

# Industrial Power Supply Connectors

Redundant / Switching  
Power Supply

User's Guide



About iStarUSA

iStarUSA established in 1989, iStarUSA Computer Inc. has over 19 years of experience in designing and manufacturing Industrial Switching Power Supply, Rackmount Chassis and Server Cabinet. From the standard switching power supply to high-end redundant power supply, iStarUSA has grown to be one of major provider in IPC power supply industry. In recent years, we have also expanded our products to include 1U to 8U rackmount chassis and 6U to 42U server cabinets. Our goal is always to provide our customer with the best products and superior customer services. In the beginning, iStarUSA focused on providing our customers the combinations of cutting-edge technologies, high quality manufacturing, and superior customer services. We also adopt new industrial standards to improve our design. Our ability to design according to customer's requirement also wins us a high reputation in the industry.

Our experienced design and project engineers complete an OEM project within the deadline and meet the product requirements. We believe that being a leader of innovative technology means able to integrate it into our products which is the key to be successful for us as well as for our customers. iStarUSA has a global ISO 9001 certification which means a consistency of delivering products that meets customer requirement and continue improvement for our product and services. We are proudly to provide cost effective solutions, responsive services and the best delivery time for our customers.



Form Factors	Power Cable Requirement
ATX	20 pin main power cable 4 pin peripheral cable Floppy drive power cable
ATX12V 1.0	20 pin main power cable 4 pin 12 volt cable 6 pin auxiliary cable 4 pin peripheral cable Floppy drive power cable
ATX12V 1.3	20 pin main power cable 4 pin 12 volt cable 6 pin auxiliary cable SATA drive power cable 4 pin peripheral cable Floppy drive power cable
ATX12V 2.0	24 pin main power cable 4 pin 12 volt cable 6 Pin PCI Express power cable SATA drive power cable 4 pin peripheral cable Floppy drive power cable
EPS12V	24 pin main power cable 8 pin 12 volt cable 6 Pin PCI Express power cable SATA drive power cable 4 pin peripheral cable Floppy drive power cable
PCI Express 2.0	24 pin main power cable 4 pin 12 volt cable 8 pin 12 volt cable 6 Pin PCI Express power cable 8 Pin PCI Express power cable SATA driver power cable 4 pin peripheral cable Floppy drive power cable

## Power Converter Cables



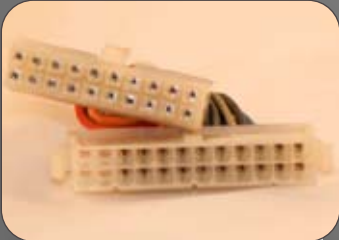
4 pin peripheral power to SAS/SATA converter cable  
ATC-ATA-C



4 pin peripheral power 1 to 2 converter cable  
ATC-Y-2LEAD



8 pin EPS 12V to 4PIN 12V power converter cable  
ATC-8/4



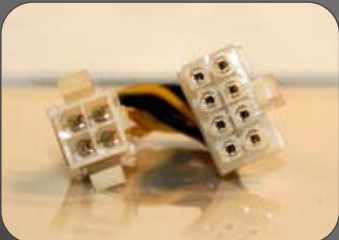
Main 24 pin to 20 pin main power cable  
ATC-24/20



4 pin peripheral power to 4 SAS/SATA device power converter cable



4 pin 12V extension power cable  
ATC-4/4-12-EXT



12V 4 pin to EPS 12V 8pin Converter Cable  
ATC-4/8



SATA slimline power converter cable for using notebook optical drives at server/workstation chassis



20-Pin to 20-Pin ATX power supply extension cable

Systems that require more than 16A of +12V current to the baseboard will require this additional 2x2 power connector. This is due to the limited +12V capability of the 2x12 baseboard power connector. +12V4 will power the 2x2 connector.

Pin number	Wire Color	Description	Description	Wire Color	Pin number
1	Black	COM	+ 12 Volts	Yellow	3
2	Black	COM	+ 12 Volts	Yellow	4

\* If 240VA limiting is not a requirement for the power supply then all +12V outputs are common and may have the same wire color (yellow).

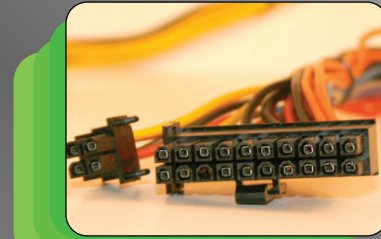
Voltage rail	# of circuit ( Wire )	Maximum Current	Maximum wattage
+12 Volts	2	16 Amps	192 Watts



4 Pin +12 Volt Power Cable

For more information please visit iStarUSA [Power Cable Line](#)

## ATX 20 pin main power cable

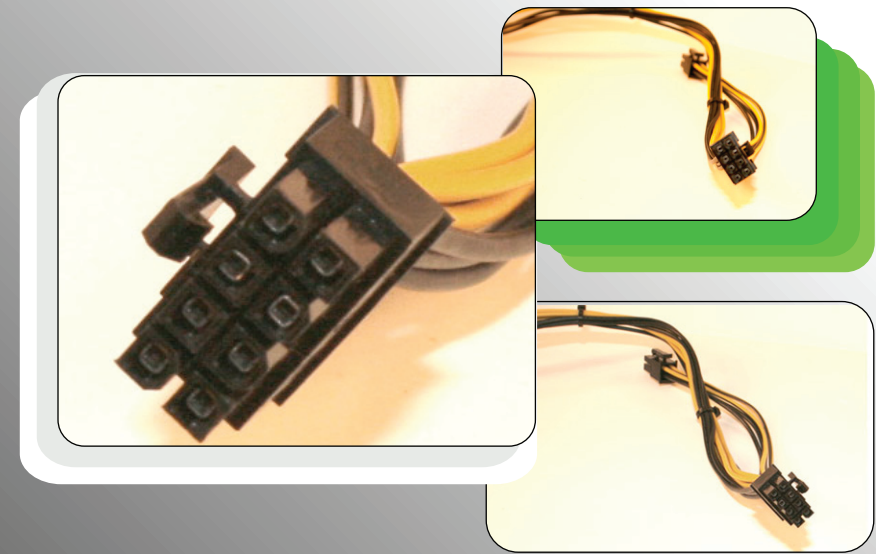


ATX 20 + 4 pin

Voltage rail	# of circuit ( Wire )	Maximum Current	Maximum wattage
+3.3 V DC	4	24 Amps	79.2 Watts
+5 V DC	5	30 Amps	150 Watts
+12 V DC	2	12 Amps	144 Watts

Pin number	18 AWG color	Signal Description	Signal Description	18 AWG color	Pin number
1	Orange	+ 3.3 VDC, 1	+ 3.3 V DC	Orange	13
2	Orange	+ 3.3 VDC	-12 V DC	BLue	14
3	Black	COM	COM	Black	15
4	Red	+ 5 V DC	PS_On	Green	16
5	Black	COM	COM	Black	17
6	Red	+ 5 V DC	COM	Black	18
7	Black	COM	COM	Black	19
8	Gray	PWR OK	Reserved (-5 V in ATX )	( White )	20
9	Purple	+ 5V DC SB	+ 5 V DC	Red	21
10	Yellow/ Blue stripe	+ 12 V DC3,2	+ 5 V DC	Red	22
11	Yellow/ Blue stripe	+ 12 V DC3,2	+ 5 V DC	Red	23
12	Orange	+ 3.3 VDC	COM	Black	24

- 3.3V remote sense signal double crimped with 3.3V contact.
- If 240VA limiting is not a requirement for the power supply than all +12V outputs are common and may have the same wire color (yellow).



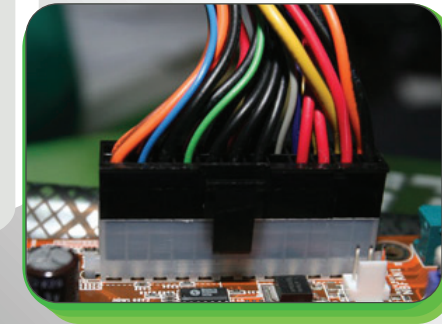
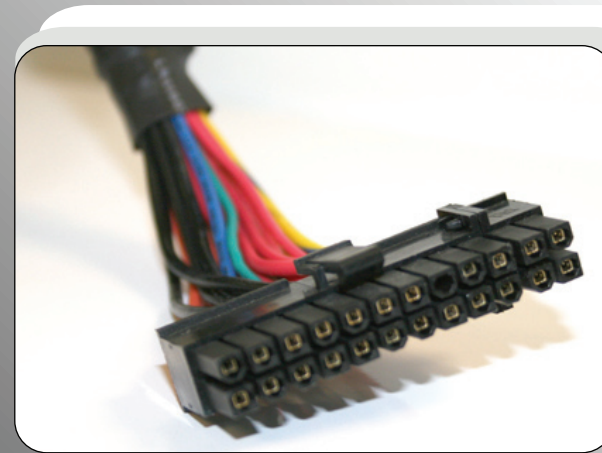
Pin number	18 AWG color	Description	Description	18 AWG color	Pin number
1	Black	COM	+ 12 Volts (12V1)	Yellow	5
2	Black	COM	+ 12 Volts (12V1)	Yellow	6
1	Black	COM	12 Volts (12V1 or 12V2)	Yellow	7
1	Black	COM	12 Volts (12V1 or 12V2)	Yellow	8

Voltage rail	# of circuit ( Wire )	Maximum Current	Maximum wattage
+12 Volts	4	28 Amps	336 Watts

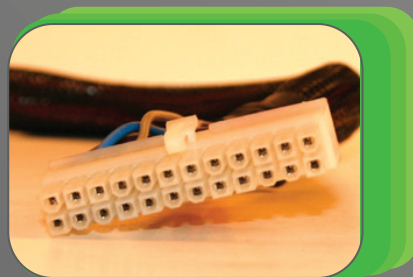
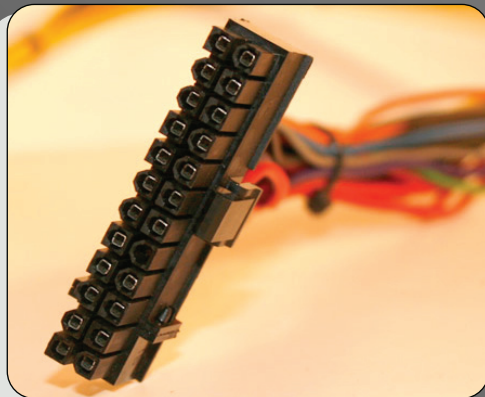
## 8 pin EPS +12 Volt power cable

ATX 24 pin  
main power cable

Pin number	18 AWG color	Signal Description	Signal Description	18 AWG color	Pin number
1	Orange	+ 3.3 VDC	+ 3.3 V DC	Orange	13
2	Orange	+ 3.3 VDC	-12 V DC	BLue	14
3	Black	COM	COM	Black	15
4	Red	+ 5 V DC	PS_On	Green	16
5	Black	COM	COM	Black	17
6	Red	+ 5 V DC	COM	Black	18
7	Black	COM	COM	Black	19
8	Gray	PWR OK	-5 Volts ( Optional )	White	20
9	Purple	+ 5V DC SB	+ 5 V DC	Red	21
10	Yellow/ Blue stripe	+ 12 V DC3,2	+ 5 V DC	Red	22
11	Yellow/ Blue stripe	+ 12 V DC3,2	+ 5 V DC	Red	23
12	Orange	+ 3.3 VDC	COM	Black	24



Pin number	18 AWG color	Signal Description	Signal Description	18 AWG color	Pin number
1	Orange	+ 3.3 VDC, 1	+ 3.3 V DC	Orange	13
2	Orange	+ 3.3 VDC	-12 V DC	BLue	14
3	Black	COM	COM	Black	15
4	Red	+ 5 V DC	PS_On	Green	16
5	Black	COM	COM	Black	17
6	Red	+ 5 V DC	COM	Black	18
7	Black	COM	COM	Black	19
8	Gray	PWR OK	Reserved (-5 V in ATX )	( White )	20
9	Purple	+ 5V DC SB	+ 5 V DC	Red	21
10	Yellow/ Blue stripe	+ 12 V DC3,2	+ 5 V DC	Red	22
11	Yellow/ Blue stripe	+ 12 V DC3,2	+ 5 V DC	Red	23
12	Orange	+ 3.3 VDC	COM	Black	24

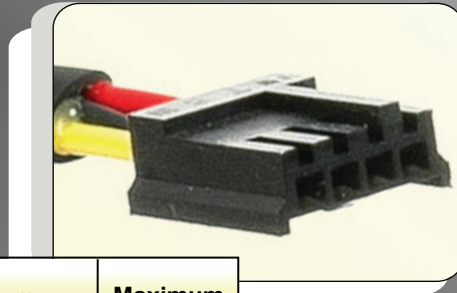


Voltage rail	# of circuit ( Wire )	Maximum Current	Maximum wattage
+3.3 V DC	4	24 Amps	79.2 Watts
+5 V DC	5	30 Amps	150 Watts
+12 V DC	2	12 Amps	144 Watts

EPS 12V 24pin  
Main power cable

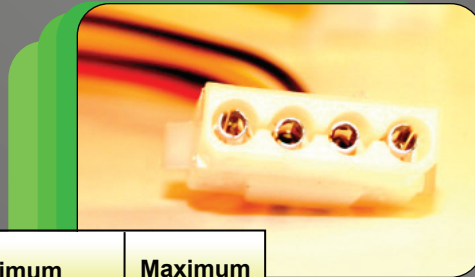
Storage Device  
Power Cable

Floppy drive power cable



Pin number	22 AWG color	Description	Maximum Current	Maximum Wattage
1	Red	+ 5 Volts	3 Amps	15 Watts
2	Black	COM		
1	Black	COM		
1	Yellow	+ 12 Volts	3 Amps	36 Watts

4 pin peripheral power cable



Pin number	22 AWG color	Description	Maximum Current	Maximum Wattage
1	Yellow	+ 12 Volts	5 Amps	60 Watts
2	Black	COM		
1	Black	COM		
1	Red	P	5 Amps	25 Watts



6 pin auxiliary power cable

Pin number	22 AWG color	Description	Maximum Current	Maximum Wattage
1	Black	COM		
2	Black	COM		
3	Black	COM		
4	Orange	+ 3.3 Volts	10 Amps	33 Watts
5	Orange	+ 3.3 Volts		
6	Red	+ 5 Volts	5 Amps	25 Watts

SAS/SATA peripheral power cable



Pin number	18 AWG color	Signal Description	Signal Description	18 AWG color	Pin number
1	5	Orange	+ 3.3 V DC	4.5 Amps	14.85 Watts
2	5	Orange			
3	5	Orange			
4	4	Black	COM		
5	4	Black			
6	4	Black			
7	3	Red	+ 5 V DC	4.5 Amps	22.5 Watts
8	3	Red			
9	3	Red			
10	2	Black	COM		
11	2	Black			
12	2	Black			
13	1	Yellow	+ 12 V DC	4.5 Amps	54 Watts
14	1	Yellow			
15	1	Yellow			

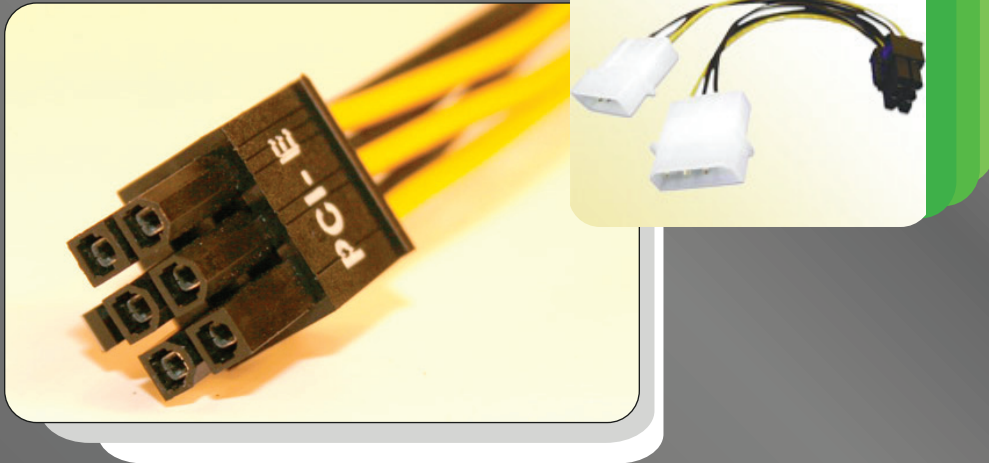


Slimline Connector -- For notebook optical drives

Pin #	Function
1	Device Present
2 & 3	5V
4	Manufacturing Diagnostic
5 & 6	Ground

PCI- Express  
Power Cable

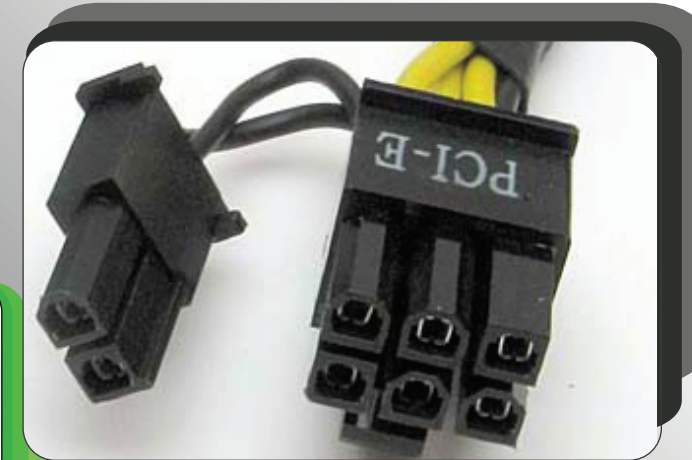
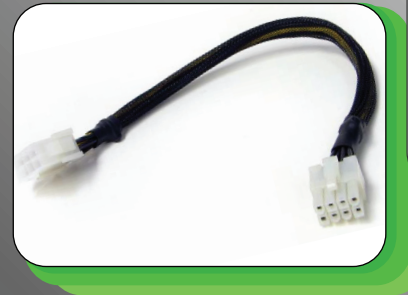
6 pin PCI Express power cable



Pin number	Wire Color	Description	Description	Wire Color	Pin #
1	Yellow	+ 12 Volts	Ground	Black	4
2	Yellow or not connected	+ 12 Volt or not connected	Ground	Black	5
3	Yellow	+12 Volts	Ground	Black	6

Voltage rail	# of circuit ( Wire )	Maximum Current per circuit	Maximum wattage
+12 Volts	2/3	2.083 Amps	49.99 / 74.98 Watts

8 pin PCI Express  
Power Cable



Pin number	Wire Color	Description	Description	Wire Color	Pin #
1	Yellow	+ 12 Volts	Ground	Black	5
2	Yellow	+ 12 Volts	Ground	Black	6
3	Yellow	+12 Volts		Black	7
4	Black	Ground	Ground	Black	8

Voltage rail	# of circuit ( Wire )	Maximum Current per circuit	Maximum wattage
+12 Volts	3	4.167 Amps	150 Watts