



Grandstream Networks, Inc.

GVC Video Conferencing System

Power Consumption Technical Bulletin



POWER DISSIPATION

Table 1: Power Dissipation and Advertisement

ITEM	Product	Power Adapter	Idle State	Work State	Max power consumption
			Power(W)	Power(W)	Power(W)
1	GVC3200	12VDC	12.740	18.710	37.950
2	GVC3202	12VDC	12.740	18.390	37.680
3	GVC3210	12VDC	11.270	16.440	21.560
4	GVC3220	48VDC	18.590	23.280	40.310
5	GVC3212	12VDC	3.656	4.531	9.375

PD POWER CLASSIFICATION

Table 2: PD Power Classification (IEEE 802.3af)

Class	Usage	MAX Power Range used by the PD (Video Conference Device)
0	Default	0.44 to 12.95W
1	Optional	0.44 to 3.84W
2	Optional	3.84 to 6.49W
3	Optional	6.49 to 12.95W
4	Not Allowed	Reserved for future use (for example: IEEE802.3af)

Table 3: PD Power Classification (IEEE 802.3at)

Class	Usage	MAX Power Range used by the PD (Video Conference Device)
0	Default	0.44 to 12.95W
1	Optional	0.44 to 3.84W
2	Optional	3.84 to 6.49W
3	Optional	6.49 to 12.95W
4	Optional	12.95 to 25.5W



TEST CONDITION TERMINOLOGY

The following test condition terminology was used in Table 1.

▪ **Idle State**

- The system has completed the boot-up process.
- The system is not undergoing any configuration changes.
- USB1 is connected to Mouse, while HDMI OUT1/OUT2 are connected to a Monitor, HDMI IN and USB2 are not connected, Bluetooth is connected but not operating. Wi-Fi is opened but not connected, Speaker volume is set to 0, ETH port was connected to a switch, no Video recording. Is running and no Video demo is being played.
- SPKR port is not connected to an external SPK

▪ **Work State**

- The system was setup as described in the Idle State
- The system was establishing 4 * 1080P video call by 5.8G WIFI, with maximum sound volume.
- All HDMI OUT are connected to a Monitor, The HDMI INPUT is connected to another GVC3200, The VGA INPUT is connected to PC VGA OUTPUT in video demo mode, the SD card is inserted in SD port and the system is in video recording mode. The OLED display was lighting during the test, the FAN was working during the test.
- GVC3210: USB1 is connected to Mouse, HDMI OUT1/OUT2 are connected to a Monitor, USB2 is not connected, HDMI IN is connected to PC's HDMI OUT. Bluetooth is connected and operating. Wi-Fi is opened but not connected, Speaker volume is at 100%, ETH port is connected Ethernet switch. Running Video record. Video demo is running.
- GVC3212: USB1 is connected to Mouse, USB2 is not connected, HDMI OUT is connected to Monitor, Wi-Fi is not connected, LAN port is connected to Ethernet switch. Video call established.



- GVC3220: 5*1080P video call established, USB2.0 connected to Mouse, HDMI OUT1/OUT2 are connected to a Monitor, USB3.0 is not connected, HDMI IN is connected to a PC's HDMI OUT, Bluetooth is connected and operating, Wi-Fi is opened but not connected, ETH port is connected to an Ethernet switch. Running Video record. Video demo is running, FAN working.

- **Power Not to Exceed**

- Change the external SPK and Mouse with dummy loader, and use remote controller to control motor in working mode.
- Other Peripherals and setting are as in Work State condition.
- Record the power data when all the motor in working mode.
- GVC3210: USB1 is connected to a 500mA load, USB2 is connected to a 500mA load. HDMI OUT1/OUT2 are connected to a Monitor, HDMI IN is connected to a PC's HDMI OUT. Bluetooth is connected and operating. Wi-Fi is opened but not connected, Speaker volume is at 100%, ETH port is connected to an Ethernet switch. Running Video record. Video demo is running.
- GVC3212: USB1 is connected to a 800mA load, USB2 is connected to a Mouse. HDMI OUT is connected to a Monitor, Wi-Fi is not connected, Network port is connected to an Ethernet switch. Video call established. Line in is connected to Phone. Playing music on the phone.
- GVC3220: 5*1080P video call is established, USB1 is connected to a 700mA load, USB2 is connected to a 700mA load. HDMI OUT1/OUT2 are connected to a Monitor, HDMI IN is connected to a PC's HDMI OUT, Wi-Fi is opened but not connected, Wireless microphone is connected, M port connects to GAC2500 to play standard male voice, all motors are in working mode, ETH port was connected to an Ethernet switch. Running Video record. Video demo is running.

