

Gigampz Breakout Board for Common Slot Power Supplies

This board is intended for use with HP brand power supplies compatible with the Common Slot power supply standard. The supply can be turned on and off via the JP1 header, either manually using the supplied jumper, or via an attached controller device such as a Raspberry Pi, Beagleboard, Arduino, or Microcontroller.

CAUTION: Before working with or attaching wires to the supply be sure it is off and disconnected from power. Even when 12 volt power is off the supply has standby 12 volt rails that are still active. It is important to unplug it before working on it to avoid causing a short which could damage the supply or cause injury.

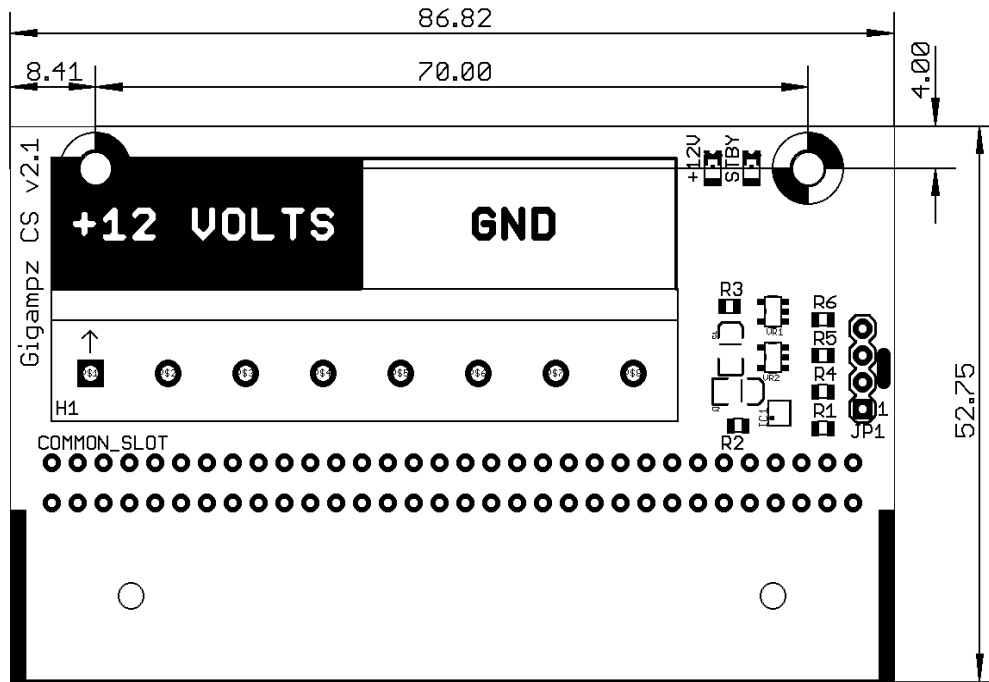


Figure 1: Gigampz CS v2, (all dimensions in mm)

Specifications

+12 VOLTS / GND – There are 8 screw terminal contacts, 4 for +12 volts and 4 for ground, that provide a way to attach the main load. Each individual contact is rated for up to 30 Amps of current and combined up to the maximum rating of the attached power supply. Each terminal can accommodate solid or stranded wire from 10 – 22 AWG in size. Be sure to use the appropriate gauge wire for your electric load.

JP1 – The 'JP1' header allows the supply to be controlled manually via the provided jumper or digitally by a Raspberry Pi or similar device such as a micro-controller, Arduino, or Beagleboard.

To operate the supply manually use the provided jumper to connect pins 2 and 3 (center pins) on the JP1 header to turn 12 volt power on. To turn 12 volt power off remove the jumper, or place it in the off position across pins 1 & 2.

Jumpered Pins	State
2 & 3	+12 Volts ON
1 & 2 or None	+12 Volts OFF

The signals on the JP1 header are 3.3 volt logic but are 5 volt tolerant. The pins on the JP1 header starting with pin #1 closest to the JP1 marking are GND, PS_ON, STBY_OK, 12V_OK. A detailed description of each is in the following table...

Pin	Signal	Direction	Description
1	GND	N/A	Ground, connect this to ground on your controlling device (ie: RPi)
2	PS_ON	Input	Drive this pin high to turn 12 volt power on, low to turn it off. This pin is compatible with 3.3 or 5 volt inputs.
3	STBY_OK	Output	This pin is high (+3.3v) when the supply is plugged in receiving power
4	12V_OK	Output	This pin is high (+3.3v) when the 12 Volt power is on

* Use caution when using an external device to control the supply. For example the state of the GPIO pins at boot on the Pi can vary between Linux distributions and rebooting the Pi could cause the supply to turn on unexpectedly until you have a chance to properly configure the pins.

STBY – Yellow LED is illuminated when the supply is plugged into the wall and receiving power

+12V – Green LED is illuminated when the supply is on and supplying 12 volt power.