

ATX12V

Power Supply Design Guide

Version 2.2

March 2005

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Revision History

Version	Release Date	Notes
1.0	Feb, 2000	<ul style="list-style-type: none"> Public release
1.1	Aug, 2000	<ul style="list-style-type: none"> Increase 3.3 V current; add more explanation for power sharing; do minor edits and format fixes
1.2	Jan, 2002	<ul style="list-style-type: none"> Typical Power Distribution. Change +5V loading on all power supplies distribution tables defined in DG to 0.3A PS_ON# Add text "The power supply should not latch into a shutdown state when PS_ON# is driven active by pulses between 10ms to 100ms during the decay of the power rails." Remove -5V from all power distribution tables.
1.3	April, 2003	<ul style="list-style-type: none"> Update Power and Current guidance Added efficiency guidance at typical and light load Increased min efficiency at full load from 68% to 70% Serial ATA* connector definition added Acoustic levels added for low noise power supply design Reformat and update revision table Update Disclaimers Remove guidelines for ATX Remove guidance for -5V rail Updated guidance for Energy Star and stand by efficiency
2.0	February, 2003	<ul style="list-style-type: none"> Added Terminology section Updated power and current guidance Includes 250W, 300W, 350W, and 400W guidance Updated cross regulation graphs Updated load tables Updated required efficiency targets. Added recommended efficiency targets. Increased required minimum efficiency at typical and light load. Main Power Connector changes to 2x12. Aux power connector removed. Required Serial ATA Connector. Isolated current limit on 2x2 connector for 12V2 rail.
2.01	June, 2004	<ul style="list-style-type: none"> Updated 3.3 V remote sense pin # on the main power connector Updated 12V2 DC Output Noise/Ripple information Removed -5V reference Updated 5Vsb maximum current step Modified 115 VAC Frequency for the Voltage Hold-up Time
2.1	March 2005	<ul style="list-style-type: none"> Add 450W guidance

		<ul style="list-style-type: none">• Current requirements updated: 250,300,350,400W• Load table Updated• Cross loading NEED TO UPDATE: from 250W to 450W.• Efficiency requirements increased• 3.3.3 5V standby current increased	
2.2	March 2005	<ul style="list-style-type: none">• Corrected 12V2 load levels in Tables 3-7• Added label to Figure 5• 4.5.1 Added High Current Series wire terminals for ATX Main Power Connector• 4.5.2 Added High Current Series wire terminals for +12 V Power Connector	

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