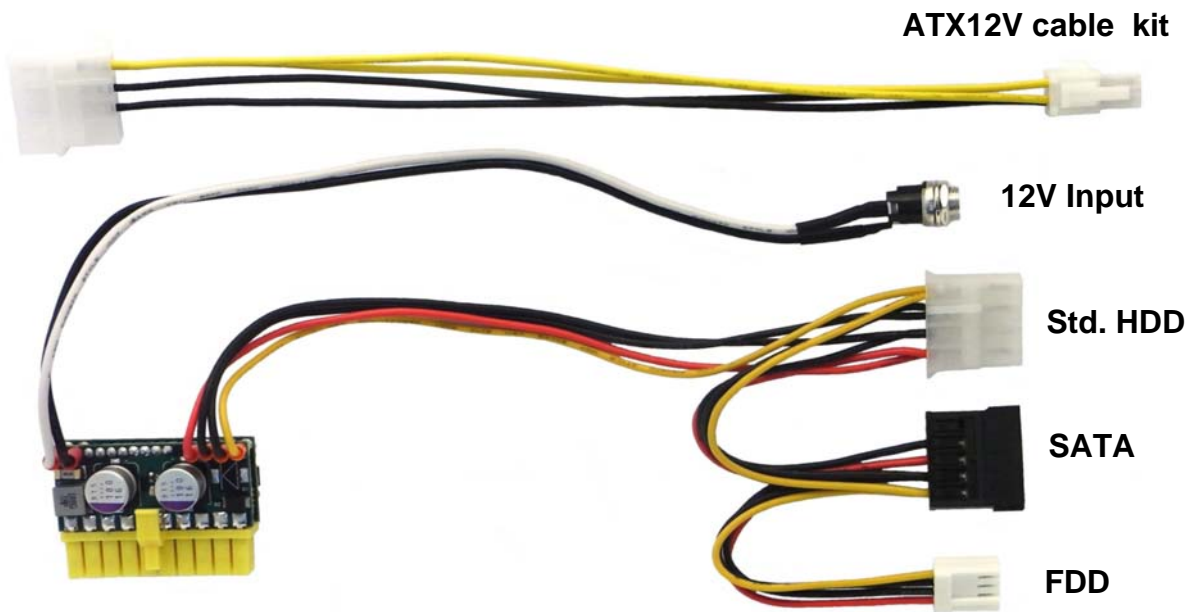




User Manual

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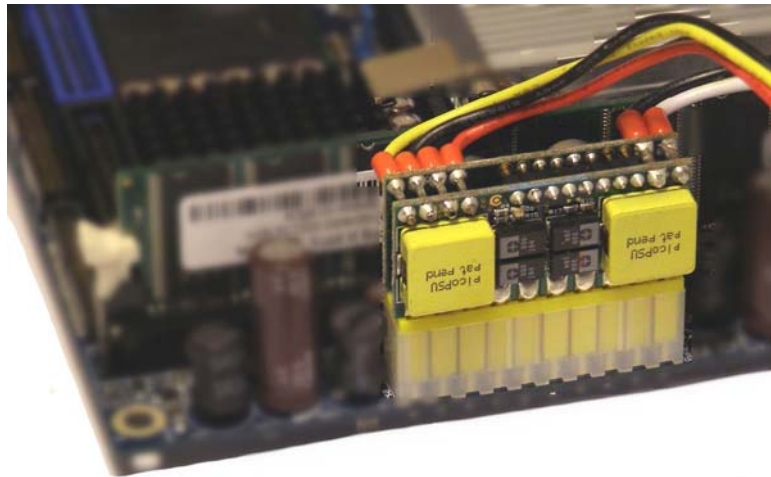
820152 DC-DC Power Supply 120W 12Vin





Introduction

The 820152 DC-DC Power Supply is a fully compliant ATX power supply designed to power a wide variety of motherboard like the KT690mITX, 786LCD/mITX, 886LCD-M and 986LCD-M families of boards. It has included cable kit inclusive P4-12V cable, as required by the KT690mITX and 986LCD-M families, and it is supporting a wider temperature range than the standard embedded PC range 0 - 60°C. When the DC-DC Supply is installed it will not influence the total height of the motherboard, however for some boards some free space is needed near the ATX Power Connector: The 886LCD-M/mITX requires 5 mm free space and the KT690mITX and 986LCD-M/mITX families of boards require 10 mm free space.



The power supply shall be powered by regulated 12V with the tolerance +5% -3%. The 12V is switched and then used as 12V output.

Voltage Output	Max load / [A] (fan less)	Peak Load / [A] (< 60 sec.)
5V	4,8	8
5VSB	1,5	2
3.3V	4,8	8
-12V	0,05	0.1
12V	6	10

It is recommended to make sure that the DC-DC Power Supply can be used in a specific application by measure the maximum load of each voltage and then compare it to the maximum allowed load. In order to estimate if the DC-DC Power Supply is suitable for a specific project the following table can be used.

The allowed load (without forced air) can be compared to the maximum load of the actual board. Maximum load from LCD, HDD, PCI, AGP cards must be taken into consideration to make sure none of the outputs is overloaded. The "green" numbers are the available power for these loads.

Voltage Output	Loads in Ampere															
	KT690mITX		786LCD/mITX				886LCD-M		986LCD-M							
	Turion 1.6G	Sempron 1.00G	733/133		400/100		1600/400		800/400		Duo 2GHz		Celeron 1.06G			
5V	3,2	1,6	2,4	2,4	1,7	3,1	1	3,8	4,7	0,1*	3	1,8	2,5	2,3	2,1	2,7
5VSB	0,3	1,2	0,3	1,2	0,24	1,25	0,24	1,25	1,2	0,3	1,2	0,3	0,7	0,8	0,2	1,3
3.3V	1,3	3,5	1,3	3,5	3,2	1,6	2,5	2,3	2,6	2,2	2,6	2,2	1,3	3,5	1,6	3,2
-12V	-	0,05	-	0,05	-	0,05	-	0,05	-	0,05	-	0,05	0,05	0,0	-	0,05
12V	2,4	3,6	0,8	5,2	0,4	5,6	0,3	5,7	0,6	5,4	0,6	5,4	2,7	3,3	0,6	5,4

* Note that there is no power left over for a display requiring 5V supply voltage.



Installation guide

1. Plug in (press in) the DC-DC Power Supply to the Mother Boards ATX power connector.

Please notice that for the KT690mITX and 986LCD-M families:

Four pins of the ATX Power Connector are not used, but the connector system is keyed so the DC-DC Power Supply can not be mounted in a wrong position.

The ATX connector lock has no effect.

ATX12V cable shall be connected.

2. Connect HDD, CD-ROM, ADD or ADD2 card if required. If more power connectors are needed then a standard HDD/floppy "Y" splitter cable can be used.
3. Connect a 12 VDC power source to the DC-to-DC connector, centre pin / white wire is positive (+).
4. Turn on the Mother Board by using the Power On Button pin (pin 16) in the Front Panel Connector (alternatively short circuit pin 16 and pin 18 for half a second).

Removing the DC-DC Power Supply

In order to remove the DC-DC Power Supply you must release the power connector latch (except for the KT690 and 986LCD-M families) and then at the same time as gently as possible pulling at the PCB. Do NOT pull at components or the wire harness.



Specifications

Input Requirements

12V regulated, +5% / -3%, max=10A (load dependent). Over-voltage shutdown will occur at ~13-13.5V.

DC-Jack: Female, panel mount, 2.5 * 5.5 * 10 mm.

Voltage outputs

Output voltage	Max Load / [A] (Fan less)	Max Load / [A] (Forced air)	Peak Load / [A] (<60 sec.)	Regulation
5V	4,8	6	8	+/- 1.5%
5VSB	1,5	1.5	2	+/- 1.5%
3.3V	4,8	6	8	+/- 1.5%
-12V	0,05	0.05	0.1	+/- 5%
12V	6	6	10	Switched input

Over load protection will be effected when either of the loads (+5V & +3.3V) exceeds > 200% Max Load.

After turning on, at least 20 ms will be needed for the rise of +5VSB output voltage (measured from 10% to 95%) to reach its peak.

Efficiency Ratings, 3.3 and 5V

5V / [A]	Efficiency / [%]	3.3V / [A]	Efficiency / [%]
1	86	1	85
3	94	3	93
5	96	5	94
8	93	8	91

Lifetime: MTBF=100K hours at 55 °C.

Size: (L, W, H) = (44.5, 20, 30) mm

Operating environment: Temperature: -20 to 85 °C. Relative Humidity 10 to 90% (non-condensing).

Shipping and storage: Temperature -40 to +90 °C. Relative humidity 5 to 95% (non-condensing).

Certifications: EN55024, EN55022 Class B (CE certification), Australia/New Zealand (using CISPR 22, EN55022), Japan (VCCI: using CISPR 22, ANSI C63.4), United States (FCC Part 15, Subpart B, Class B), Canada (ICES-003 using CISPR 22, ANSI C63.4)