

Turbo-Cool® ATX-PFC Power Supplies for Dual CPU and Specialty Boards

AC INPUT	510 ATX/ATX12V	510 A4	510 ID	510 XE/EPS12V
Operating Range:	90-264 VAC 0.99 power factor auto-select	90-264 VAC 0.99 power factor auto-select	90-264 VAC 0.99 power factor auto-select	90-264 VAC 0.99 power factor auto-select
Frequency:	47-63Hz	47-63Hz	47-63Hz	47-63Hz
Current:	10A @ 115V	10A @ 115V	10A @ 115V	10A @ 115V
Efficiency:	70%	70%	70%	70%
EMI:	FCC-B, CE	FCC-B, CE	FCC-B, CE	FCC-B, CE
DC OUTPUT				
Output:	+5V @ 40A +12V @ 34A, 38A pk -5V @ 0.3A -12V @ 2A +3.3V @ 30A +5VSB @ 3A power<510W peak power<650W	+5V @ 40A +12V @ 34A, 38A pk -5V @ 0.3A -12V @ 2A +3.3V @ 30A +5VSB @ 3A power<510W peak power<650W	+5V @ 40A +12V @ 34A, 38A pk -5V @ 0.3A -12V @ 2A +3.3V @ 30A +5VSB @ 3A power<510W peak power<650W	+5V @ 40A +12V @ 34A, 38A pk -5V @ 0.3A -12V @ 2A +3.3V @ 30A +5VSB @ 3A power<510W peak power<650W
Regulation:	1% (+5, +12) 5% (-5, -12) 1% (+3.3)	1% (+5, +12) 5% (-5, -12) 1% (+3.3)	1% (+5, +12) 5% (-5, -12) 1% (+3.3)	1% (+5, +12) 5% (-5, -12) 1% (+3.3)
Ripple:	1% (p-p)	1% (p-p)	1% (p-p)	1% (p-p)
Hold Time:	20ms	20ms	20ms	20ms
PG Delay:	300ms	300ms	300ms	300ms
SAFETY				
OV Protection:	+3.3, +5, +12	+3.3, +5, +12	+3.3, +5, +12	+3.3, +5, +12
OC Protection:	+3.3, ±5, ±12 OCP	+3.3, ±5, ±12 OCP	+3.3, ±5, ±12 OCP	+3.3, ±5, ±12 OCP
Agency Approval:	UL, ULC, TUV, CE	UL, ULC, TUV, CE	UL, ULC, TUV, CE	UL, ULC, TUV, CE
ENVIRONMENTAL				
Temperature:	0°-50° C	0°-50° C	0°-50° C	0°-50° C
Humidity:	10%-90% RH	10%-90% RH	10%-90% RH	10%-90% RH
Fan Type:	44 CFM ball	44 CFM ball	44 CFM ball	44 CFM ball
Noise:	44dB(A)	44dB(A)	44dB(A)	44dB(A)
MISCELLANEOUS				
Compatibility:	ATX (Rev. 2.03)	ATX (Rev. 2.03)	ATX (Rev. 2.03)	ATX/EPS12V
M/B Connectors:	20-pin, 6-pin, P4	24-pin, 8-pin	24-pin, 6-pin, P4	24-pin, 8-pin, P4
Drive Connectors:	8 (2 mini)	8 (2 mini)	8 (2 mini)	8 (2 mini)
MTBF:	100,000 hrs.	100,000 hrs.	100,000 hrs.	100,000 hrs.

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Turbo-Cool® ATX-PFC Power Supplies for Dual CPU and Specialty Boards

AC INPUT	510 S2	510 TY
Operating Range:	90-264 VAC 0.99 power factor auto-select	90-264 VAC 0.99 power factor auto-select
Frequency:	47-63Hz	47-63Hz
Current:	10A @ 115V	10A @ 115V
Efficiency:	70%	70%
EMI:	FCC-B, CE	FCC-B, CE
DC OUTPUT		
Output:	+5V @ 40A +12V @ 34A, 38A pk -5V @ 0.3A -12V @ 2A +3.3V @ 30A +5VSB @ 3A power<510W peak power<650W	+5V @ 40A +12V @ 34A, 38A pk -5V @ 0.3A -12V @ 2A +3.3V @ 30A +5VSB @ 3A power<510W peak power<650W
Regulation:	1% (+5, +12) 5% (-5, -12) 1% (+3.3)	1% (+5, +12) 5% (-5, -12) 1% (+3.3)
Ripple:	1% (p-p)	1% (p-p)
Hold Time:	20ms	20ms
PG Delay:	300ms	300ms
SAFETY		
OV Protection:	+3.3, +5, +12	+3.3, +5, +12
OC Protection:	+3.3, ±5, ±12 OCP	+3.3, ±5, ±12 OCP
Agency Approval:	UL, ULC, TUV, CE	UL, ULC, TUV, CE
ENVIRONMENTAL		
Temperature:	0°-50° C	0°-50° C
Humidity:	10%-90% RH	10%-90% RH
Fan Type:	44 CFM ball	44 CFM ball
Noise:	44dB(A)	44dB(A)
MISCELLANEOUS		
Compatibility:	ATX (Rev. 2.03)	ATX (Rev. 2.03)
M/B Connectors:	24-pin, 8-pin	20-pin, 20-pin
Drive Connectors:	8 (2 mini)	8 (2 mini)
MTBF:	100,000 hrs.	100,000 hrs.
M/B Compatibility:	See list	See list

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Dual CPU and Specialty Motherboard Power Supplies

Board Manufacturer and Model

Turbo-Cool® Model

ASUS

ASUS	A7M266-D	510 ATX
ASUS	P2B-D	510 ATX
ASUS	P2L97	510 ATX
ASUS	P3C-D	510 ATX
ASUS	P4T533	510 ATX
ASUS	PR-DLS	510 XE
ASUS	TR-DLS	510 ID

ECS

ECS	D6VAA-R	510 ATX
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EPoX

EPoX	M762A	510 ATX
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Force

Force	FES-4201	510 XE
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Gigabyte

Gigabyte	GA-8IPXDR	510 XE
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Intel

Intel	C440GX+	510 ID
Intel	L440GX+	510 ID
Intel	MS440GX	510 TY
Intel	OR840	510 ATX
Intel	SAI2	510 ID
Intel	SBT2	510 ID
Intel	SCB2	510 ID
Intel	SDS2	510 XE
Intel	SEC7500CW2	510 XE
Intel	SE7500WV2	510 XE
Intel	SHG2	510 XE
Intel	STL2	510 ID
Intel	W460GXBS2	Custom (call)

Iwill

Iwill	DP400	510 S2
Iwill	DPX	510 XE
Iwill	DR-133	510 ATX
Iwill	DVD266	510 ATX
Iwill	DVD266U-RN	510 ATX
Iwill	DX400-SN	510 S2
Iwill	MPX2	510 XE

Micron

Micron	Outrigger	510 ATX
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Dual CPU and Specialty Motherboard Power Supplies

Board Manufacturer and Model

Turbo-Cool® Model

MSI		
MSI	MS-6321 (694D Pro V2.X)	510 ATX
MSI	MS-6501 (K7D Master)	510 ATX
MSI	MS-6508 (860D Pro)	510 S2
MSI	MS-9105 (Pro266TD Master)	510 ATX
SuperMicro		
SuperMicro	P3TDDE	510 ID
SuperMicro	P3TDE6	510 ID
SuperMicro	P3TDEI	510 ID
SuperMicro	P3TDER	510 ID
SuperMicro	P3TDL3	510 ID
SuperMicro	P3TDLE	510 ID
SuperMicro	P3TDLR	510 ID
SuperMicro	P4DC6	510 XE
SuperMicro	P4DC6+	510 XE
SuperMicro	P4DCE+	510 XE
SuperMicro	P4DE8	510 XE
SuperMicro	P4DEE	510 XE
SuperMicro	P4DEI	510 XE
SuperMicro	P4DL6	510 XE
SuperMicro	P4DLR	510 XE
SuperMicro	P4DLR+	510 XE
SuperMicro	P4DME	510 XE
SuperMicro	P4DMS	510 XE
SuperMicro	P4DP6	510 XE
SuperMicro	P4DPE	510 XE
SuperMicro	P4DPR	510 XE
SuperMicro	P4DS8	510 XE
SuperMicro	P4DSE	510 XE
SuperMicro	P4QH6	Custom (call)
SuperMicro	P4SBA	510 ID
SuperMicro	P4SBA+	510 ID
SuperMicro	P4SBE	510 ID
SuperMicro	P4SBM	510 ID
SuperMicro	P4SBR	510 ID
SuperMicro	P4SDA+	510 ID
SuperMicro	P4SDM	510 ID
SuperMicro	P4STA	510 ID
SuperMicro	P6DBE	510 ATX
SuperMicro	P6DBS	510 ATX
SuperMicro	P6DBU	510 ATX
SuperMicro	P6SBA	510 ATX
SuperMicro	P6SBM	510 ATX
SuperMicro	P6SBS	510 ATX
SuperMicro	P6SBU	510 ATX
SuperMicro	S2QE6	510 TY
SuperMicro	S2QR6	510 TY

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Dual CPU and Specialty Motherboard Power Supplies

Board Manufacturer and Model

Turbo-Cool® Model

Tyan

Tyan	S2460 (Tiger MP)	510 ATX
Tyan	S2462 (Thunder K7)	510 A4
Tyan	S2466 (Tiger MPX)	510 ATX
Tyan	S2468 (Thunder K7X)	510 A4
Tyan	S2469 (Thunder K7X Pro)	510 XE
Tyan	S2505T (Tiger 200T)	510 ATX
Tyan	S2507T (Tiger 230T)	510 ATX
Tyan	S2510 (Thunder LE)	510 ATX
Tyan	S2518 (Thunder LE-T)	510 ATX
Tyan	S2567 (Thunder HEsl)	510 TY
Tyan	S2603 (Thunder i860)	510 S2
Tyan	S2688 (Thunder HEsl-T)	510 ATX
Tyan	S2720 (Thunder i7500)	510 XE
Tyan	S2721 (Tiger i7500 Pro)	510 XE
Tyan	S2722 (Tiger i7500)	510 XE

Other

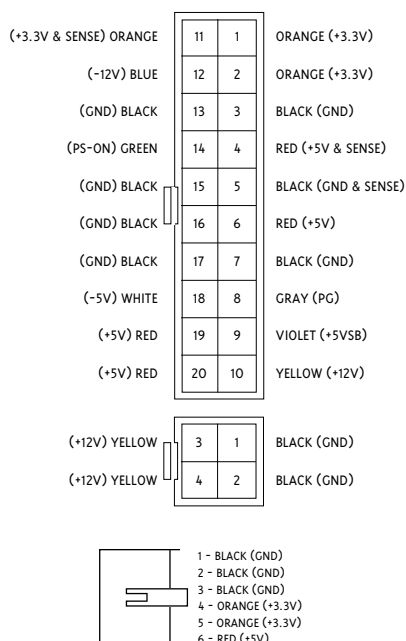
Dual CPU Motherboards Before 2001

510 ATX

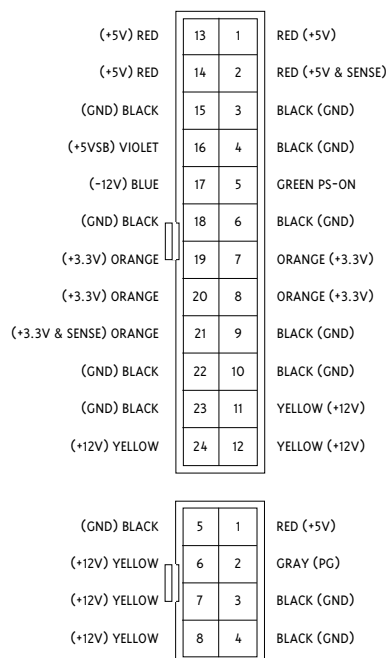
Turbo-Cool® 510 Motherboard Connectors

(As seen from the wire side)

Turbo-Cool® 510 ATX



Turbo-Cool® 510 A4



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Turbo-Cool® 510 Motherboard Connectors

(As seen from the wire side)

Turbo-Cool® 510 ID

(+3.3V & SEN) ORANGE	13	1	ORANGE (+3.3V)
(-12V) BLUE	14	2	ORANGE (+3.3V)
(GND) BLACK	15	3	BLACK (GND)
(PS-ON) GREEN	16	4	RED (+5V & SEN)
(GND) BLACK	17	5	BLACK (GND & SEN)
(GND) BLACK	18	6	RED (+5V)
(GND) BLACK	19	7	BLACK (GND)
(-5V) WHITE	20	8	GRAY (PG)
(+5V) RED	21	9	VIOLET (+5VSB)
(+5V) RED	22	10	YELLOW (+12V)
(+5V) RED	23	11	YELLOW (+12V)
(GND) BLACK	24	12	ORANGE (+3.3V)

(+12V) YELLOW	4	1	BLACK (GND)
(+12V) YELLOW	3	2	BLACK (GND)

1 - BLACK (GND)
2 - BLACK (GND)
3 - BLACK (GND)
4 - ORANGE (+3.3V)
5 - ORANGE (+3.3V)
6 - RED (+5V)

Turbo-Cool® 510 XE/ATX 12V

(+3.3V & SENSE) ORANGE	13	1	ORANGE (+3.3V)
(-12V) BLUE	14	2	ORANGE (+3.3V)
(GND) BLACK	15	3	BLACK (GND)
PS-ON GREEN	16	4	RED (+5V & SEN)
(GND) BLACK	17	5	BLACK (GND & SEN)
(GND) BLACK	18	6	RED (+5V)
(GND) BLACK	19	7	BLACK (GND)
(-5V) WHITE	20	8	GRAY (PG)
(+5V) RED	21	9	VIOLET (+5VSB)
(+5V) RED	22	10	YELLOW (+12V)
(+5V) RED	23	11	YELLOW (+12V)
(GND) BLACK	24	12	ORANGE (+3.3V)

(+12V) YELLOW	5	1	BLACK (GND)
(+12V) YELLOW	6	2	BLACK (GND)
(+12V) YELLOW	7	3	BLACK (GND)
(+12V) YELLOW	8	4	BLACK (GND)

(+12V) YELLOW	3	1	BLACK (GND)
(+12V) YELLOW	4	2	BLACK (GND)

Turbo-Cool® 510 S2

(+3.3V) ORANGE	13	1	ORANGE (+3.3V)
(+3.3V) ORANGE	14	2	ORANGE (+3.3V)
(GND) BLACK	15	3	ORANGE (+3.3V & SENSE)
(GND) BLACK	16	4	BLACK (GND)
(+5V) RED	17	5	BLACK (GND)
(+5V) RED	18	6	RED (+5V & SENSE)
(+5V) RED	19	7	VIOLET (+5VSB)
(-12V) BLUE	20	8	BLACK (GND)
(+12V) YELLOW	21	9	BLACK (GND)
(+12V) YELLOW	22	10	BLACK (GND)
(PS-ON) GREEN	23	11	GRAY (PG)
EMPTY	24	12	EMPTY

(GND) BLACK	5	1	YELLOW (+12V)
(GND) BLACK	6	2	YELLOW (+12V)
(GND) BLACK	7	3	YELLOW (+12V)
EMPTY	8	4	EMPTY

Turbo-Cool® 510 TY

(+3.3V & SENSE) ORANGE	11	1	ORANGE (+3.3V)
(-12V) BLUE	12	2	ORANGE (+3.3V)
(GND) BLACK	13	3	BLACK (GND)
(PS-ON) GREEN	14	4	RED (+5V & SENSE)
(GND) BLACK	15	5	BLACK (GND & SENSE)
(GND) BLACK	16	6	RED (+5V)
(GND) BLACK	17	7	BLACK (GND)
(-5V) WHITE	18	8	GRAY (PG)
(+5V) RED	19	9	VIOLET (+5VSB)
(+5V) RED	20	10	YELLOW (+12V)

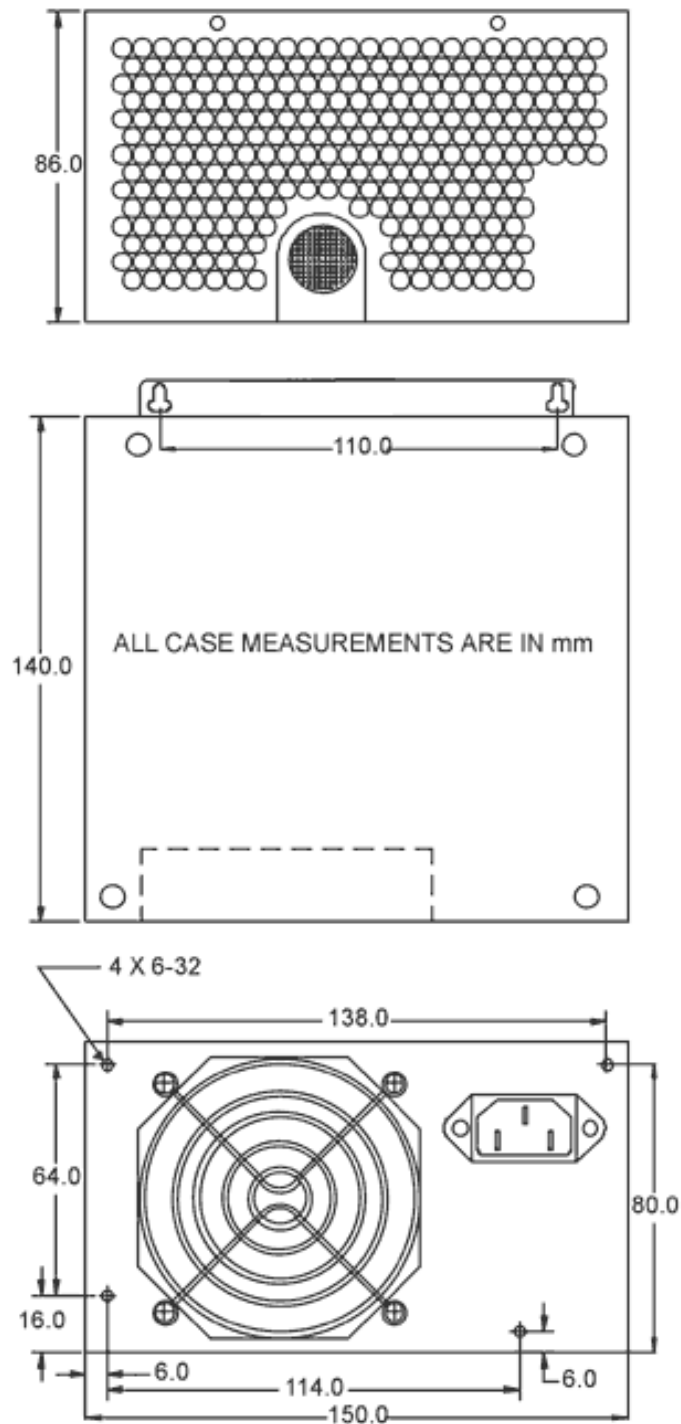
(+3.3V & SENSE) ORANGE	11	1	ORANGE (+3.3V)
(-12V) BLUE	12	2	ORANGE (+3.3V)
(GND) BLACK	13	3	BLACK (GND)
EMPTY	14	4	RED (+5V)
(GND) BLACK	15	5	BLACK (GND)
(GND) BLACK	16	6	RED (+5V)
(GND) BLACK	17	7	BLACK (GND)
(-5V) WHITE	18	8	EMPTY
(+5V) RED	19	9	EMPTY
(+5V) RED	20	10	YELLOW (+12V)

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Turbo-Cool® 510 Dimensions



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