

ID452

12~24 V Wide range power board

Engineer Specification

For MI956/MI953/MI945/MI952/MI888/MI958

Revision	Date	Description	Remark
0.1	25 th /Jan./2011	- Initial with conclusion of kick off meeting	
0.2	11 th / Feb/2011	- Modify the PW234 cable of connect C	
0.3	13 rd / Dec/2011	- Modify the dimension of the PCB	
0.4	3 rd /July/2012	- Revised DC input range	

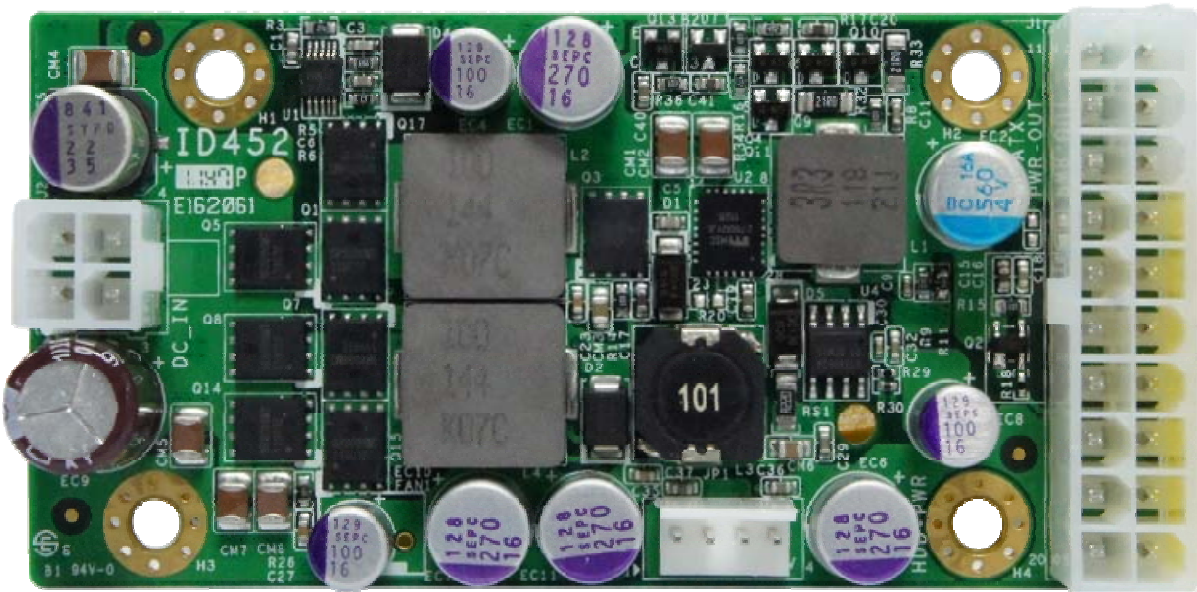
Issued By: Scott Chen

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Date: Dec. 13rd, 2011

Version: 0.3

A. PCB specification



A.1 Input voltage

DC **+15V** (+-5%) ~+24V (+-20%)

[+14.25V (Min.) ~ +28.8V (Max.)]

A.2 Input rated current

10A when VIN = +12V, 5A when VIN= +24V

A.3 Output voltage and current

	Output Voltage	Tolerance	Regulation	Total Power	
#1	+5VSB	5%	2.5A	12.5W	120W max
#2	+3.3V	5%	5A	105W max	
#3	+5V	5%	8A		
#4	+12V	10%	6A		
#5	-12V	10%	0.2A	2.4W	

Remark: #2~#5 outputs on/off controlled by PS-ON low signal.

Remark : +3.3V & +5V & +12V = 105W max , Total output continuous shall not exceed 120W

A.4 Power supply control on/off signal

PS-ON signal control #2~#5 output ON by TTL active low level, and OFF by TTL active high level.

A.5 Power good signal

PWR-OK power good signal a TTL high level with 100~500mS delay when all output available in

their tolerance.

A.6 Operating temperature and relative humidity

5% to 95% RH , environment temp. -20°C~60°C

A.7 Storage temperature

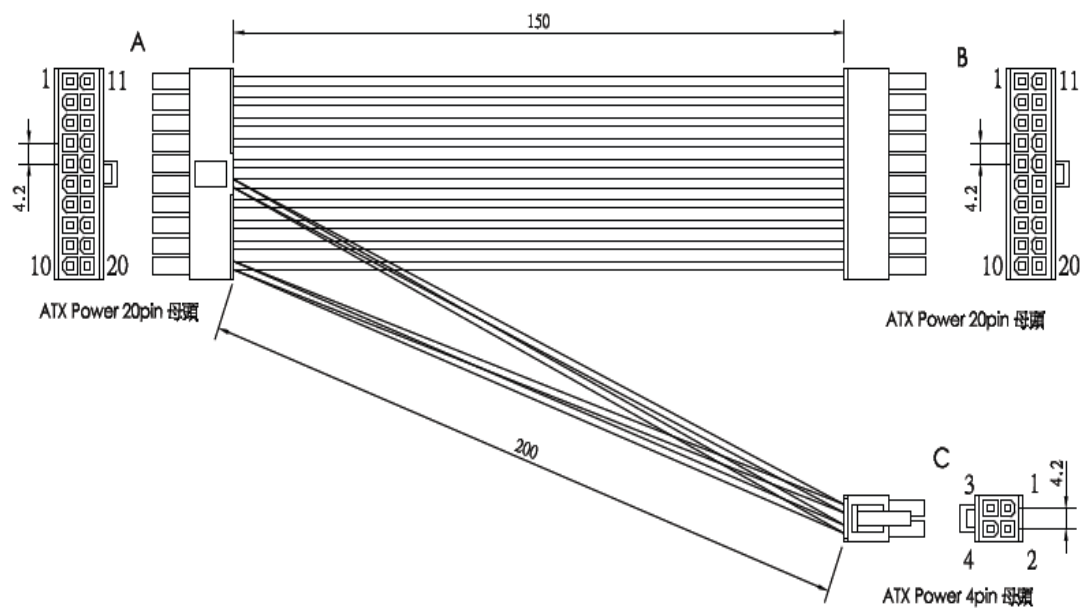
-20°C~85°C

A.8 Dimension

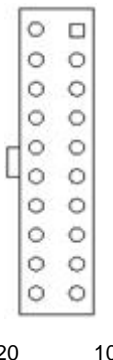
90x45x25 mm

B. ATX power cable Specification (PW234)

B.1 Cable drawing

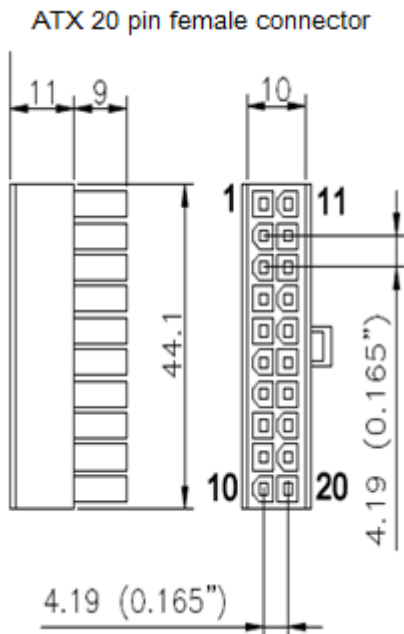


B.2 Connector A, B definition



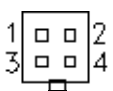
Color		Signal Name	Pin #	Pin #	Signal Name		Color
Orange		3.3V	11	1	3.3V		Orange
Blue		-12V	12	2	3.3V		Orange
Black		Ground	13	3	Ground		Black
Green		PS-ON	14	4	+5V		Red
Black		Ground	15	5	Ground		Black
Black		Ground	16	6	+5V		Red
Black		Ground	17	7	Ground		Black
White		NC	18	8	Power good		Grey
Red		+5V	19	9	5VSB		Purple
Red		+5V	20	10	+12V		Yellow

B.3 Specification of Connector A, B



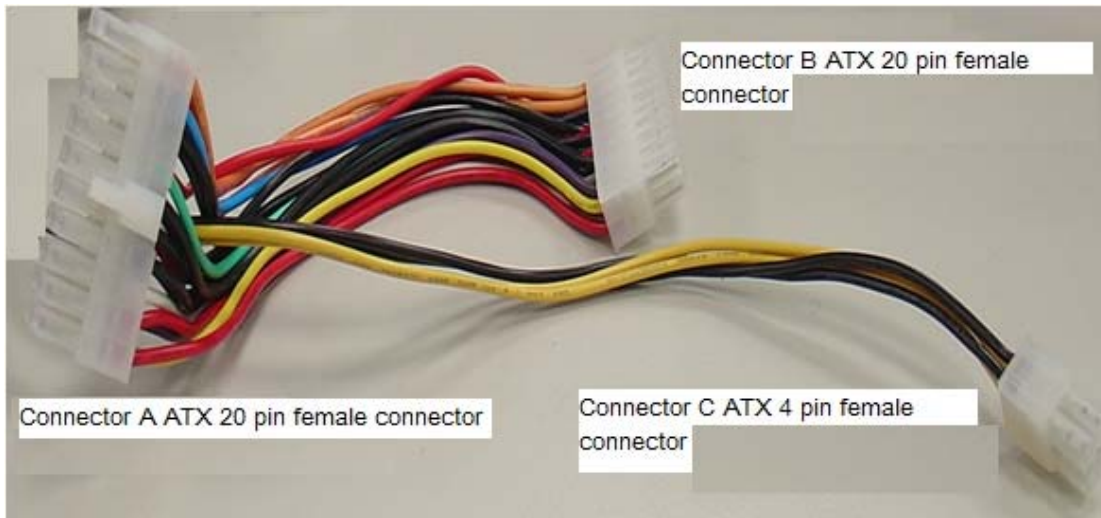
B.4 Connector C definition

This connector supplies the CPU operating voltage.



Pin #	Signal Name		Color
1	Ground		Black
2	Ground		Black
3	+12V		Yellow
4	+12V		Yellow

B.5 Picture

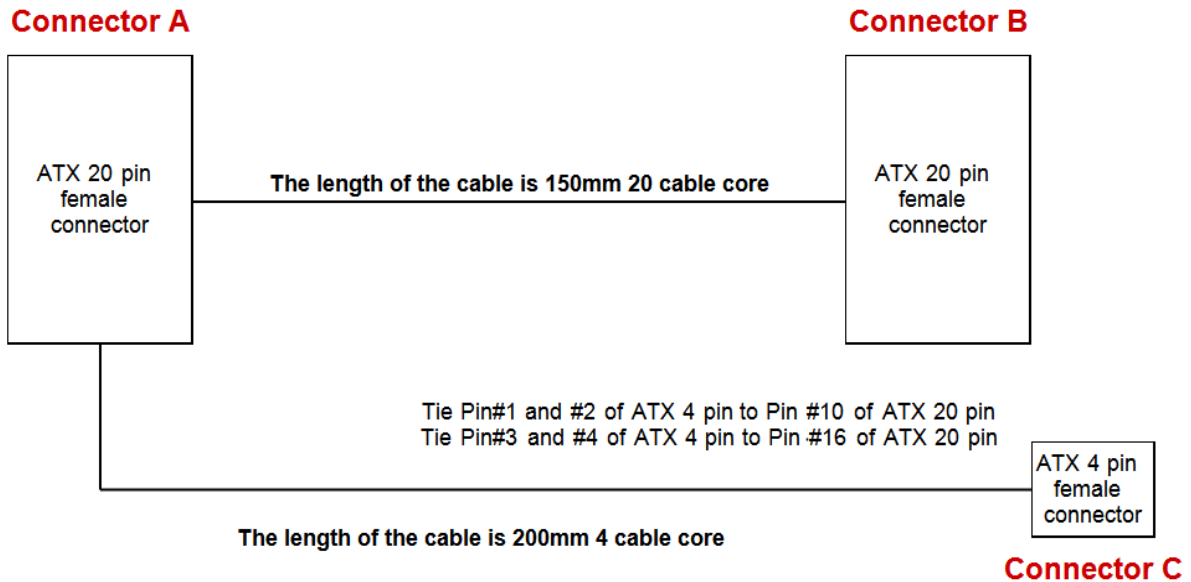


B.6 Connection information

Connector B		Connector A		Connector C	
Signal Name	Pin #	Pin #	Signal Name	Pin #	Signal Name
3.3V	1	1	3.3V		
3.3V	2	2	3.3V		
Ground	3	3	Ground		
+5V	4	4	+5V		
Ground	5	5	Ground		
+5V	6	6	+5V		
Ground	7	7	Ground		
Power Good	8	8	Power Good		
5VSB	9	9	5VSB		
+12V	10	10	+12V	3,4	+12V
3.3V	11	11	3.3V		
-12V	12	12	-12V		
Ground	13	13	Ground		
PS-ON	14	14	PS-ON		
Ground	15	15	Ground		
Ground	16	16	Ground	1,2	Ground
Ground	17	17	Ground		
NC	18	18	NC		
+5V	19	19	+5V		

+5V	20	20	+5V		
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B.7 Cable block diagram



C. Validation for iBASE models:

1. MI956 (QM67)
2. MI953 (QM57)
3. MI945 (GM45)
4. MI952 (780E)
5. MI888 (D510)
6. MI958 (G-T56N)