

Advantech AE Technical Share Document

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Category	▪ FAQ □ SOP	Release Note	□ Internal ▪ External
Related OS	None		
Abstract	Why some Mini ITX motherboards cannot power-on on AIMB-C600		
Keyword	Mini ATX, Power on.		
Related Product	AIMB-C600, AIMB-228		

■ **Description:**

Almost Micro ATX motherboards can work with AIMB-C600 Micro ATX Chassis, but why some Mini ITX motherboards (ex: AIMB-288) cannot power-on on AIMB-C600?

■ **Analysis and Solution:**

It is because the 3.3 mini load requirement of power supply to cause this compatibility problem.

You can find the power requirements of Micro ATX and Mini ITX are different on 3.3v as the following figure. (Micro ATX: AIMB-588, Mini ITX: AIMB-288)

Mini ITX motherboard has different power design, so it doesn't need 3.3v power source.

Power Requirements	Power On	+5 V	3.3 V	12 V	12V_8P	5 Vsb	AIMB-588
		19.6A	24.04A	19A	18.5A	2.5A	

Power	Power Type	Wide voltage 12~24V DC input; 1 x External DC jack; 1 x Internal 4-pin (2x2) power connector; Supports AT/ATX mode	AIMB-288
	Typical Power Consumption	TBD	

AIMB-C600 is using Delta DPS-300AB power supply which offer different voltage power source include 3.3v, and each voltage power source have the mini power load as the below table That is why AIMB-288 can't power on with AIMB-C600.

So, the customer can use other ACP or IPC series chassis, its power doesn't need 3.3 mini load.

you can re-confirm with Application Engineer.

	Load	Range		Regulation	Ripple (Ripple & Noise)
Output Voltage	Min.	Max.	Surge		Max. mV P-P
+12V1V	1 A	11A		+ 5 % - 5 %	20mV(200 mV)
+12V2 V	1 A	14.5A		+ 5 % - 5 %	200 mV
+5 V	0.3 A	18 A		+ 5 % - 5 %	50mV(100 mV)
+3.3V	0.5 A	18A		+ 5 % - 5 %	50mV(100 mV)
-12V	0A	0.4A		+ 10% - 10 %	120 mV(200 mV)
+5VSB	0.02A	2 A	2.5A	+ 5% - 5 %	50mV(100 mV)