KINGWIN MACH 1 SERIES

ADVANCED CABLE MANAGEMENT POWER SUPPLY

GENERAL INFORMATION:

Since 1992, Kingwin has been a pioneer in bringing new advances in technology and innovative products to the marketplace. With this latest offering, Kingwin once again delivers a high performance and professional power solution. This solution meets with the latest ATX+12V 2.2 Version, EPS +12V 2.91 Version, and EPS +12V 2.92 Version specifications, and is designed throughout with high efficiency, density and expandability in mind. High reliability, efficient power consumption and output make Kingwin the clear choice for today and tomorrow's PC applications. The Kingwin Mach 1 power supply was designed to work with the Intel Core Duo and Core 2 Duo/ AMD 64, and 64 x2 CPU's and high performance ATI / NVIDIA graphic-cards (PCI-E 6+2pin/ PCI-E 6pin/ VGA 4pin). The Mach 1 also supports Serial ATA and HDD/FDD connectors with easy installation.

IMPORTANT SAFETY INSTRUCTIONS:

Check the power supply voltage before installation. It should be the same as your local power voltage (115V for USA and 230V for most of the European countries). Change the voltage setting if necessary.

1. Disconnect the power cord from your old power supply.
2. Follow your computer case manual and open the case.
3. Disconnect all the power Connectors from the motherboard and the peripheral devices such as hard drives, floppy drives, etc.
4. Remove the existing power supply from your computer case and replace it with the Kingwin power supply.
5. Connect the Power Connectors to your motherboard and peripheral devices.
6. Close the computer case.
7. Connect the power cord to the Kingwin power supply.

The picture below is a sub use of every end and joining the position of detachable Power Supply:

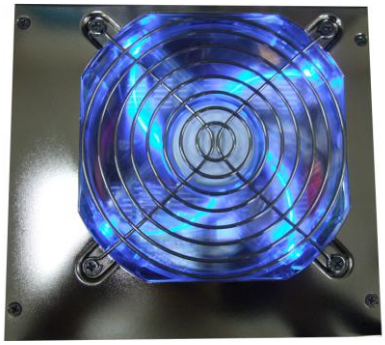
※**Multi-Use:** The Peripheral connector 4Pin

※**SATA:** The Serial- ATA Power connector

※**PCI-E / SLI:** The High performance graphic cards connector

1. Pictures of connector:

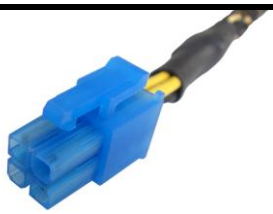
Advance Easy Plug/ Unplug connector



Power Supply Fan with LED

20+4pin connector

EPS+12V 8 (4+4) pin connector



For above 650W model only

+12V 4pin connector

PCI-E connector (6pin & 6+2pin)

FDD connector

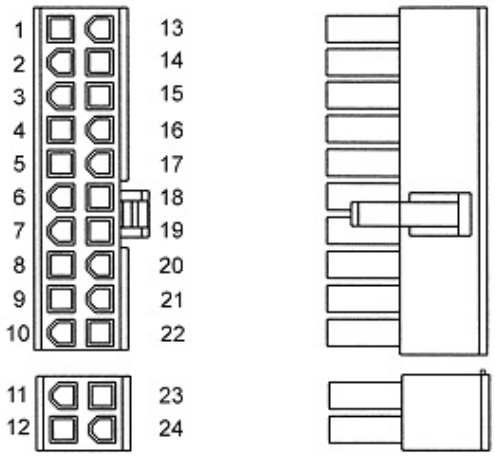
Serial ATA connector

HDD connector

1.1 **Color, Pin and signal assignment of output power connectors:**

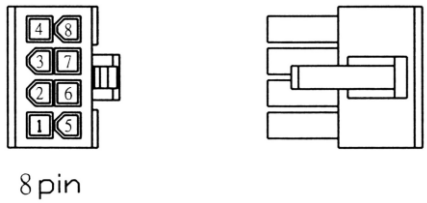
a. EPS12V / BTX motherboard power connector (20+4Pin)

Color	Signal	Pin	Color	Signal	Pin
Orange	+3.3V	1	Orange	+3.3V	13
Orange	+3.3V	2	Brown	[+3.3V sense]	
Black	COM	3	Blue	-12V	14
Red	+5V	4	Black	COM	15
Black	COM	5	Green	PS_ON#	16
Red	+5V	6	Black	COM	17
Black	COM	7	Black	COM	18
Gray	PWR_OK	8	Black	COM	19
Purple	+5VSB	9	White	NC	20
Yellow	+12V	10	Red	+5V	21
Yellow	+12V	11	Red	+5V	22
Orange	+3.3V	12	Red	+5V	23
			Black	COM	24



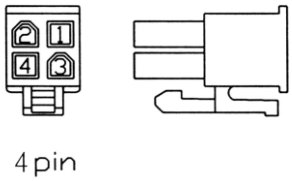
b. EPS +12V Power Connector (8 Pin) for Intel 945/955 chipset

Color	Signal	Pin	Color	Signal	Pin
Black	COM	1	Yellow	+12V	5
Black	COM	2	Yellow	+12V	6
Black	COM	3	Yellow	+12V	7
Black	COM	4	Yellow	+12V	8



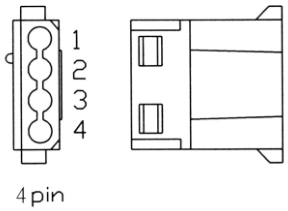
c. +12V Power Connector (4 Pin) for ATX/BTX

Color	Signal	Pin
Black	COM	1
Black	COM	2
Yellow	+12V	3
Yellow	+12V	4



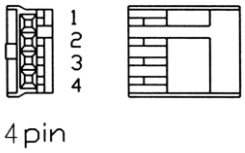
d. Peripheral connector (4 Pin)

Color	Signal	Pin
Yellow	+12V	1
Black	COM	2
Black	COM	3
Red	+5V	4



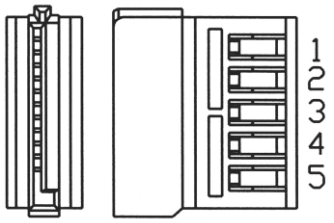
e. Floppy disc connector (4 Pin)

Color	Signal	Pin
Red	+5V	1
Black	COM	2
Black	COM	3
Yellow	+12V	4



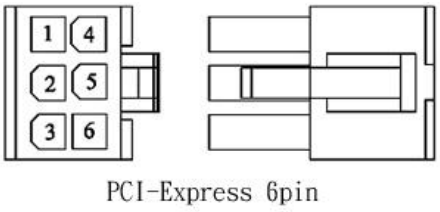
f. Serial-ATA power connector

Color	Signal	Location
Yellow	+12V	1
Black	COM	2
Red	+5V	3
Black	COM	4
Orange	+3.3V	5



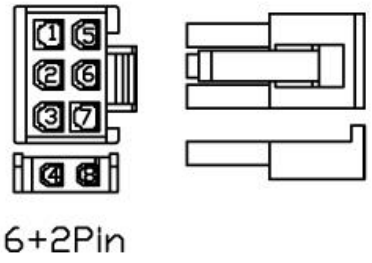
g. PCI-Express 6pin power connector

Color	Signal	Location	Color	Signal	Location
Yellow	+12V	1	Black	COM	4
Yellow	+12V	2	Black	COM	5
Yellow	+12V	3	Black	COM	6



h. PCI-Express 6+2pin power connector

Color	Signal	Location	Color	Signal	Location
Yellow	+12V	1	Black	COM	5
Yellow	+12V	2	Black	COM	6
Yellow	+12V	3	Black	COM	7
Black	COM	4	Black	COM	8



2. Remarks:

2.1 Do not open the top cover of power supply case!

******* To avoid electric shocks! *******

2.2 Before turning on the power supply, please make sure if the "Input Voltage" of the slide switch set on power supply corresponds to the power voltage given in your environment. (115V or 230V).

2.3 Keep the power supply from moistened or dusty places.

3. Specification:

Version 2.2:

Table (a) Model NO.: ABT-520MA1/ABT-520MA1W Series

AC INPUT	115 Vac 10.7A 230 Vac 6.2A	Frequency	50 / 60HZ
DC OUTPUT			
Load	Min	Max	Max Combined Wattage
+3.3V	1.0A	23A	+3.3V & +5V =180W +3.3V&+5V&+12V=503W +12V1 + V2=372W Max Peak = 520W
+5V	1.0A	28A	
+12V1	0.5A	17A	
+12V2	0.5A	18A	
-12V	0A	0.6A	
+5VSB	0.1A	2.0A	

Table (b) Model NO.: ABT-600MA1S Series

AC INPUT	115 Vac 10.7A 230 Vac 6.2A	Frequency	50 / 60HZ
DC OUTPUT			
Load	Min	Max	Max Combined Wattage
+3.3V	1.0A	24A	+3.3V & +5V =200W +3.3V&+5V&+12V=583W +12V1 + V2=456W Max Power = 600W
+5V	1.0A	32A	
+12V1	0.5A	21A	
+12V2	0.5A	22A	
-12V	0A	0.6A	
+5VSB	0.1A	2.0A	

Version 2.91:

Table (a) Model NO.: ABT-700MA1S Series

AC INPUT	115 Vac13.0A 230 Vac 7.0A	Frequency	50 / 60HZ
DC OUTPUT			
Load	Min	Max	Max Combined Wattage
+3.3V	1.0A	24A	+3.3V & +5V =175W +3.3V&+5V&+12V=683W +12V1+V2+V3+V4=600W Max Power = 700W
+5V	1.0A	30A	
+12V1	0.8A	18A	
+12V2	0.8A	18A	
+12V3	0.5A	18A	
+12V4	1.0A	20A	
-12V	0A	0.5A	
+5VSB	0.1A	2.2A	

Table (b) Model NO.: ABT-800MA1S Series

AC INPUT	115 Vac14.5A 230 Vac 7.0A	Frequency	50 / 60HZ
Load	Min	Max	Max Combined Wattage
+3.3V	1.0A	24A	+3.3V & +5V =180W +3.3V&+5V&+12V=783W +12V1+V2+V3+V4=720W Max Power = 800W
+5V	1.0A	32A	
+12V1	0.8A	18A	
+12V2	0.8A	18A	
+12V3	0.5A	20A	
+12V4	1.0A	22A	
-12V	0A	0.5A	
+5VSB	0.1A	2.2A	

Version 2.92:

Table (a) Model NO.: ABT-650MA2S Series

AC INPUT	115 Vac ~ 240 Vac 10 A		Frequency	60 / 50 HZ
DC OUTPUT				
Load	Min	Max	Max Combined Wattage	
+3.3V	1.0A	24A		
+5V	1.0A	30A		
+12V1	0.8A	20A		
+12V2	0.8A	20A	+3.3V & +5V =170W	
+12V3	0.5A	20A	+3.3V&+5V&+12V=630W	
+12V4	1.0A	30A	**+12V1~ +12V6=624W (52A)**	
+12V5	1.0A	30A	Max Power = 650W	
+12V6	1.0A	20A		
-12V	0A	0.5A		
+5VSB	0.1A	3A		

Table (b) Model NO.: ABT-750MA2S Series

AC INPUT	115 Vac ~ 240 Vac 12A		Frequency	60 / 50 HZ
DC OUTPUT				
Load	Min	Max	Max Combined Wattage	
+3.3V	1.0A	24A		
+5V	1.0A	30A		
+12V1	0.8A	20A		
+12V2	0.8A	20A	+3.3V & +5V =170W	
+12V3	0.5A	20A	+3.3V&+5V&+12V=730W	
+12V4	1.0A	33A	**+12V1~ +12V6=720W (60A)**	
+12V5	1.0A	33A	Max Power = 750W	
+12V6	1.0A	20A		
-12V	0A	0.5A		
+5VSB	0.1A	3A		

Version 2.92:

Table (a) Model NO.: ABT-900MA1S Series

AC INPUT	115 Vac ~ 240 Vac 15A		Frequency	60 / 50 HZ
DC OUTPUT				
Load	Min	Max	Max Combined Wattage	
+3.3V	1.0A	24A		
+5V	1.0A	30A		
+12V1	0.8A	20A		
+12V2	0.8A	20A	+3.3V & +5V =170W	
+12V3	0.5A	20A	+3.3V&+5V&+12V=870W	
+12V4	1.0A	35A	**+12V1~ +12V6=864W (72A)**	
+12V5	1.0A	35A	Max Power = 900W	
+12V6	1.0A	20A		
-12V	0A	0.5A		
+5VSB	0.1A	5A		

Table (b) Model NO.: ABT-1000MA1S Series

AC INPUT	115 Vac~ 240 Vac 15A		Frequency	60 / 50HZ
DC OUTPUT				
Load	Min	Max	Max Combined Wattage	
+3.3V	1.0A	24A		
+5V	1.0A	30A		
+12V1	0.8A	20A		
+12V2	0.8A	20A	+3.3V & +5V =170W	
+12V3	0.5A	20A	+3.3V&+5V&+12V=970W	
+12V4	1.0A	35A	**+12V1 ~ +12V6 =960W (80A)**	
+12V5	1.0A	35A	Max Power=1000W	
+12V6	1.0A	20A		
-12V	0A	0.5A		
+5VSB	0.1A	5A		

Table (a) Model NO.: ABT-1220MA1S Series

AC INPUT	115 Vac ~ 240 Vac 20A	Frequency	60 / 50 HZ
DC OUTPUT			
Load	Min	Max	Max Combined Wattage
+3.3V	1.0A	24A	
+5V	1.0A	30A	
+12V1	0.8A	20A	
+12V2	0.8A	20A	+3.3V & +5V =170W
+12V3	0.5A	20A	+3.3V&+5V&+12V=1170W
+12V4	1.0A	35A	**+12V1~ +12V6=1080W(90A)**
+12V5	1.0A	35A	Max Power =1220W
+12V6	1.0A	20A	
-12V	0A	0.5A	
+5VSB	0.1A	5A	

4. Electric Specification

4.1 Timing Control

4.1.1 DC Output

Version 2.2-

Output	Range	Min	Nom	Max.	Max.Ripple&Noise(mVpp)
+12V1DC	±5%	+11.40V	+12.00V	+12.6V	120
+12V2DC	±5%	+11.40V	+12.00V	+12.6V	120
+5VDC	±5%	+4.75V	+5.00V	+5.25V	50
+3.3VDC	±5%	+3.14V	+3.30V	+3.47V	50
-12VDC	±10%	-10.80V	-12.00V	-13.20V	120
+5VSB	±5%	+4.75V	+5.00V	+5.25V	50

*** Noise is within the frequency range of 10 Hz – 20 MHz***

Version 2.91-

DC Nominal Output	Output Voltage Tolerance	Ripple & Noise
+5V	± 5%	≦ 50 mV(pk-pk)
+12V1	±5%	≦ 120 mV(pk-pk)
+12V2	±5%	≦ 120 mV(pk-pk)
+12V3	±5%	≦ 120 mV(pk-pk)
+12V4	±5%	≦ 120 mV(pk-pk)
+3.3V	± 5%	≦ 50 mV(pk-pk)
-12V	± 10%	≦ 120 mV(pk-pk)
+5VSB	± 5%	≦ 50 mV(pk-pk)

*** Noise is within the frequency range of 10 Hz – 20 MHz***

Version 2.92-

DC Nominal Output	Output Voltage Tolerance	Ripple & Noise
+5V	± 5%	≦ 50 mV(pk-pk)
+12V1	±5%	≦ 120 mV(pk-pk)
+12V2	±5%	≦ 120 mV(pk-pk)
+12V3	±5%	≦ 120 mV(pk-pk)
+12V4	±5%	≦ 120 mV(pk-pk)
+12V5	±5%	≦ 120 mV(pk-pk)
+12V6	±5%	≦ 120 mV(pk-pk)
+3.3V	± 5%	≦ 50 mV(pk-pk)
-12V	± 10%	≦ 120 mV(pk-pk)
+5VSB	± 5%	≦ 50 mV(pk-pk)

*** Noise is within the frequency range of 10 Hz – 20 MHz***

4.1.2 Risetime = 0.1 ~ 20mS

4.1.3 Power OK Signal = 100~500mS

4.1.4 Power OK Risetime ≤ 10mS

4.1.5 Hold-Up Time ≥ 16mS

4.2 Output protection:

The power supply is designed with protection for over-voltage, overload and short circuit as follows:

4.3 Over-voltage Protection

The over-voltage circuit is capable of preventing the system and its peripherals from being damaged by unexpected surges either from the inside or from the outside.

(+5VDC = 5.74V~7.0V / +12VDC = 13.4V~15.6V / +3.3VDC = 3.76V~4.3V)

4.4 Short-circuit Protection

In the event of short circuit in any output DC current, the power supply would stop automatically, preventing high temperature or fire.

4.5 Over-load Protection

For the sake of service life of the parts, when the total output exceeds the maximum voltage by between 105% and 150%, the power supply would stop automatically.

5. Features:

5.1 Fully gold-plated connectors for minimum power consumption and optimal conductance.

5.2 Built-in heat dissipating fan control system for adjustable rpm along with change in temperature in the power supply and extended service life of the fan for minimum noise, more efficiency and reduced power consumption.

5.3 Disc scanning protection (PS-off time ≥1mS) to prevent the system from performing automatic disc scanning in case of abnormal system off

5.4 20+4 pins connector support the Pentium 4 standard required & early version.

6. Easy troubleshooting:

If the power supply does not operate normally, please check the following:

6.1 Make sure the plug is properly inserted into the outlet.
6.2 Check the switch location shows the same input voltage as that of the outlet.
6.3 Check the peripheral or the floppy disc drive connector is correctly plugged.
6.4 Repeat the I/O several times, each in 5 seconds after the last attempt.
6.5 If after the aforementioned checks, the power supply remains with failure, please return the product to the retailer or dealer for service.

7. Safety certifications:

7.1. CUL, TÜV, CB, FCC, CE, C-Tick and BSMI