if they have 80% or more energy efficiency at 20%, 50% and 100% load and a power factor of at least 0.9 at 100% load.

ADVANTAGE:

Pending on the efficiency level of the product, 20% or less electric energy is dissipated/lost in form of heat at specified load levels thereby reducing electricity use/consumption and resulting in much cheaper/lower bills, not to oversee the environmental advantages.



EFFICIENCY LEVELS:

Percentage of rated load	10%	20%	50%	100%
80 Plus		80%	80%	80%
80 Plus Bronze		82%	85%	82%
80 Plus Silver		85%	88%	85%
80 Plus Gold		87%	90%	87%
80 Plus Platinum		90%	92%	89%
80 Plus Titanium	90%	92%	94%	90%



ATX 3.0 DEFINITION:

ATX 3.0 is a new power standard announced by Intel in 2022. The new standard upgrades the 12VHPWR power supply interface of the graphics card, using 12+4 pins, and the maximum power supply can reach 600W, which is mainly used to meet the power supply requirements of PCIe 5.0 graphics cards.
Increase the peak power supply in the blink of an eye, 10% duty cycle, 100 microseconds, and undertake 200% index efficiency.

Duty Cycle	Time for Power Excursion (T_E)	Time Constant (T_C)	Power @ T_E	Power @ T_C
10%	100 µs	900 µs	2000 W	817 W
20%	1 ms	4 ms	1800 W	663 W
25%	10 ms	30 ms	1600 W	693 W
50%	100 ms	100 ms	1200 W	749 W

Output	Range	Min	Nom	Max	Unit
+12V1DC[2]	+5% / -7%	+11.20	+12.00	+12.60	V
+12V2DC[2]	+5% / -7%	+11.20	+12.00	+12.60	V
+5VDC	±5%	+4.75	+5.00	+5.25	V
+3.3VDC	±5%	+3.14	+3.30	+3.47	V
-12VDC[3]	±10%	-10.80	-12.00	-13.20	V
+5VSB	±5%	+4.75	+5.00	+5.25	V

Output	PSU without PCIe* 12VHPWR Connectors (Rated Size ≤450 Watts)	PSU with PCIe* 12VHPWR Connector (Rated Size >450 Watts)
All +12V	2.5 A/µs	5.0 A/µs
+5V	1.0 A/µs	1.0 A/µs
+3.3V	1.0 A/µs	1.0 A/µs
+5VSB	0.1 A/µs	0.1 A/µs
-12V	0.1 A/µs	0.1 A/µs

Power Excursion % of PSU Rated Size PSU ≤ 450 Watts & PSUs without 12VHPWR Connector	Power Excursion % of PSU Rated Size PSU > 450 Watts & 12VHPWR Connector present	Time for Power Excursion (TE)	Testing Duty Cycle
100%	100%	Infinite	--
110%	120%	100 ms	50%
135%	160%	10 ms	25%
145%	180%	1 ms	20%
150%	200%	100 µs	10%

ATX 3.1 DEFINITION --

The ATX 12V 3.1 standard is an update to the ATX 3.0 specification for power supply units (PSUs). Here are the key improvements and features –

1. **12V-2x6 Connector**:
   This new connector replaces the 12VHPWR connector, addressing issues such as melting by improving conductivity and stability. It supports up to 600W of power, making it suitable for high-end GPUs.

2. **Shorter Hold-Up Time**:
   The hold-up time, which is the duration a PSU can maintain output after a power loss, has been reduced from 17ms in ATX 3.0 to 12ms in ATX 3.1. This enhances the PSU's efficiency and reliability.

3. **Enhanced Sense Pins**:
   The sense pins in the 12+4 pin (12VHPWR) connector have been updated to improve power delivery and safety.

PCIe GEN 5.0 12VHPWR DEFINITION:



INTEL calls the 4 pins of 12VHPWR SIDEBAND SIGNALS, power supply manufacturers can set 150W / 300W / 450W / 600W four power levels to control and tell the graphics card the highest (auxiliary) power it can get from it .

Pending on the efficiency level of the product, 20% or less electric energy is dissipated/lost in form of heat at specified load levels thereby reducing electricity use/consumption and resulting in much cheaper/lower bills, not to oversee the environmental advantages.

- All 12 Power Contacts Rated up to 9.2A
- Completely separate terminals

PCIe* AIC Power (W)	CPU Continuous Power (W)	Rest of Platform (W)	PSU Rated PSU Size (W)
75	275	100	450
150	300	100	550
225	300	125	650
300	300	150	750
450	300	250	1000
600	300	300	1200

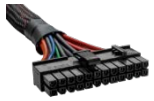
Sense0	Sense1	Initial Permitted Power at System Power Up	Maximum Sustain Power after Software Configuration
Gnd	Gnd	375 W	600 W
Open	Gnd	225 W	450 W
Gnd	Open	150 W	300 W
Open	Open	100 W	150 W

PCIe GEN 5.0 12V-2x6 DEFINITION:



12V-2x6 and 12VHPWR are compatible with each other.
The 12V-2x6 connector is essentially an updated version of the 12VHPWR standard, designed to improve reliability.
The key difference is that 12V-2x6 has shorter sensing pins (1.5mm) and longer conductor terminals (0.25mm), which helps ensure a more secure connection.

In terms of appearance, they look nearly identical. The changes are subtle and mostly affect the internal pin structure rather than the overall shape of the connector. If you already have 12VHPWR cables, they will work with 12V-2x6 connectors, so there’s no need to replace them.



24PIN➔ Main power connector for motherboards (20 + 4 PINs ATX)



4PIN 12V ➔ CPU power connector (P4 power connector) ATX 12V power connectors on motherboards. For most computers, you will just need to connect a single 4 pin connector.



8PIN EPS (4+4) 12V ➔ A hybrid of the 4 PIN ATX12V and EPS 12V connectors that can be split in half or combined to accommodate either the EPS 12V Socket or the ATX 12V socket. Provides additional power to the CPU.



6PIN PCIe➔ PCI Express power cable used to power GPUs/graphic cards with higher power demand.



8PIN PCIe (6+2)➔ PCI Express power cable used to power premium GPUs/graphic cards with high power demand.



16PIN PCIe GEN 5➔ 12VHPWR/12V-2x6 Cable Plug Connector used to power premium GPUs/graphic cards with high power demand



Molex ➔ power connector for IDE HDDs & ODDs. Although old standard, MOLEX can be hijacked with adapters to provide SATA, 8PIN PCIe or 8PIN EPS 12V additional connectors.



SATA➔ Serial-ATA power cable connectors for SATA HDDs/SSDs and ODDs



Floppy ➔FFD for floppy drives. Basically not required anymore.

NOTE:
the amount and types of connectors on a PSU determine the amount and type of mainboards, add-on cards and peripherals that can be installed and what technology is compatible.

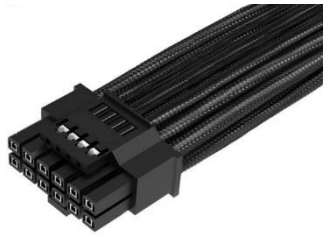
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PERFORMANCE POWER SUPPLIES

UNIQUE FAN GRILL
JAPANESE CAPACITORS
MAXIMUM EFFICIENCIES
MAX. ACCESSORIES INSIDE
DOUBLE FWD. PCB TECHNOLOGY
xTRA LONG BLACK & FLAT CABLES
MAXIMUM PROTECTION FEATURES
NON-AUDIBLE BALL & FDB-BEARING FANS
BUILT FOR GAMING & ABSOLUTE HIGH PERFORMANCE

POLARIS PRO (PLATINUM) series





Models: PPS-1300FC-A3

Unique Selling Points:

- DESIGNED TO INTEL'S ATX 3.1 STANDARD
- SUPPORTS PCIe GEN 5
- GAMING/HIGH PERFORMANCE
- 80PLUS PLATINUM
- RETAIL (incl. Pwr cord + accessories)
- 100% MODULAR
- 14cm BALL BEARING (silent) FAN
- SECURITY FEATURES: UVP, OVP, SCP, OPP, OCP, OTP, AFC & SIP
- LLC Half-Bridge converter with DC-to-DC technology
- +12V Single Rail technology

Model	24PIN	SATA	Molex	16PIN PCIe GEN5	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
PPS-1300FC	1	12	4	1	x	6	2	1

PowerUP GOLD (PERFORMANCE) series







Models: GPX-550FC, GPX-650FC, GPX-750FC & GPX-850FC

Unique Selling Points:

- GAMING/HIGH PERFORMANCE
- 80PLUS GOLD
- JAPANESE CAPs.
- RETAIL (incl. Pwr cord + accessories)
- 100% MODULAR
- 14cm FDB (silent) FAN
- Security features: UVP, OVP, SCP, OPP, OCP, OTP, AFC & SIP
- LLC full bridge resonant design
- DC to DC technology
- +12V Single Rail technology

Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
GPX-550FC	1	6	3	x	x	2	2	1
GPX-650FC	1	9	3	x	x	2	2	1
GPX-750FC	1	9	3	x	x	4	2	1
GPX-850FC	1	9	3	x	x	6	2	1

SteelPower (PERFORMANCE)series





Models: BDK-550FC, BDK-650FC, BDK-750FC & BDK-850FC

Unique Selling Points:

- GAMING/HIGH PERFORMANCE
- 80PLUS GOLD
- JAPANESE CAPs.
- RETAIL (incl. Pwr cord + accessories)
- 100% MODULAR
- 12cm FDB (silent) FAN
- Security features: UVP, OVP, SCP, OPP, OCP, OTP, AFC & SIP
- LLC half bridge resonant design
- DC to DC technology
- +12V Single Rail technology

Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
BDK-550FC	1	6	3	x	x	2	2	1
BDK-650FC	1	6	3	x	x	4	2	1
BDK-750FC	1	6	3	x	x	4	2	1



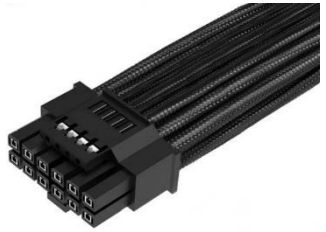
ATMOS(PERFORMANCE)series

Models: CPX-750FC & CPX-850FC

Unique Selling Points:

- DESIGNED TO INTEL'S ATX 3.1 STANDARD
- SUPPORTS PCIe GEN 5
- GAMING/HIGH PERFORMANCE
- 80PLUS GOLD
- RETAIL (incl. Pwr cord + accessories)
- 100% MODULAR
- 12cm (silent) FAN
- ECO Fan : Smart Fan Control
- SECURITY FEATURES: UVP, OVP, SCP, OPP, OCP, OTP, AFC & SIP
- SRC Full-Bridge converter with DC-to-DC technology
- +12V Single Rail technology





Model	24PIN	SATA	Molex	16PIN PCIe GEN5	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
PPS-750FC	1	9	4	1	x	4	2	x
PPS-850FC	1	9	4	1	x	4	2	x

POLARIS 3.0(PERFORMANCE)series

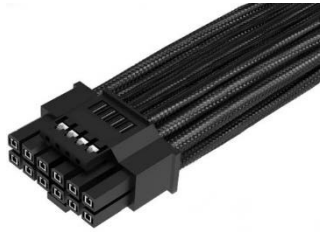


Models: PPS-850FC-A3, PPS-1050FC-A3 & PPS-1250FC-A3

Unique Selling Points:

- DESIGNED TO INTEL'S ATX 3.1 STANDARD
- SUPPORTS PCIe GEN 5
- GAMING/HIGH PERFORMANCE
- 80PLUS GOLD
- RETAIL (incl. Pwr cord + accessories)
- 100% MODULAR
- 14cm BALL BEARING (silent) FAN
- SECURITY FEATURES: UVP, OVP, SCP, OPP, OCP, OTP, AFC & SIP
- LLC Half-Bridge converter with DC-to-DC technology
- +12V Single Rail technology





Model	24PIN	SATA	Molex	16PIN PCIe GEN5	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
PPS-850FC	1	12	4	1	x	2	2	x
PPS-1050FC	1	12	4	1	x	4	2	x
PPS-1250FC	1	12	4	1	x	4	2	x

POLARIS (PERFORMANCE) series







Models: PPS-550FC, PPS-650FC, PPS-750FC, PPS-850FC, PPS-1050FC & PPS-1250FC

Unique Selling Points:

- GAMING/HIGH PERFORMANCE
- 80PLUS GOLD
- RETAIL (incl. Pwr cord + accessories)
- 100% MODULAR
- 14cm BALL BEARING (silent) FAN
- SECURITY FEATURES: UVP, OVP, SCP, OPP, OCP, OTP, AFC & SIP
- LLC Half-Bridge converter with DC-to-DC technology
- +12V Single Rail technology

Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
PPS-550FC	1	6	3	x	x	2	2	1
PPS-650FC	1	6	3	x	x	4	2	1
PPS-750FC	1	8	3	x	x	4	2	1
PPS-850FC	1	12	4	x	x	4	2	x
PPS-1050FC	1	12	6	x	x	6	2	x
PPS-1250FC	1	12	6	x	x	6	4	x

CORE (PERFORMANCE) series







Models: BBS-500S, BBS-600S & BBS-700S

Unique Selling Points:

- GAMING/HIGH PERFORMANCE
- 80PLUS GOLD
- RETAIL (incl. Pwr cord + accessories) & BULK (excl. Pwr cord & accessories)
- DIRECT CABLES
- 12cm ball bearing (silent) fan
- Security features: UVP, OVP, SCP, OPP, AFC & SIP
- LLC half bridge resonant design & DC to DC technology
- +12V Single Rail technology

Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
BBS-500S	1	4	3	x	x	1	1	1
BBS-600S	1	6	3	x	x	2	1	1
BBS-700S	1	6	3	x	x	2	2	1

PROTON (PERFORMANCE) series







Models (CABLES): BDF-400S, BDF-500S & BDF-600S
Models (MODULAR): BDF-650C, BDF-750C, BDF-850C & BDF-1000C

Unique Selling Points:

- GAMING/HIGH PERFORMANCE
- 80PLUS BRONZE
- RETAIL (incl. Pwr cord + accessories)
- 100% MODULAR for all „**C**“ **models**
- DC-2-DC technology
- Xtra long & flat uni-color cables
- 14cm ball bearing (silent) fan
- Security features: UVP, OVP, SCP, OPP, OCP, OTP, AFC & SIP

Model	24PIN	SATA	Molex	6PIN PCIe	8PIN 12V	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
BDF-400S	1	3	3	1	X	x	1	x
BDF-500S	1	6	3	x	x	2	1	x
BDF-600S	1	6	3	x	x	2	1	x
BDF-650**C**	1	6	3	x	x	4	1	1
BDF-750**C**	1	6	3	x	x	4	1	1
BDF-850**C**	1	9	3	x	1	6	1	1
BDF-1000**C**	1	9	3	x	1	6	1	1

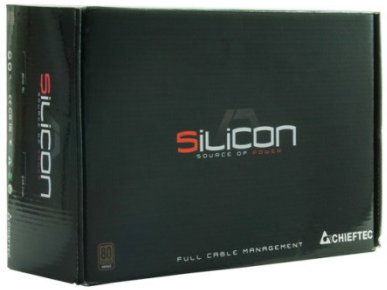
SILICON (PERFORMANCE) series



Models: SLC-650C, SLC-750C, SLC-850C & SLC-1000C

Unique Selling Points:

- GAMING/HIGH PERFORMANCE
- 80PLUS BRONZE
- RETAIL (incl. Pwr cord + accessories)
- 100% MODULAR
- DC-2-DC technology
- Xtra long & flat uni-color (black) cables
- 14cm ball bearing (silent) fan
- Security features: UVP, OVP, SCP, OPP, OCP, OTP, AFC & SIP



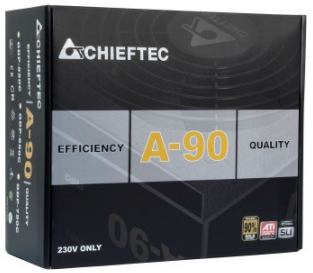


Model	24PIN	SATA	Molex	6PIN PCIe	8PIN PCIe (6+2)	8PIN 12V	8PIN EPS (4+4)	Floppy
SLC-650C	1	6	3	x	4	x	1	1
SLC-750C	1	6	3	x	4	x	1	1
SLC-850C	1	9	3	x	6	1	1	1
SLC-1000C	1	9	3	x	6	1	1	1

A – 90 (PERFORMANCE) series









Models: GDP-550C, GDP-650C & GDP-750C

Unique Selling Points:

- GAMERS/ENTHUSIASTS
- 90% EFFICIENCY @230V (equivalent to 80PLUS GOLD)
- RETAIL (incl. Pwr cord + accessories)
- SEMI MODULAR
- 14cm (silent) Fan (+5V addressable)
- Security features: UVP, OVP, SCP, OPP, OCP, OTP, AFC & SIP
- Double forward design & DC to DC technology
- +12V Single Rail technology

Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
GDP-550C	1	6	3	x	x	2	1	1
GDP-650C	1	6	3	x	x	2	1	1
GDP-750C	1	8	3	x	x	4	1	1

PHOTON GOLD (RGB) series









Models: GDP-650C-RGB & GDP-750C-RGB

Unique Selling Points:

- GAMERS/ENTHUSIASTS
- 90% EFFICIENCY @230V (equivalent to 80PLUS GOLD)
- RETAIL (incl. Pwr cord + accessories)
- SEMI MODULAR
- 14cm (RGB) (silent) Fan (+5V addressable)
- Security features: UVP, OVP, SCP, OPP, OCP, OTP, AFC & SIP
- Double forward design & DC to DC technology
- +12V Single Rail technology
- RGB: supports all renowned RGB lightening synchronization systems such as ASUS™ AURA SYNC, MSI™ MYSTIC LIGHT SYNC, ASROCK™ POLYCHROME SYNC and GIGABYTE™ RGB FUSION.

Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
GDP-650C-RGB	1	6	3	x	x	4	1	1
GDP-750C-RGB	1	8	3	x	x	4	1	1

PHOTON (RGB) series









Models: CTG-650C-RGB & CTG-750C-RGB

Unique Selling Points:

- GAMERS/ENTHUSIASTS
- 85% EFF@230V (equivalent to 80PLUS BRONZE)
- RETAIL (incl. Pwr cord + accessories)
- SEMI MODULAR
- 12cm (RGB) (silent) Fan (+5V addressable)
- Security features: UVP, OVP, SCP, OPP, AFC & SIP
- RETAIL
- Double Forward Design with +3.3V magnetic amplification
- +12V Single Rail Technology
- RGB: supports all renowned RGB lightening synchronization systems such as ASUS™ AURA SYNC, MSI™ MYSTIC LIGHT SYNC, ASROCK™ POLYCHROME SYNC and GIGABYTE™ RGB FUSION.

Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
CTG-650C-RGB	1	6	4	x	x	4	1	2
CTG-750C-RGB	1	6	4	x	x	4	1	2

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RETAIL POWER SUPPLIES

REAL POWER
RETAIL & BULK
QUALITY COMPONENTS
MAXIMUM EFFICIENCIES
EYE CATCHING RETAIL PACKING
THERMAL BOARD TECHNOLOGY
+12V SINGLE RAIL TECHNOLOGY
+3.3V MAGNETIC AMPLIFICATION LLC
HALF BRIDGERESONANT DESIGN PCB
MAINSTREAM GAMING, HOME & OFFICE

VEGA M (RETAIL) series









Models: PPG-750-C, PPG-850-C *(New)

Unique Selling Points:

- YOUR TRUSTWORTHY CHOICE FOR ALL COMPUTING NEEDS
- 80PLUS® Gold certified efficiency
- Fully modular cable management
- Support PCIe GEN5
- RETAIL (incl. Pwr cord + accessories)
- LLC Half-Bridge converter with DC to DC technology
- 135mm FDB (silent) fan
- Security features: UVP, OVP, OTP, OCP, SCP, OPP, AFC & SIP

Model	24PIN	SATA	Molex	16 PIN 12V-2x6	8PIN PCIe (6+2)	8PIN EPS (4+4)
PPG-750-C	1	6	3	1	4	1
PPG-850-C	1	6	3	1	4	1

VEGA (RETAIL) series







Models: PPG-750-S, PPG -850-S

Unique Selling Points:

- YOUR TRUSTWORTHY CHOICE FOR ALL COMPUTING NEEDS
- 80PLUS® Gold certified efficiency
- EXTRA LONG BLACK DIRECT CABLES
- Support PCIe GEN5
- RETAIL (incl. Pwr cord + accessories)
- LLC Half-Bridge converter with DC to DC technology
- 135mm FDB (silent) fan
- Security features: UVP, OVP, OTP, OCP, SCP, OPP, AFC & SIP

Model	24PIN	SATA	Molex	16 PIN PCIe GEN5	8PIN PCIe (6+2)	8PIN EPS (4+4)	8PIN EPS
PPG-750-S	1	6	3	1	4	1	1
PPG-850-S	1	6	3	1	4	1	1

VITA SM3 (RETAIL) series



Models: BPX-750-C, BPX-850-C *(New)

Unique Selling Points:

- YOUR TRUSTWORTHY CHOICE FOR ALL COMPUTING NEEDS
- 80PLUS® Bronze certified efficiency
- Semi-Modular cable management
- Support PCIe GEN5
- RETAIL (incl. Pwr cord + accessories)
- Double Forward Design + DC-to-DC technology
- +12cm FDB (silent) fan
- Security features: UVP, OVP, OTP, OCP, SCP, OPP, AFC & SIP

					Modular	Modular	Modular
Model	**20+4PIN**	**8PIN EPS (4+4)**	**16 PIN 12V-2x6**	**8PIN PCIe (6+2)**	**8PIN PCIe (6+2)**	**SATA**	**MOLEX**
BPX-750-S	1	2	1	2	2	6	3
BPX-850-S	1	2	1	2	2	6	3

VITA (RETAIL) series





Models: BPX-750-S, BPX-850-S

Unique Selling Points:

- YOUR TRUSTWORTHY CHOICE FOR ALL COMPUTING NEEDS
- 80PLUS® Bronze certified efficiency
- EXTRA LONG BLACK DIRECT CABLES
- RETAIL (incl. Pwr cord + accessories)
- Double Forward Design + DC-to-DC technology
- +12cm FDB (silent) fan
- Security features: UVP, OVP, OTP, OCP, SCP, OPP, AFC & SIP





Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
BPX-750-C	1	6	2	x	x	4	2	x
BPX-850-C	1	6	2	x	x	4	2	x

Eon (RETAIL) series



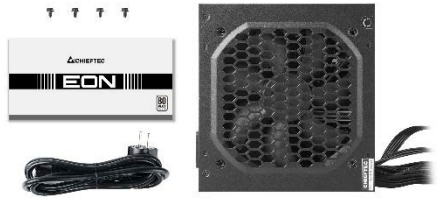
80 PLUS 230V EU

Models: ZPU-400S, ZPU-500S, ZPU-600S & ZPU-700S

Unique Selling Points:

- HIGH VALUE HOME/GAMING & OFFICE SYSTEMS
- 80PLUS 230V EU (WHITE)
- DIRECT CABLES (All black flat wire)
- RETAIL (incl. Pwr cord + accessories)
- Double forward design with +3.3V magnetic amplification
- +12V Single Rail Technology
- 12cm (silent) fan
- Security features: UVP, OVP, SCP, OPP, AFC & SIP





Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
ZPU-400S	1	4	2	x	x	1	1	x
ZPU-500S	1	4	2	x	x	1	2	x
ZPU-600S	1	4	2	x	x	2	2	x
ZPU-700S	1	4	2	x	x	4	2	x

CE CB TÜV RoHS ErP









VOLTA (RETAIL) series

Models: VPS-600S & VPS-700S

Unique Selling Points:

- HIGH VALUE HOME/GAMING & OFFICE SYSTEMS
- 80PLUS BRONZE
- RETAIL & BULK (incl. Pwr cord + accessories) & BULK (excl. Pwr cord & accessories)
- DIRECT CABLES (Xtra long MB & CPU cables - 650mm)
- +12V Single Rail Technology
- 12cm ball bearing (silent) fan
- Double forward design & DC to DC technology + Thermal board
- Security features: : UVP, OVP, SCP, OPP, OTP, AFC & SIP

Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
VPS-600S	1	5	3	x	x	2	1	x
VPS-700S	1	6	3	x	x	2	1	x

TASK (RETAIL) series







Models: TPS-400S, TPS-500S, TPS-600S & TPS-700S

Unique Selling Points:

- HIGH VALUE HOME/GAMING & OFFICE SYSTEMS
- 80PLUS BRONZE
- DIRECT CABLES
- RETAIL & BULK (incl. Pwr cord + accessories) & BULK (excl. Pwr cord & accessories)
- DIRECT CABLES (Xtra long MB & CPU cables - 650mm)
- +12V Single Rail Technology
- 12cm ball bearing (silent) fan
- Double forward design & DC to DC technology + Thermal board
- Security features: : UVP, OVP, SCP, OPP, OTP, AFC & SIP

Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
TPS-400S	1	5	3	x	x	1	1	x
TPS-500S	1	5	3	x	x	1	1	x
TPS-600S	1	5	3	x	x	2	1	x
TPS-700S	1	6	3	x	x	2	1	x

ELEMENT (RETAIL) series









Models: ELP-350S, ELP-400S, ELP-500S, ELP-600S & ELP-700S

Unique Selling Points:

- HIGH VALUE HOME/GAMING & OFFICE SYSTEMS
- 85% EFF @230V (equivalent to 80PLUS BRONZE)
- DIRECT CABLES
- RETAIL & BULK (incl. Pwr cord + accessories) & BULK (excl. Pwr cord & accessories)
- Double Forward Design with +3.3V magnetic amplification
- +12V Single Rail Technology
- 12cm ball bearing (silent) fan
- Security features: UVP, OVP, SCP, OPP, AFC &SIP
- **ELP-600S** & **ELP-700S** with xtra long (650mm) **24PIN** & **EPS 12V** cables

Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
ELP-350S	1	3	2	x	x	x	1	1
ELP-400S	1	3	2	x	x	1	1	1
ELP-500S	1	3	2	x	x	1	1	1
ELP-600S	1	4	2	x	x	2	1	1
ELP-700S	1	6	2	x	x	2	1	1

A - 80 (RETAIL) series









Models: CTG-550C, CTG-650C & CTG-750C

Unique Selling Points:

- HIGH VALUE HOME/GAMING & OFFICE SYSTEMS
- 85% EFF @230V (equivalent to 80PLUS BRONZE)
- SEMI MODULAR
- RETAIL (incl. Pwr cord + accessories)
- Double Forward Design with +3.3V magnetic amplification
- +12V Single Rail Technology
- 12cm ball bearing (silent) fan
- Security features: UVP, OVP, SCP, OPP, AFC & SIP

Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
CTG-550C	1	6	4	x	x	2	1	2
CTG-650C	1	6	4	x	x	2	1	2
CTG-750C	1	6	4	x	x	2	1	2

ECO (RETAIL) series









Models: GPE-400S, GPE-500S, GPE-600S & GPE-700S

Unique Selling Points:

- HIGH VALUE HOME/GAMING & OFFICE SYSTEMS
- 85% EFF @230V (equivalent to 80PLUS BRONZE)
- DIRECT CABLES
- RETAIL (incl. Pwr cord + accessories)
- Double Forward Design with +3.3V magnetic amplification
- +12V Single Rail Technology
- 12cm ball bearing (silent) fan
- Security features: UVP, OVP, SCP, OPP, AFC & SIP

Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
GPE-400S	1	4	2	x	x	x	1	x
GPE-500S	1	4	2	x	x	x	1	x
GPE-600S	1	6	2	x	x	2	1	x
GPE-700S	1	6	2	x	x	2	1	x

SMART (RETAIL) series









Models: GPS-400A8, GPS-500A8, GPS-550A8, GPS-600A8, GPS-650A8 & GPS-700A8

Unique Selling Points:

- HIGH VALUE HOME/GAMING & OFFICE SYSTEMS
- 85% EFFICIENCY @230V (equivalent to 80PLUS BRONZE)
- DIRECT CABLES
- RETAIL (incl. Pwr cord + accessories) & BULK (excl. Pwr cord & accessories)
- Double forward design with +3.3V magnetic amplification
- +12V Single Rail Technology
- 12cm ball bearing (silent) fan
- Security features: UVP, OVP, SCP, OPP, AFC & SIP

Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
GPS-400A8	1	3	2	x	x	1	1	1
GPS-500A8	1	3	2	x	x	1	1	1
GPS-550A8	1	4	2	x	x	2	1	1
GPS-600A8	1	4	2	x	x	2	1	1
GPS-650A8	1	4	2	x	x	2	1	1
GPS-700A8	1	6	2	x	x	2	1	1

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OEM/BULK POWER SUPPLIES

REAL POWER
RETAIL & BULK
QUALITY COMPONENTS
MAXIMUM EFFICIENCIES
THERMAL BOARD TECHNOLOGY
+12V SINGLE RAIL TECHNOLOGY
+3.3V MAGNETIC AMPLIFICATION LLC
HALF BRIDGERESONANT DESIGN PCB
MAINSTREAM GAMING, HOME & OFFICE

iARENA-II (BULK/OEM) series



Models: GPA-350S8, GPA-400S8, GPA-450S8 & GPA-500S8

Unique Selling Points:

- MAIN STREAM HOME & OFFICE
- 85% EFF @230V (equivalent to 80PLUS)
- BULK (excl. Pwr cord & accessories)
- +12V Single Rail Technology
- 12cm ball bearing (silent) fan
- Security features: UVP, OVP, SCP, OPP, AFC & SIP
- Active PFC (PF 0,9)
- Thermal board

Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
GPA-350S8	1	3	2	x	x	x	1	1
GPA-400S8	1	3	2	x	x	1	1	1
GPA-450S8	1	3	2	x	x	1	1	1
GPA-500S8	1	3	2	x	x	1	1	1

iARENA-IV (BULK/OEM) series





Models: GPB-350S, GPB-400S, GPB-450S & GPB-500S

Unique Selling Points:

- MAIN STREAM HOME & OFFICE
- 85% EFF @230V (equivalent to 80PLUS BRONZE)
- BULK (excl. Pwr cord & accessories)
- +12V Single Rail Technology
- 12cm ball bearing (silent) fan
- Security features: UVP, OVP, SCP, OPP, AFC & SIP
- Active PFC (PF 0,9)
- Thermal board





Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PINEPS (4+4)	Floppy
GPB-350S	1	5	3	x	x	1	1	x
GPB-400S	1	5	3	x	x	1	1	x
GPB-450S	1	5	3	x	x	1	1	x
GPB-500S	1	5	3	x	x	1	1	x

VALUE (BULK/OEM) series



80 PLUS 230V EU

Models: APB-400B8 & APB-500B8

Unique Selling Points:

- MAIN STREAM HOME & OFFICE
- 80PLUS EU (WHITE)
- BULK (excl. Pwr cord & accessories)
- +12V Single Rail Technology
- 12cm ball bearing (silent) fan
- Security features: UVP, OVP, SCP, OPP, AFC & SIP
- Active PFC (PF 0,9)
- Thermal board

Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
APB-400B8	1	3	2	1	1	x	x	1
APB-500B8	1	3	2	1	1	x	x	1
APB-600B8	1	4	2	x	x	2	1	1
APB-700B8	1	4	2	x	x	2	1	1

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iARENA-III (BULK/OEM) series



80+
230V only

Models: GPC-400S, GPC-500S, GPC-600S, & GPC-700S

Unique Selling Points:

- MAIN STREAM HOME & OFFICE
- 80% EFF @230V (equivalent to 80PLUS)
- BULK (excl. Pwr cord & accessories)
- +12V Single Rail Technology
- 12cm ball bearing (silent) fan
- Security features: UVP, OVP, SCP, OPP, AFC & SIP
- Active PFC (PF 0,9)
- Thermal board





Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
GPC-400S	1	4	2	x	x	x	1	x
GPC-500S	1	4	2	x	x	1	1	x
GPC-600S	1	6	2	x	x	2	1	x
GPC-700S	1	6	2	x	x	2	1	x

CE CB TÜV RoHS ErP

iARENA-I (BULK/OEM) series



Models: GPA-550S, GPA-600S, GPA-650S & GPA-700S

Unique Selling Points:

- MAIN STREAM HOME & OFFICE
- <80% EFF @230V
- BULK (excl. Pwr cord & accessories)
- +12V Single Rail Technology
- 12cm ball bearing (silent) fan
- Security features: UVP, OVP, SCP, OPP, AFC & SIP
- Active PFC (PF 0,9)
- Thermal board

Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
GPA-550S	1	4	2	x	x	2	1	1
GPA-600S	1	4	2	x	x	2	1	1
GPA-650S	1	6	2	x	x	2	1	1
GPA-700S	1	6	2	x	x	2	1	1

CHIEFTEC

SFX POWER SUPPLIES

SFF (small form factor) solution

REAL Power
HIGH EFFICIENCIES
QUALITY CAPACITORS
RETAIL & BULK PACKING
DC – to – DC technology
+12V SINGLE RAIL Technology
THERMAL BOARD Technology
LLC HALF BRIDGE RESONANT DESIGN PCB
GMING, PERFORMANCE, HOME & OFFICE

SMART (SFX PERFORMANCE) series



Models: SFX-500GD-C

Unique Selling Points:

- GAMING/HIGH PERFORMANCE
- 80PLUS GOLD (SFX-500DG-C)
- RETAIL (incl. Pwr cord & accessories)
- +12V Single Rail Technology
- 8cm ball bearing (silent) fan
- Security features: UVP, OVP, SCP, OPP, OCP, OTP, AFC & SIP
- Thermal board
- Dedicated to SFF (small form factor) cases
- ATX 2.3 version

Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
SFX-500GD-C	1	4	2	x	x	2	1	x

SMART (SFX) series





Models: SFX-250VS, SFX-350BS & SFX-450BS

Unique Selling Points:

- MAIN STREAM HOME & OFFICE
- 85% EFF @230V (SFX-XXXVS/BS)
- BULK (excl. Pwr cord & accessories)
- +12V Single Rail Technology
- 8cm ball bearing (silent) fan
- Security features: UVP, OVP, SCP, OPP, OCP, OTP, AFC & SIP
- Thermal board
- Dedicated to SFF (small form factor) cases
- ATX 2.3 version

Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
SFX-250VS	1	2	2	X	x	x	1	1
SFX-350BS	1	2	2	x	x	x	1	1
SFX-450BS	1	4	2	x	x	1	1	1
SFX-500GD-C	1	4	2	x	x	2	1	x

SMART (BFX) series



Models: BFX-350BS & BFX-450BS

Unique Selling Points:

- MAIN STREAM HOME & OFFICE
- 80PLUS BRONZE
- BULK (excl. Pwr cord & accessories)
- +12V Single Rail Technology
- 8cm ball bearing (silent) fan
- Security features: UVP, OVP, SCP, OPP, OCP, OTP, AFC & SIP
- DC to DC technologie
- Dedicated to SFF (small form factor) cases
- ATX 2.3 version

Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
BFX-350BS	1	3	2	x	x	1	1	1
BFX-450BS	1	3	2	x	x	2	1	1

COMPACT (SFX PERFORMANCE) series







Models: CSN-450C, CSN-550C & CSN-650C

Unique Selling Points:

- GAMING/HIGH PERFORMANCE
- 80PLUS GOLD certified
- RETAIL (incl. Pwr cord & accessories)
- +12V Single Rail Technology
- 8cm ball bearing (silent) fan
- Security features: UVP, OVP, SCP, OPP, OCP, OTP, AFC & SIP
- Active PFC (PF 0,9)
- Thermal board
- Dedicated to SFF (small form factor) cases
- ATX 2.3 version

Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
CSN-450C	1	6	3	x	x	2	1	1
CSN-550C	1	6	3	x	x	2	1	1
CSN-650C	1	6	3	x	x	2	1	1

SMART (TFX) series



Models: GPF-300P, GPF-350P & GPF-400P

Unique Selling Points:

- MAIN STREAM HOME & OFFICE
- 80PLUS BRONZE
- 85% EFF @230V ➔ GPF-350P & GPF-400P
- BULK (excl. Pwr cord & accessories)
- +12V Single Rail Technology
- 8cm ball bearing (silent) fan
- Security features: UVP, OVP, SCP, OPP, AFC & SIP
- Thermal board
- Dedicated to SFF (small form factor) cases
- ATX 2.3 version

Model	24PIN	SATA	Molex	4PIN 12V	6PIN PCIe	8PIN PCIe (6+2)	8PIN EPS (4+4)	Floppy
GPF-300P	1	4	2	x	x	x	1	1
GPF-350P	1	4	2	x	x	x	1	1
GPF-400P	1	4	2	x	x	x	1	1

PRODUCT REAEARCH & DEVELOPEMENT

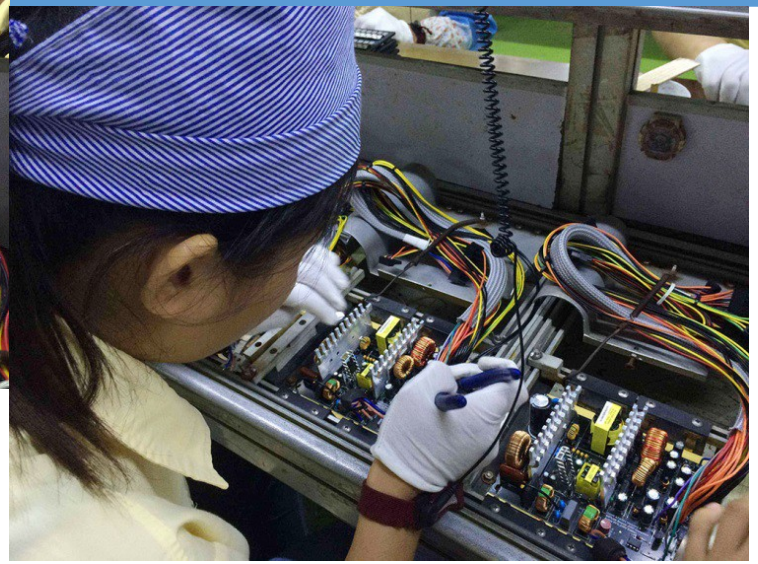
1. pre-processing



2. plug in components



3. Initial check

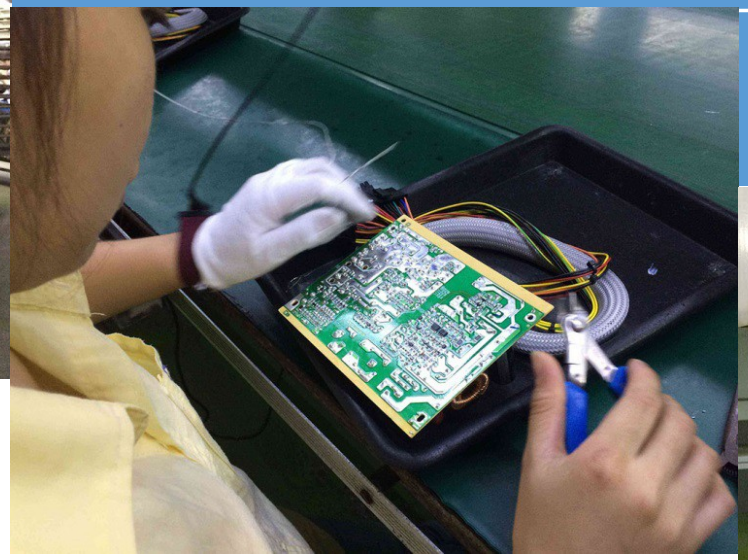


Product developement / R&D

4. wave-soldering process



5. check the soldering quality

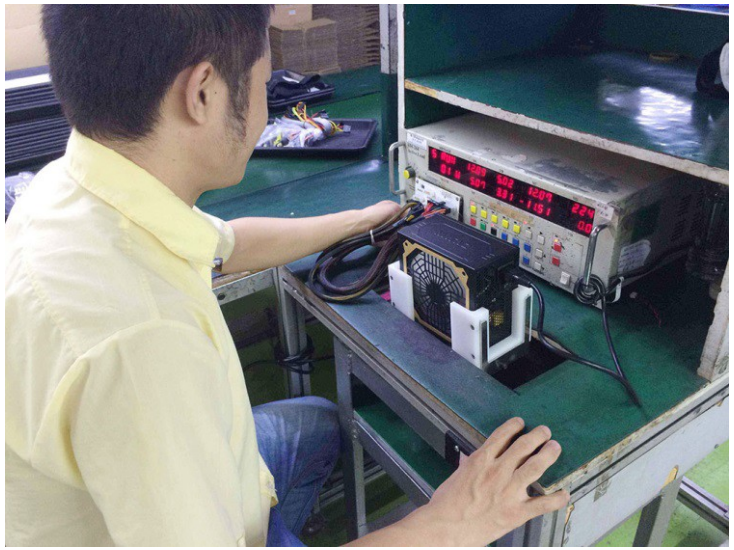


6. in circuit test



Product developement / R&D

10. Test after assembly



11. burn-in test

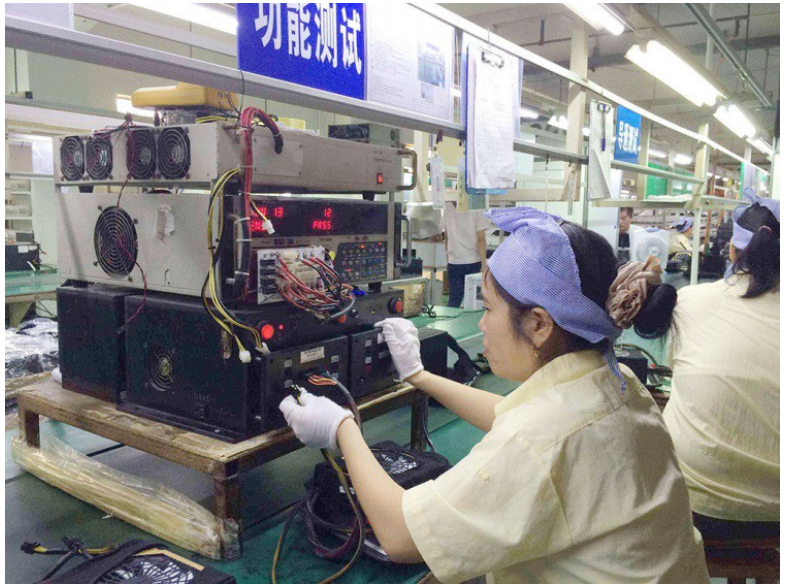


12. HI-POT test

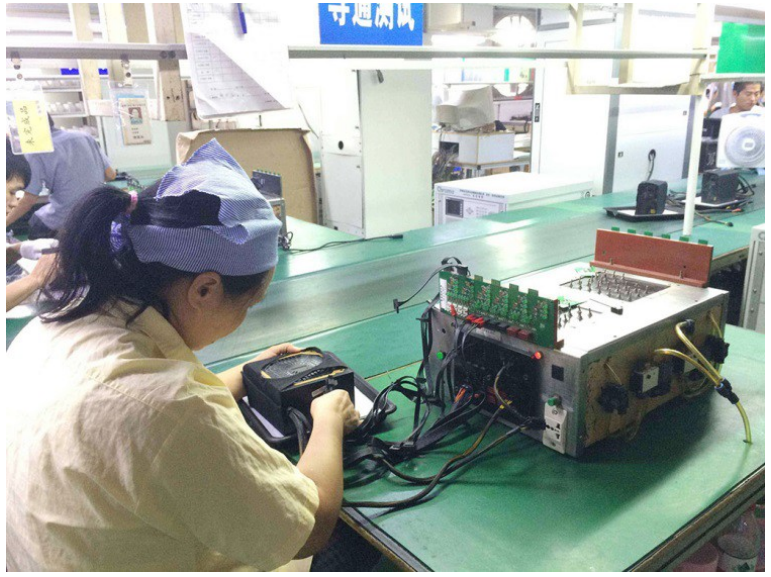


Product developement / R&D

13. function test



14. cable test



15. ATE test



Product developement / R&D

16. appearance check



17. packaging



18. out-going quality control



QUALITY CONTROL



QUALITY CONTROL



This powerful feature saves time and reduces significantly, human operations errors which in turn decreases failure rate due to improper tests.

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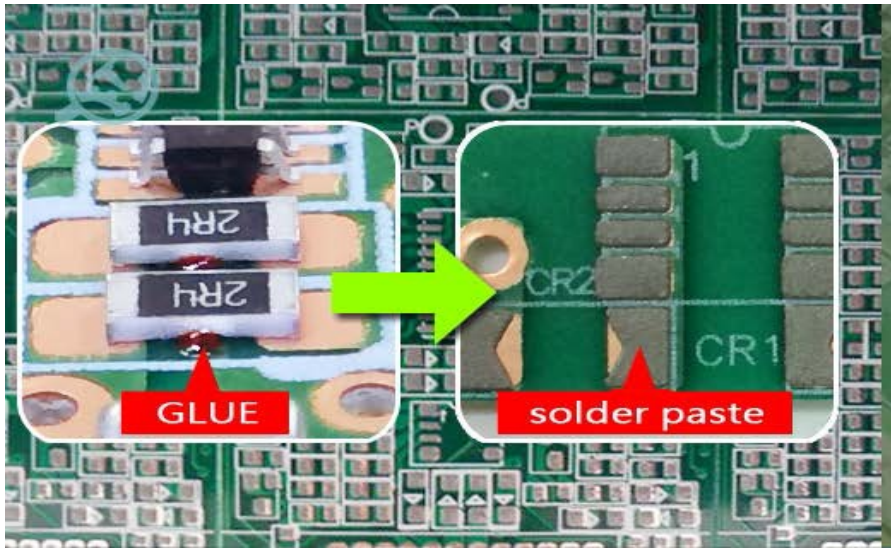


Brand new soldering machine launched in 2014 to ensure clean soldering processes which increase longevity of components and related solutions

The new BURN-IN room which is used to stress-test PSUs until burning point to establisch max. values correctly.



QUALITY CONTROL





Brand new soldering paste processes for daughter mainboards to enhance cleaner and more dependent soldering points.

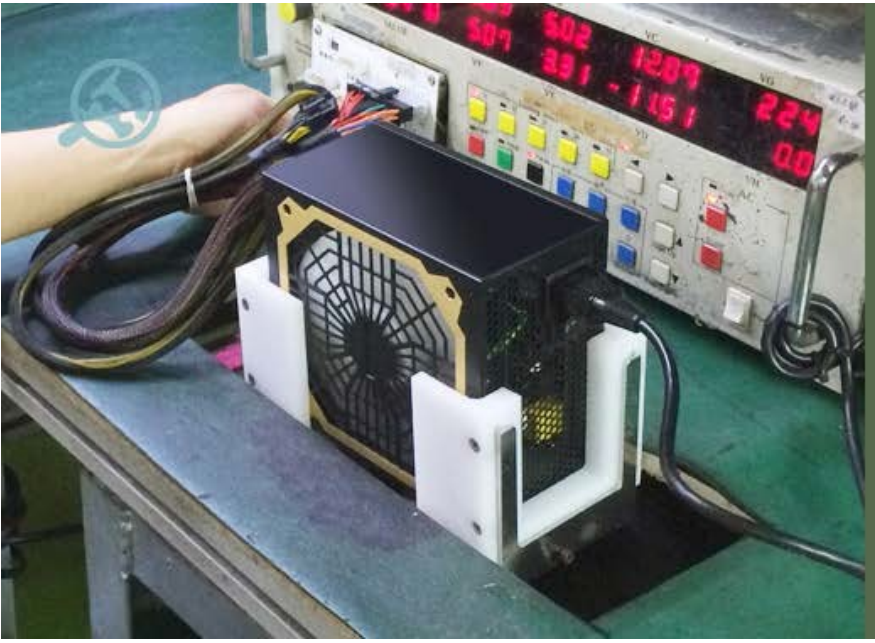
The glue is a relevant aspect of the PSU so that anti water, dust and insulation glue is now implemented to enhance functionality further.

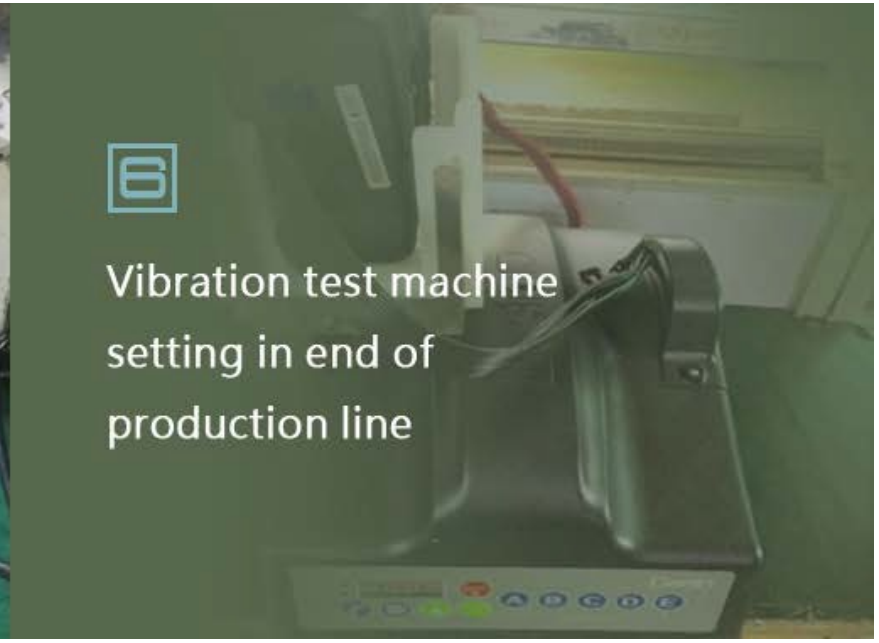


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QUALITY CONTROL





The vibration test is run on every single unit at the end of the production line to further ensure all quality standards are met.

SMD capacitors have been replaced with TDKs to boost longevity and ensure additional MTBF.



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QUALITY CONTROL



Both soldering spray and solder bars have been upgraded to very renowned brand ALPHA which ensures highest quality soldering.

Solder bars with 0,3% silver to ensure long-term soldering results and lowest possible insulation.



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CHIEFTEC QUALITY CONTROL CENTER



