

USB-C® TO HDMI®, USB-A, SD CARD READER, ETHERNET, AND USB-C® MINI DOCKING STATION

AV MATRIX TEST FOR USB OPERATION

C2G58888 was tested for compatibility performance with various source/sink combinations

Source/Sink	Dell S3221QS	Samsung TV (HDMI)	Sceptre Ultrawide
MacBook Pro M2pro	pass	pass	pass
Acer Spin 714 Chromebook	pass	pass	pass
Dell Inspiron 14	pass	pass	pass

TEST ITEMS FOR EACH TEST CASE

1. AV Quality: Observe general audio and video quality, and be attentive to abnormalities
2. DUV AV Hotplug: Hotplug all video and audio connections in random sequence
3. DUT Power Hotplug: Hotplug power source and change power state of DUT
4. Device Power On/Off: Source and sink, monitor/TV is turned on/off with power switch or RC
5. PC Operating States: S3/S5 [S3: sleep mode, S5: power off mode], PC to keep screen configurations with the same resolutions
6. DUT

Key	
	Pass
	Failure
	Intermittent Failure
	Intermittent Failure; Less Pronounced

HOW TESTS WERE CONDUCTED

Source->3.3ft (1m) C-C Cable or 10ft (3m)
A-C Cable->USB 3.2 Extender TX->328ft
(100m) Cat6a U/FTP->RX->Device

C2G | CHIEF | CONNECTRAC | DA-LITE | LUXUL | MIDDLE ATLANTIC | ON-Q | SANUS | VADDIO | WIREMOLD

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POWER DELIVERY MATRIX

C2G58888 was tested for compatibility performance with various notebook computers

Notebook Computer	Notebook Charging	SOC	V/I Levels	Comments
Microsoft Surface Laptop 4	pass	56%	19.66V / 1.87A	Full charge in at least 1 hour and 20 minutes
HP Spectre x360 2021	pass	72%	19.94V / 2.60A	Full charge in at least 1 hour 20 minutes

Notebook Computer	Notebook Charging	SOC	V/I Levels	Comments
Lenovo ThinkPad L15	pass	0%	19.55V / 2.55A	88% in 1 hour and 20 minutes
CTL Chromebook	pass	0%	20.02V / 1.99A	88% in 1 hour and 20 minutes
MacBook Pro M2pro	pass3	0%	19.66 / 4.05A	83% in 1 hour and 30 minutes
MacBook Air 2019	pass	0%	19.64V / 1.85A	93% in 1 hour and 30 minutes

TEST ITEMS FOR EACH TEST CASE

- Charging PC at operating mode
- Charging PC at S3 [sleep mode]
- Charging PC at S5 [power off mode]
- Charging PC at SOC of 0%, a fully drained computer battery

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POWER CAPABILITIES TEST

C2G58888 was tested to confirm capabilities of all power sourcing ports on DUT (USB-A, USB-C, HDMI, DP)

Test Items	Pass/Fail	V/I Levels	Temperature	Comments
Max Notebook Charging Power (20V/5A) - 1hrs	pass	20.04V / 4.25A	81°F / 27°C	
Max USB-A Current (Left Port)	pass	Left port 5.03V / 0A 4.80V / 500mA 4.62V / 900mA		1.3A falls out of USB-A voltage spec ~2.3A overcurrent protection
Max USB-A Current (Right Port)	pass	Right port 5.03V / 0A 4.78V / 500mA 4.61V / 900mA		1.3A falls out of USB-A voltage spec ~2.3A overcurrent protection
Max HDMI 5V Current	pass	5.04V / 55mA		

TEST ITEMS FOR EACH TEST CASE

12. Max notebook charging power (20V/5A): 1 Hour
13. Max USB-A Current (all ports checked)
14. Max USB-C current
15. Max HDMI 5V current (all ports checked)
16. Max DP 3.3V current (all ports checked)

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USB MATRIX TEST

C2G58888 was tested to confirm compatibility performance between the DUT USB ports and various USB devices

Source \ Device	Logitech Brio	Kingston SSD	Logitech Wireless Mouse & Keyboard
MacBook Pro M2pro	pass	pass	pass
Acer Spin 714 Chromebook	pass	pass	pass
Dell Inspiron 14	pass	pass	pass

TEST ITEMS FOR EACH TEST CASE

18. Check intended functions of the connected devices
19. DUT Power Hotplug: Hotplug power source, charge power state of DUT
20. PC Operating States: S3/S5 [S3: sleep mode, S5: power mode, S5: power off mode], intended functions should stay intact after coming back from S3/S5 modes

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USB PERFORMANCE TEST

C2G58888 was tested to confirm throughput performance of all the USB ports on DUT

Test Items	Pass/Fail	Read Speed	Write Speed
USB-A#1 - USB3	pass	419.27 MB/s	356.20 MB/s
USB-A#2 - USB3	pass	416.92 MB/s	336.56 MB/s
USB-A#1 - USB2	pass	40.26 MB/s	38.59 MB/s
USB-A#2 - USB2	pass	40.25 MB/s	38.56 MB/s

TEST ITEMS FOR EACH TEST CASE

- 22. Test SS (SuperSpeed, USB3) throughput performance of all USB ports
- 23. Test HS (High Speed, USB2) throughput performance of all USB ports
- 24. Compare throughput data against intrinsic throughput speeds obtained with direct connection between the USB storage device and the host computer

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ETHERNET PERFORMANCE TEST

C2G58888 was tested to confirm throughput performance of the Ethernet ports DUT

Test Items	Pass/Fail	Outgoing Speed	Incoming Speed
1000Base-T	pass	958 Mbps	956 Mbps
100Base-T	pass	95.9 Mbps	96.5 Mbps
10Base-T	pass	9.59 Mbps	10.4 Mbps

TEST ITEMS FOR EACH TEST CASE

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- 23. Test HS (High Speed, USB2) throughput performance of all USB ports
- 24. Compare throughput data against intrinsic throughput speeds obtained with direct connection between the USB storage device and the host computer

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