Introduction

HP DOCK SOLUTIONS

Models Docking Stations

HP USB-C Dock G5 5TW10AA/5TW10UT/5TW10ET HP USB-C/A Universal Dock G2 5TW13AA/5TW13UT/5TW13ET HP 4.5 mm and USB-C Dock Adapter G2 6LX61AA HP Thunderbolt™ Dock 120W G2 2UK37AA/2UK37UT/2UK37ET HP Thunderbolt™ Dock 230W G2 2UK38AA/2UK38UT/2UK38ET HP Thunderbolt™ Dock G2 w/ Combo Cable 3TR87AA/3TR87UT/3TR87ET HP Thunderbolt™ Dock 120W G2 w/Audio 3YE87AA/3YE87UT/3YE87ET HP Thunderbolt™ Dock G2 Audio Module 3AQ21AA/3AQ21UT/3AQ21ET HP USB-C Dock G4 (discontinued) 3FF69AA HP USB-C Universal Dock w/4.5mm Adapter (discontinued) 2UF95AA HP USB-C Universal Dock (discontinued) 1MK33AA **HP USB-C Mini Dock** 1PM64AA HP USB Travel Dock (discontinued) TOK30AA HP UltraSlim Docking Station (discontinued) D9Y32AA



Introduction

Introduction

It is common practice to use more than one dock with your computer. There are users who have a dock at the office, carry a travel hub or dock for use while traveling and also have a dock at home.

There are many reasons to use a lock with your computer and your dock. The currently shipping docks:

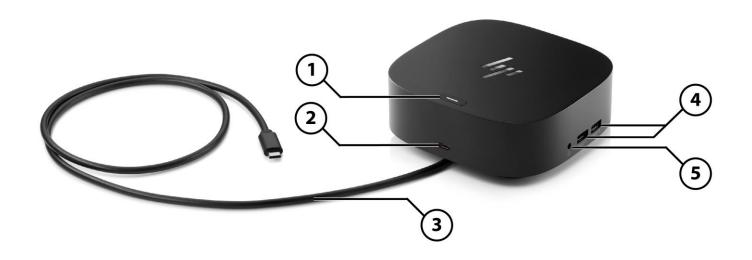
HP USB-C Dock G5	5TW10AA/5TW10UT/5TW10ET
HP USB-C/A Universal Dock G2	5TW13AA/5TW13UT/5TW13ET
HP Thunderbolt™ Dock 120W G2	2UK37AA/2UK37UT/2UK37ET
HP Thunderbolt™ Dock 230W G2	2UK38AA/2UK38UT/2UK38ET
HP Thunderbolt™ Dock G2 w/ Combo Cable	3TR87AA/3TR87UT/3TR87ET
HP Thunderbolt™ Dock 120W G2 w/Audio	3YE87AA/3YE87UT/3YE87ET

are compatible with the following HP locks:

HP Dual Head Keyed Cable Lock	11A64AA
HP Keyed Cable Lock 10mm	T1A62AA
HP Combination Lock	TOY15AA



HP USB-C Dock G5



Front and Side View

- 1. 1 LED power button
- 2. 1 USB -C 3.2 port with data and power out (15W)
- 3. 1 USB-C cable to connect to host system (1 meter length)
- 4. 2 USB-A 3.2 Gen 1 charging ports
- 5. 1 Combo audio jack



HP USB-C Dock G5



Back View

- 1. 2 USB-A 3.2 Gen 1 charging ports
- 2. 2 DisplayPort[™] 1.4 ports
- 3. 1 Standard lock slot

- 4. 1 HDMI 2.0 port
- 5. 1 RJ45 port



Bottom View

1. 1. Insert 4.5 mm barrel from included 120W power supply.



	Components
Part number	5TW10AA/5TW10UT/5TW10ET
Product dimensions (LxWxH)	4.80 x 4.80 x 1.77 in (122 x 122 x 45 mm)
Package dimensions (LxWxH)	7.63 x 6.18 x 6.57 in (194 x 157 x 167 mm)
Weight	1.49 lb (0.68 kg)
Top components	Mechanical power button with LED indicator to power or wake host system ¹
Front components	1 x USB-C 3.2 Gen 1 port with data and power out (15W) 1 x USB-C cable to connect to host system (1 meter cable length)
Side components	2 x USB-A 3.2 Gen 1 charging ports 1 x Combo audio jack
Back components	2 x USB-A 3.2 Gen 1 charging ports 2 x DisplayPort™ 1.4 ports 1 x RJ45 port (10/100/1000) 1 x HDMI 2.0 port 1 x Standard lock slot
External monitor support	For hosts that support DisplayPort 1.4 with Display Stream Compression: 3x FHD @ 60 Hz 3x QHD @ 60 Hz 3x 4k @ 60 Hz For hosts that support DisplayPort 1.3/1.4:
	3x FHD @ 60 Hz 3x QHD @ 60 Hz 2x 4K @ 60 Hz For hosts that support DisplayPort 1.2: 3x FHD @ 60 Hz 2x QHD @ 60 Hz 1x 4K @ 60 Hz
Networking	Supports 1 Gb of Ethernet
Network manageability features	eTag Disconnected Firmware updates PXE Boot Wake on LAN (from the Off, Sleep or Hibernation States²) MAC address pass-through (from the On, Off, Sleep or Hibernation States³) WLAN-LAN Switching
Power to system	Up to 100W via USB-C. Up to 75W on non HP machines. Separate AC power needed for HP ZBooks that require more than 100W power delivered via USB-C alt mode.
Compatibility	Tested and supported on select HP commercial notebooks. For HP notebook compatibility please visit: https://pcb.inc.hp.com/webapp/#!/us-en and search by notebook. Tested and supported on the following 3rd party notebooks: Apple MacBook Pro 16 2020 (Intel Coffee Lake), Apple MacBook Air 2020 (Intel Ice Lake), Apple MacBook Pro 13 2020 (M1 chip), Apple MacBook Air 13 2020 (M1 chip), Dell 5300 Chrome Enterprise 2020 (Whiskey Lake), Dell Latitude 5400 2020 (Whiskey Lake), Dell Latitude 7420 2021 (Tiger Lake-U), Dell XPS 13 2020 (Whiskey



Technical Specifications

	Lake), Google PixelBook Go 2020 (Amber Lake Y), Google PixelBook Go 2 2020 (Amber Lake), Lenovo Thinkbook 14 2020 (Ice Lake), Lenovo T14 2020 (AMD Renoir), and Lenovo X1 Carbon G8 Thinkpad 2020 (Whiskey Lake).
Power to host (USB-C PD)	5V, 9V, 10V, 12V, 15V, 20V all at 5A MAX
Operating systems	Windows 11 21H2 Windows 10 RS4 Windows 10 RS5 Windows 10 19H1 Windows 10 19H2 Windows 10 20H1 Windows 10 20H2 Windows 10 21H1 Windows 10 21H2 Windows 10 22H2 ChromeOS v92.0.4515.157 ChromeOS M92 (HP notebooks only) ChromeOS M93 (HP notebooks only) ThinPro 8.0 Windows 10 IoT Enterprise LTSC 2021 macOS Monterey v12.0 macOS Big Sur 11.5.2
Power adapter	120W
Security slot type	1x Kensington Lock Slot ⁴
Power barrel connector	4.5mm

- 1. For USB-C functionality, host PC must support the DisplayPort™ Alt mode protocol through its USB-C port. Thunderbolt™-enabled notebooks will function at USB-C speeds. Charging and port replication is supported on notebooks that have implemented USB-C industry specifications. Power button to turn on or wake the system, Wake-on LAN from warm and cold dock, Wake-on LAN from S4/S5, and MAC Address Pass-Through S0, S3, S4, S5 warm and cold dock features only function on HP or HP-supported notebooks. HP does not provide Ethernet and audio drivers on Mac PCs.
- 2. Your computer might support Wake on LAN from the Off, Sleep or Hibernate States, or only when the computer is On or in Sleep.
- 3. Your computer might support MAC address pass-through the On, Off, Sleep or Hibernate States, or only when the computer is On or in Sleep.
- 4. Compatible with the following HP locks: T1A62AA HP Keyed Cable Lock 10mm, T1A63AA HP Keyed Cable Lock 10mm (master), T1A64AA HP Dual Headed Keyed Cable Lock 10mm, T1A65AA HP Dual Headed Keyed Cable Lock 10mm (master), T0Y16AA HP Essential Combination Lock, T0Y15AA HP Combination Lock.

NOTE: The DSC supported version and color format depends on GFX capability. DSC is disabled when display is attached to the VGA port or to an external DP2 VGA dongle.

Video Resolution (Continue on the next page)							
	Video resolution and support is dependent on the maximum capability of the notebook. ¹ This table shows which ports to use to achieve the display configuration.						
	Display Configurations	Display Configurations Output ports					
Single Display	(1) 2.5k Display	Any port					
	(1) 4k Display	Any port					
	(1) 5K single cable*	Either DP port					
	(1) 5K dual cable	Both DP ports					
	(1) 8K dual cable Both DP ports						
	(1) 8K single cable*	Either DP port					



Dual Displays	(2) FHD Displays	Any 2 ports
	(2) 2.5k Displays	Any 2 ports
	(1) 4K and (1) FHD	Any 2 ports
	(2) 4k Displays	Any 2 ports
	(1) 5K single* + 1 FHD	5K on either DP, FHD on any other port
	(1) 5K dual cable + 1 FHD	Both DP ports for 5K and FHD on HDMI
Triple Displays	(3) 1680 x 1050 Displays	All 3 ports
	(3) FHD Displays	All 3 ports
	(2) 2.5K and (1) FHD	Any 3 ports
	(3) 2.5K	All 3 ports
	(1) 4K + (1) 2.5k + (1) FHD	Any 3 ports
	(1) 4k and (2) 2.5k Displays	Any 3 ports
	(2) 4K and (1) FHD	Any 3 ports
	(3) 4K	Any 3 ports
	(2) 5K single cable* and (1) 4K	5K on either DP, 4K on HDMI

^{1.} For Chrome users, dual displays are supported at full HD. Triple displays are only supported on select Chromebox machines. For Apple users, the maximum display resolution using Apple is one display on a DP 1.4 host at UHD@60Hz. On an Apple DP 1.2 host you will get QHD~2.5K NOTE*: Information provided for when single cable 5K and 8K displays are available on the market.

Video Resolution								
		Host						
	Display Configurations ¹	High Re	s mode DP A	lt Mode (DP x4)	Multi-	Function (defa	ult)(DP x2)	
	Display comigurations	DP 1.2	DP 1.3/1.4	DP 1.4w/DSC**	DP 1.2 MF	DP1.3/1.4MF	DP1.4 MF w/DSC**	
Single Display	(1) 2.5K Display	Υ	Υ	Υ	Υ	Υ	Υ	
	(1) 4K Display	Υ	Υ	Υ		Υ	Υ	
	(1) 5K single cable*		Υ	Υ			Υ	
	(1) 5K dual cable	Y (D5)	Y (D5)	Y (D5)			Y (D5)	
	(1) 8K dual cable			Y (D5)				
	(1) 8K single cable*			Υ				
Dual Displays	(2) FHD Displays	Υ	Υ	Υ	Y	Υ	Υ	
	(2) 2.5K Displays	Υ	Υ	Υ		Υ	Υ	
	(1) 4K and (1) FHD	Υ	Υ	Υ		Y (D3)	Υ	
	(2) 4K Displays		Y (D1)	Υ			Υ	
	(1) 5K single* + 1 FHD		Y (D4)	Υ			Υ	
	(1) 5K dual cable + 1 FHD			Y (D5)			Y (D5)	
Triple Displays	(3) 1680 x 1050 Displays	Υ	Υ	Υ	Y	Υ	Υ	
	(3) FHD Displays	Υ	Υ	Υ		Υ	Υ	
	(2) 2.5K and (1) FHD	Υ	Υ	Υ			Υ	
	(3) 2.5K		Υ	Y			Υ	
	(1) 4K + (1) 2.5K + (1) FHD		Υ	Υ			Υ	



Technical Specifications

(1) 4K and (2) 2.5K Displays	Y (D1)	Υ		Υ
(2) 4K and (1) FHD		Υ		Y (D2)
(3) 4K		Υ		
(2) 5K single cable* and (1) 4K		Υ		

1. Assumes the host supports up to 3 simultaneous displays with no resolution limitations. Some lower power processors may have a resolution limitation.

NOTES:

- D1 Only supports up to 3840 x 2160 (UHD 4K)
- D2 Only supports up to dual 3840 x 2160 (UHD 4K) and 1920 x 1080 (FHD)
- D3 Only supports up to 4096 x 2160 (4K) @ 30Hz
- D4 Supports up to 5120 x 2880 (5K) and 1920 x 1080 (FHD) with reduced blanking timing
- D5 Both DP cables must be connected to the same graphics controller and the graphics driver must support the tile display feature under

MST. Currently, no GPU (in 2019) supports tiled 5K and 8K over MST. However, it is possible that future GPUs may add this support.

Unless noted, displays are driven @ 60Hz, 8bpp

- *Information provided for when single cable 5K and 8K displays are available on the market.
- ** The DSC supported version and color format depends on GFX capability. DSC is disabled when display is attached to the VGA port or to an external DP2VGA dongle.

FHD = 1920 x1200 or 1920 x 1080

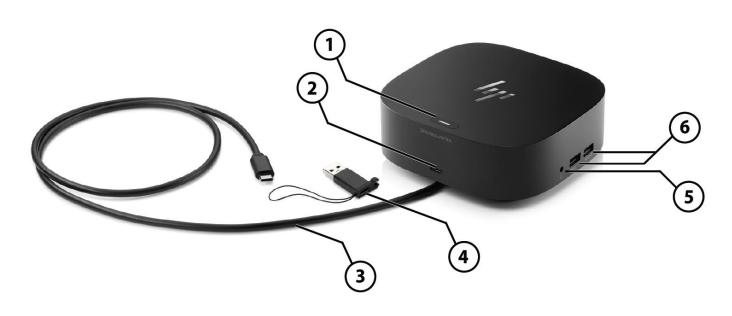
2.5K = 2560 x 1600 or 2560 x 1440

4K = 4096 x 2160 or 3840 x 2160

5K = 5120 x 2880



HP USB-C/A Universal Dock G2



Front and Side View

- 1. 1 LED power button
- 2. 1 Type-C USB 3.2 port with data and power out (15W)
- 3. 1 USB-C cable to connect to host system (1 meter length)
- 4. USB-A Adapter
- 5. 1 Combo audio jack
- 6. 2 USB-A 3.2 charging ports



HP USB-C/A Universal Dock G2



Back View

- 1. 2 USB-A 3.2 charging ports
- 2. 2 DisplayPort[™] 1.2 ports
- 3. 1 Standard lock slot

- 4. 1 HDMI 2.0 port
- 5. 1 RJ45 port



Bottom View

1. 1. Insert 4.5 mm barrel from included 120W power supply.



	Components
This table shows how to achieve the	ne resolutions provided in the previous table. Please refer to the notes at the bottom of the table.
Part number	5TW13AA/5TW13UT/5TW13ET
Product dimensions (L \times W \times H)	4.80 x 4.80 x 1.77 in (122 x 122 x 45 mm)
Package dimensions (L × W × H)	7.63 x 6.18 x 6.57 in (194 x 157 x 167 mm)
Weight	1.53 lb (0.695 kg)
Top components	Mechanical power button with LED indicator to power or wake host system ¹
Front components	1 x USB-C 3.2 Gen 1 port with data and power out (15W) 1 x USB-C cable to connect to host system (1 meter cable length)
Side components	2 x USB-A 3.2 Gen 1 charging ports 1 x Combo audio jack
Back components	2 x USB-A 3.2 Gen 1 charging ports 2 x DisplayPort™ 1.2 ports 1 x RJ45 port (10/100/1000) 1 x HDMI 2.0 port 1 x Standard lock slot
External monitor support	For hosts that support DisplayPort 1.4 with Display Stream Compression: 3x FHD @ 60 Hz 3x QHD @ 60 Hz 3x 4K @ 60 Hz
	For hosts that support DisplayPort 1.3/1.4: 3x FHD @ 60 Hz 3x QHD @ 60 Hz 2x 4K @ 60 Hz For hosts support DisplayPort 1.2: 3x FHD @ 60 Hz 2x QHD @ 60 Hz 1x 4K @ 60 Hz
Networking	Supports 1 Gb of Ethernet
Network manageability features	eTag Disconnected Firmware updates PXE Boot Wake on LAN (from the Off, Sleep or Hibernation States²) MAC address pass-through (from the On, Off, Sleep or Hibernation States³) WLAN-LAN Switching
Power to system	Up to 100W via USB-C. Up to 75W on non HP machines. Separate AC power needed for HP ZBooks that require more than 100W power delivered via USB-C alt mode.
Compatibility	Tested and supported on select HP commercial notebooks. For HP notebook compatibility please visit: https://pcb.inc.hp.com/webapp/#!/us-en and search by notebook. Tested and supported on the following 3rd party notebooks: Apple MacBook Pro 16 2020 (Intel Coffee Lake), Apple MacBook Air 2020 (Intel Ice Lake), Apple MacBook Pro 13 2020 (M1 chip), Apple MacBook Air 13 2020 (M1 chip), Dell 5300 Chrome Enterprise 2020 (Whiskey Lake), Dell Latitude 5400 2020 (Whiskey Lake), Dell Latitude 7400 2020 (Whiskey Lake), Dell Latitude 7420 2021 (Tiger Lake-U), Dell XPS 13 2020 (Whiskey Lake), Google PixelBook Go 2020 (Amber Lake Y), Google PixelBook Go 2 2020 (Amber Lake), Lenovo Thinkbook 14 2020 (Ice Lake), Lenovo T14 2020 (AMD Renoir), and Lenovo X1 Carbon G8



	Thinkpad 2020 (Whiskey Lake).
Power to host (USB-C PD)	5V, 9V, 10V, 12V, 15V, 20V all at 5A MAX
Operating systems	Windows 11 21H2 Windows 10 RS4 Windows 10 RS5 Windows 10 19H1 Windows 10 19H2 Windows 10 20H1 Windows 10 20H2 Windows 10 21H1 Windows 10 21H2 Windows 10 22H2 Windows 7ChromeOS v92.0.4515.157 ChromeOS M92 (HP notebooks only) ChromeOS M93 (HP notebooks only) ThinPro 8.0 Windows 10 IoT Enterprise LTSC 2021 macOS Monterey v12.0 macOS Big Sur 11.5.2
Drivers	DisplayLink drivers must be downloaded either through the HP support site or via Microsoft Windows updates.
Power Adapter	120W
Security Slot Type	1x Kensington Lock Slot ⁴
Power Barrel Connector	4.5mm

^{1.} For USB-C functionality, host PC must support the DisplayPort™ Alt mode protocol through its USB-C port. Thunderbolt™-enabled notebooks will function at USB-C speeds. Charging and port replication is supported on notebooks that have implemented USB-C industry specifications. Power button to turn on or wake the system, Wake-on LAN from warm and cold dock, Wake-on LAN from S4/S5, and MAC Address Pass-Through S0, S3, S4, S5 warm and cold dock features only function on HP or HP-supported notebooks. HP does not provide Ethernet and audio drivers on Mac PCs.

- 2. Your computer might support Wake on LAN from the Off, Sleep or Hibernate States, or only when the computer is On or in Sleep.
- 3. Your computer might support MAC address pass-through the On, Off, Sleep or Hibernate States, or only when the computer is On or in Sleep.
- 4. Compatible with the following HP locks: T1A62AA HP Keyed Cable Lock 10mm, T1A63AA HP Keyed Cable Lock 10mm (master), T1A64AA HP Dual Headed Keyed Cable Lock 10mm, T1A65AA HP Dual Headed Keyed Cable Lock 10mm (master), T0Y16AA HP Essential Combination Lock, T0Y15AA HP Combination Lock.



Technical Specifications

Video Resolution Video resolution and support is dependent on the maximum capability of the notebook.										
						Host				
	Display Configurations ¹	DP1	DP2	нрмі	Multi-Function (default)(x2 DP)					
	Display configurations	51.1		ПОРП	DP 1.2 MF	DP1.3/1.4MF	DP1.4 MF w/DSC			
Single Display	(1) 4K Display		Any port							
	(1) 5K dual cable		Both DP ports	5						
Dual Displays	(2) 4K Displays	A	ny 2 ports *D	1						
	(1) 5K dual cable + (1) 2.5K	Both DP p	oorts for 5K ar HDMI	nd 2.5K on	Y	Y	Y			
	(1) 5K dual cable + (1) 4K	Both DP po	rts for 5K and	4K on HDMI	Y (D2)	Y (D1)	Υ			
Triple Displays	(3) 2.5K Displays		All 3 ports			Υ	Υ			
	(2) 4K Displays + (1) 2.5K	4K on DP	ports *D1, 2.5	ik on HDMI	Υ	Υ	Υ			
	(3) 4K Displays	4K on DP p	orts *D1 and	4K on HDMI	Y (D2)	Y (D1)	Υ			

	High Res Video Resolution								
	Display								
	Configurations/High	DP1	DP1 DP2 HDMI	HDMI	High Res m	ie (DP x4) **			
	Resolution Mode ¹				DP 1.2	DP1.3/1.4	DP1.4 w/DSC		
Single Display	(1) 4K Display	Any port ²			Υ	Υ	Υ		
Dual Displays	(2) 4k Displays	Any 2 ports; DP ports limited to UHD 4K ²			Υ	Υ	Υ		
Triple Displays	(3) 4K Displays	4K on both DP ports (D1) and 4K on HDMI ²			Y	Y	Y		

^{1.} Assumes the host supports up to 3 simultaneous displays with no resolution limitations. Some lower power processors may have a resolution limitation.

D1 - Only supports 3840 x 2160 (UHD 4K)

D2 - Only supports 4096 x 2160 (4K @ 30Hz) on HDMI

**DP host is only applicable to the HDMI output when BOTH DP ports are active, or when the host is in High Res mode

Unless noted, displays are driven @ 60Hz, 8bpp

FHD = 1920 x 1200 or 1920 x 1080

2.5K = 2560 x 1600 or 2560 x 1440

4K = 4096 x 2160 or 3840 x 2160

5K = 5120 x 2880



^{2.} In High Res mode, DisplayLink is running at USB2.0 speeds. This has a significant performance impact on DP1 and DP2 output.

HP 4.5 mm and USB-C Dock Adapter G2



- 1. 1 Type-C USB 3.2 port to connect your HP USB-C/A Universal Dock G2 Type-C cable
- 2. 1 4.5 mm barrel AC adapter (65 W)
- 3. 1 Type-A USB 3.2 Plug Port



HP 4.5 mm and USB-C Dock Adapter G2 shown with the HP USB-C/A Universal Dock G2



Technical Specifications

	Components		
Part number	6LX61AA		
Model number	HSA-Q001		
Dimensions	without cable: 1.77 x 1.33 x 0.39 in (45 x 34 x 10 mm) with cable: 8.14 x 1.33 x 0.39 in (206.9 x 34 x 10 mm)		
Weight	0.053 lb (0.024 kg)		
Front components	1 x Type-A USB 3.2 Plug Port (USB signal only) 1 x 4.5 mm DC Barrel Plug Connector (Power only)		
Rear components	USB-C Receptacle (USB signal + PD power)		
Input power	20V/3.3A (66W) max		
Output power	20V/3.25A (65W) max		
Operating systems	Windows 7 and above, Windows 10 S4, Chrome		
Normal operation voltage	20V		
Average operation power	0.7W		
Max operation power	1W		
Temperature (operation)	32~104 F (0~°C)		
Temperature (non-operation)	-4~140 F (-20~+60°C)		
Relative humidity (operation)	20%~90% RH, non-condensing		
Relative humidity (non-operation)	20%~95% RH, non-condensing		
Altitude (operation)	10000ft (3048m)		
Altitude (non-operation)	30000ft (9144m)		
Shock (operation)	40G, 2 ms, half-sine		
Shock (non-operation)	240G, 2 ms, half-sine		
Random vibration (operation)	~0.21Grms, 50~2000 Hz		
Random vibration (non-operation)	~2.09Grms, 50~2000, non-operating		
Option kit contents	HP 4.5mm and USB-C Dock Adapter G2		
Dock compatibility	HP USB-C/A Universal Dock G2		

NOTE: The HP 4.5mm and USB-C Dock Adapter G2 is only compatible with the HP USB-C/A Universal Dock G2.



HP Thunderbolt™ Dock G2 - (120W/230W)



- 1. 1 power button¹
- 2. 1 USB-C® 3.2 Gen 2 port with data and power out (15W)
- 3. 1 USB-C cable to connect to host system (0.7m cable length)
- 4. 1 headphone/microphone combo jack
- 5. 1 USB-A 3.2 Gen 1 charging port
- 6. 1 standard lock slot
- 1. The dock power button is not functional when connected to non-supported HP notebooks or non-HP notebooks.



HP Thunderbolt™ Dock G2 – Back side (120W/230W)



- 7. 2 USB-A 3.2 Gen 1 ports
- 8. 1 VGA port
- 9. 2 DisplayPort™ 1.4 ports
- 10. 1 USB-C 3.2 Gen 2 port with DisplayPort™ 1.4 data and power out (15W)
- 11. 1 Ethernet port
- 12. 1 AC Adapter connector (7.4mm)
- 13. 1 Thunderbolt™ port

Technical Specifications

	Components		
Part number	2UK37AA/2UK37UT/2UK37ET - HP Thunderbolt Dock 120W G2 2UK38AA/2UK38UT/2UK38ET - HP Thunderbolt Dock 230W G2		
Ports	1 x USB-C 3.2 Gen 2 port with data and power out (15W) 1 x Type-C USB 3.2 Gen 2 port with DisplayPort™ 1.4 data and power out (15W) 1 x USB-C Thunderbolt™ port 1 x USB-A 3.2 Gen 1 ports 1 x USB-A 3.2 Gen 1 charging port 1 x Power adapter port 2 x DisplayPort™ 1.4 ports 1 x Ethernet port (10/100/1000) 1 x Combo audio port 1 x Standard lock slot		
Dimensions (H x W x D)	3.9 x 3.9 x 2.7 in (98 x 98 x 69 mm)		
Weight	1.76 lb (0.8 kg)		
Top components	LED and power button to power or wake host system ¹		
Front components	1 x USB-C 3.2 Gen 2 port with data and power out (15W) 1 x USB-C cable to connect to host system (0.7meter cable length)		
Side components	1 x USB-A 3.2 Gen 1 charging port 1 x Combo audio Jack 1 x Standard lock slot		
Back components	1 x Thunderbolt™ port 1 x USB-C 3.2 Gen 2 port with DisplayPort™ 1.4 data and power out (15W) 2 x DisplayPort™ 1.4 ports 1 x VGA port 2 x USB-A 3.2 Gen 1 ports 1 x RJ45 port 1 x AC adapter connector (7.4mm)		
Network manageability features	PXE Boot Wake on LAN (from the Off, Sleep or Hibernation States ²) MAC Address Pass-Through (from the On, Off, Sleep or Hibernation States ³) WLAN-LAN Switching ⁴		
External monitor support	For hosts that support DisplayPort 1.4 with Display Stream Compression: 3x FHD @ 60 Hz 3x QHD @ 60 Hz 3x 4K @ 60 Hz For hosts that support DisplayPort 1.3/1.4: 3x FHD @ 60 Hz 3x QHD @ 60 Hz 1x 4K @ 60Hz For hosts that support DisplayPort 1.2: 3x FHD @ 60 Hz 2x QHD @ 60 Hz 1x 4K @ 60Hz		
Power delivery (PD) Profiles	5V/5A, 9V/5A, 12V/5A, 15V/5A, 20V/5A		
Networking	Supports 1 Gb of Ethernet		
Power to system	Up to 100W via USB-C. Up to 75W on non HP machines.		



For HP ZBooks that require more than 100W power delivery should use the 3TR87AA HP

Technical Specifications

	Thunderbolt Dock 230W for 200W of power delivery.		
Compatibility	Tested and supported on select HP commercial notebooks. For HP notebook compatibility please visit: https://pcb.inc.hp.com/webapp/#!/us-en and search by notebook. Tested and supported on the following 3rd party notebooks: Apple MacBook Pro 16 2020 (Intel Coffee Lake), Apple MacBook Air 2020 (Intel Ice Lake), Apple MacBook Pro 13 2020 (M1 chip), Apple MacBook Air 13 2020 (M1 chip), Dell 5300 Chrome Enterprise 2020 (Whiskey Lake), Dell Latitude 5400 2020 (Whiskey Lake), Dell Latitude 7420 2021 (Tiger Lake-U), Lenovo Thinkbook 14 2020 (Ice Lake), Lenovo T14 2020 (AMD Renoir), and Lenovo X1 Carbon G8 Thinkpad 2020 (Whiskey Lake).		
Operating voltage and current	19.7 V dc @ 6.1 A – 120W 19.7 V dc @ 11.8 A – 230W		
Temperature (operating)	0 C to 35 C (32 F to 95 F)		
Relative humidity noncondensing (operating)	10 % to 90 %		
Maximum altitude unpressurized (operating)	15 m to 3,048 m (- 50 ft to 10,000 ft)		
Operating Systems ⁵	Windows 11 21H2 Windows 10 RS1 Windows 10 RS2 Windows 10 RS3 Windows 10 RS4 Windows 10 RS5 Windows 10 19H1 Windows 10 19H2 Windows 10 20H1 Windows 10 20H1 Windows 10 21H1 Windows 10 21H2 Windows 10 22H2 Windows 10 22H2 Windows 7 ChromeOS v92.0.4515.157 Linux Ubuntu 20.04 with 5.06 Kernel macOS Monterey v12.0 macOS Big Sur 11.5.2		
Security slot type	1x Kensington Lock Slot ⁶		

- 1. Requires host notebook to support in its BIOS.
- 2. Your computer might support Wake On LAN from the Off, Sleep or Hibernate States, or only when the computer is On or in Sleep.
- 3. Your computer might support MAC Address Pass-Through the On, Off, Sleep or Hibernate States, or only when the computer is On or in Sleep.
- 4. WLAN LAN switching is supported only on select computers running Windows 10 operating system.
- 5. The HP Thunderbolt[™] Dock G2 is designed to USB-C/Thunderbolt[™] Industry specs and will support charging and port replication for notebooks that have implemented USB-C and Thunderbolt[™] industry specifications.

Thunderbolt[™] host systems require Thunderbolt[™] software (minimum SW17.x).

Ethernet and audio drivers need to be installed separately on non-HP Windows systems for headset auto switching functionality. Drivers available on HP Support website.

For MacOS PCs, HP does not provide Ethernet and audio drivers.

Firmware updates on Window-based host systems only.

Certain features are not functional on non-HP supported nor non-HP notebooks (see points below):

Power button to turn on or wake the system.

Wake on LAN from warm and cold dock.

Wake on LAN from S4/S5.

MAC Address Pass-Through SO, S3, S4, S5 warm and cold dock.

6. Compatible with the following HP locks: T1A62AA HP Keyed Cable Lock 10mm, T1A63AA HP Keyed Cable Lock 10mm (master), T1A64AA HP



Technical Specifications

Dual Headed Keyed Cable Lock 10mm, T1A65AA HP Dual Headed Keyed Cable Lock 10mm (master), T0Y16AA HP Essential Combination Lock, T0Y15AA HP Combination Lock.



Technical Specifications

HP Thunderbolt™ Dock G2 Video resolution specifications			
HP Thunderbolt™ Doci			dock is connected to a Thunderbolt™ system:
Host Specification	# of displays	Resolution	Supported configuration
DP 1.2 Thunderbolt™ host	1	(1) 4096x2160 @ 60Hz	1 DP or 1 TB or 1 USB-C alt mode
	2	(2) 4096 x 2160 @ 60Hz	1 DP + 1 TB port or 1 USB-C Alt mode port + 1 TB port
	3	(1) 4096 x 2160 @ 60Hz + (2) 2560 x 1440 @ 60Hz	(1) 4096 x 2160 @ 60Hz from TB port (2) 2560x1440 @ 60Hz from DP ports or DP + USB- C Alt
	4	(1) 4096 x 2160 @ 60Hz + (2) 2560 x 1440 @ 60Hz+ (1) 1920 x 1080 @ 60Hz	(1) 4096 x 2160 @ 60Hz from TB port (2) 2560x1440 @ 60Hz from DP ports or DP + USB- C alt (1) 1920 x 1080 @ 60Hz from DP or USB-C Alt mode
Host Specification	# of displays on dock	Resolution	Supported configuration
DP 1.3 Thunderbolt™ host	1	(1) 5120 × 2880 @ 60Hz	1 DP or 1 TB or 1 USB-C alt mode
	2	(2) 4096 x 2160 @ 60Hz	1 DP + 1 TB port or 1 USB-C alt mode + 1 TB port
	2	(2) 3840 x 2160 @ 60Hz	2 DP ports or 1 DP + 1 USB-C Alt mode port or 1 DP + 1 TB port or 1 TB + 1 USB-C alt mode
	3	(2) 3840 x 2160 @ 60Hz + (1) 1920 x 12000 @ 60Hz	(2) 3840 x 2160@60Hz from DP ports or DP + USB- C alt (1) 1920x1200 @ 60Hz from TB port
	3	(3) 2560 x 1600 @ 60hz	2 DP ports + USB-C Alt mode
	4	(1) 3840 x 2160 @ 60Hz + (2) 2560 x 1440 @ 60Hz+ (1)1920 x 1200 @ 60Hz	(1) 3840x2160 @ 60Hz from DP or USB-C Alt mode (2) 2560x1440 @ 60Hz from DP ports or DP + USB- C alt (1) 1920 x 1200@ 60Hz from TB port

NOTE: Chart is based on 8bit DP1.2 displays (except for 5120x2880 single cable display)

NOTE: with a DP1.3 Thunderbolt™ host, when 3 or more displays are attached, the Thunderbolt™ port is limited to a 1920x1200 @ 60hz DP1.2 display, or a 2560x1440@60hz DP1.3 display.

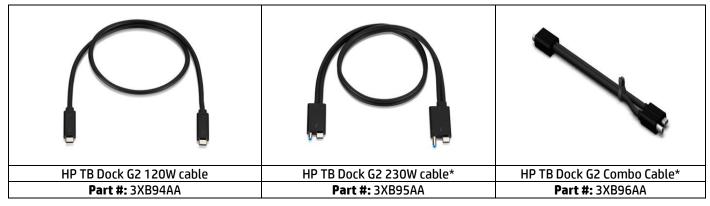


Technical Specifications

HP Thunderbolt™ Dock G2 video resolution specifications when the dock is connected to a USB-C alt-mode system¹:		
Host Specification	# of monitors	
	1	2560x1440 @ 60Hz
DP 1.2 USB-C host	2	1920x1200 @ 60Hz
DP 1.2 U3B-C11USt	3	(1) 1920x1200 @ 60Hz
		(2) 1280x768 @ 60Hz
	1	3840x2160 @ 60hz
	2	2560x1600 @ 60Hz
DP 1.3 USB-C host	3	(1) 2560x1600 @ 60Hz
		(2) 1680x1050 @ 60Hz
	4	1680 x 1050 @ 60Hz (requires MST)

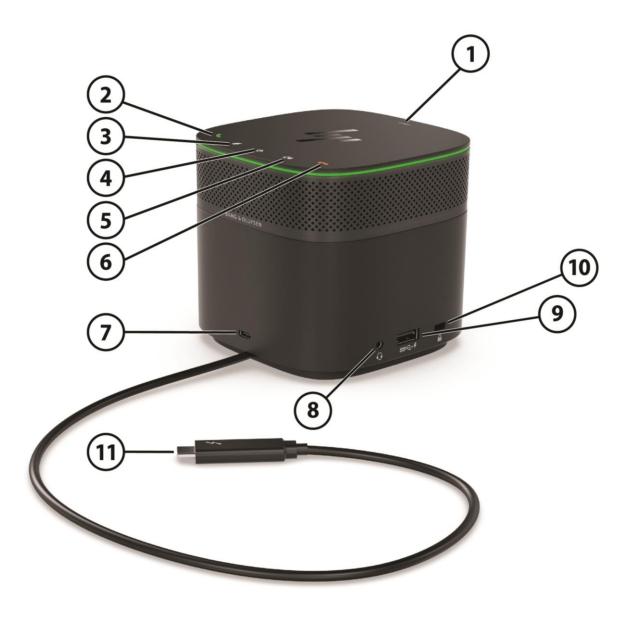
^{1.} USB-C systems will perform at USB 3.0 Gen1 speeds Thunderbolt™ port will function as a USB 2.0 port with only data and power out (15W); no video

HP Thunderbolt™ Dock G2 cable types



^{*}NOTE: Requires 230W AC adapter

HP Thunderbolt™ Dock 120W G2 w/Audio



- LED indicator (power button to power, wake, sleep host system)¹
 7.
- 2. Pick up / accept / hold call
- 3. Mic Mute
- 4. Volume down
- 5. Volume up

- 6. Hang up / decline call
- 7. 1 USB-C 3.2 Gen 2 port with data and power out (15W)
- 8. 1 headphone/microphone combo jack
- 9. 1 USB-A 3.2 Gen 1charging port
- 10. 1 Standard lock slot
- 11. 1 USB-C cable to connect to host system (0.7m cable length)

1. The dock power button is not functional when connected to non-supported HP notebooks or non-HP notebooks.



HP Thunderbolt™ Dock 120W G2 w/Audio – Back View



- 11. 2 USB-A 3.2 Gen 1 ports
- 12. 1 VGA port
- 13. 2 DisplayPort™ 1.4 ports
- 14. 1 USB-C 3.2 Gen 2 port with DisplayPort™ 1.4 data and power out (15W)
- 15. 1 Ethernet port
- 16. 1 AC adapter connector (7.4mm)
- 17. 1 Thunderbolt™ port

	Components
Part number	3YE87AA/3YE87UT/3YE87ET
Ports	1 x USB-C 3.2 Gen 2 port with data and power out (15W) 1 x USB-C cable to connect to host system (0.7m cable length) 1 x USB-A 3.2 Gen 1charging port 1 x Combo audio jack 1 x Standard lock slot 1 x Thunderbolt™ port 1 x USB-C 3.2 Gen 2 port with DisplayPort™ 1.4 data and power out (15W) 2 x DisplayPort™ 1.4 ports 1 x VGA port 2 x USB-A 3.2 ports 1 x RJ45 port 1 x AC adapter
Dimensions (HxWxD)	3.9 x 3.9 x 4.5 in (98 x 98 x 114 mm)
Weight	2 lb (0.91 kg)
Top components ¹	LED indicator (power button² to power, wake, sleep host system) Pick up / accept / hold call Mic mute Volume up Volume down Hang up / decline call
Front components	NOTE: This feature requires Skype for Business or Lync 2013 running on Microsoft Exchange or Office 365 servers.
Front components	1 x USB-C 3.2 port with data and power out (15W) 1 x USB-C cable to connect to host system (0.7m cable length)
Side components	1 x USB-A 3.2 Gen 1 charging port 1 x Combo audio jack 1 x Standard lock slot
Back components	1 x Thunderbolt™ port 1 x USB-C 3.2 Gen 2 port with DisplayPort™ 1.4 data and power out (15W) 2 x DisplayPort™ 1.4 ports 1 x VGA port 2 x USB-A 3.2 Gen 1 ports 1 x RJ45 port 1 x AC adapter
Network manageability features	PXE Boot Wake on Lan (from the Off, Sleep or Hibernation States³) MAC Address Pass-Through (from the On, Off, Sleep or Hibernation States⁴) WLAN-LAN Switching⁴
External monitor support	For hosts that support DisplayPort 1.4 with Display Stream Compression: 3x FHD @ 60 Hz 3x QHD @ 60 Hz 3x 4K @ 60 Hz For hosts that support DisplayPort 1.3/1.4: 3x FHD @ 60 Hz 3x QHD @ 60 Hz 1x 4K @ 60Hz For hosts that support DisplayPort 1.2:



·			
	3x FHD @ 60 Hz 2x QHD @ 60 Hz 1x 4K @ 60Hz		
Compatibility	Tested and supported on select HP commercial notebooks. For HP notebook compatibility please visit - https://pcb.inc. hp.com/webapp/#!/us-en and search by notebook. Tested and supported on the following 3rd party notebooks: Apple MacBook Pro 16 2020 (Intel Coffee Lake), Apple MacBook Air 2020 (Intel Ice Lake), Apple MacBook Pro 13 2020 (M chip), Apple MacBook Air 13 2020 (M1 chip), Dell 5300 Chrome Enterprise 2020 (Whiskey Lake), Dell Latitude 7400 2020 (Whiskey Lake), De Latitude 7420 2021 (Tiger Lake-U), Lenovo Thinkbook 14 2020 (Ice Lake), Lenovo T14 2020 (AMD Renoir), and Lenovo X1 Carbon G8 Thinkpad 2020 (Whiskey Lake).		
Power delivery (PD) profiles	PD 3.0: 5V/5A, 9V/5A, 12V/5A, 15V/5A, 20V/5A		
Networking	Supports 1 Gb of Ethernet		
Speaker rated power	2W		
Operating voltage and current	19.7 V dc @ 6.1 A – 120W 19.7 V dc @ 11.8 A – 230W		
Temperature (operating)	0° C to 35° C (32° F to 95° F)		
Relative humidity noncondensing (operating)	10 % to 90 %		
Maximum altitude unpressurized (operating)	15 m to 3,048 m (- 50 ft to 10,000 ft)		
Operating systems	Windows 11 21H2 Windows 10 RS1 Windows 10 RS2 Windows 10 RS3 Windows 10 RS4 Windows 10 RS5 Windows 10 19H1 Windows 10 19H2 Windows 10 20H1 Windows 10 20H2 Windows 10 21H1 Windows 10 21H2 Windows 10 22H2 Windows 7 ChromeOS v92.0.4515.157 Linux Ubuntu 20.04 with 5.06 Kernel macOS Monterey v12.0 macOS Big Sur 11.5.25		
LED colored ring	Incoming call (blinking green) On call (solid green) On muted call (solid red) Hold (blinking green)		
Speakers/mics	Two side-firing speakers and two microphones		
Microphone type	Omni-directional		
Analog audio	Yes		
Number of channels	Stereo (left and right channels)		
Power to system	Up to 100W via USB-C. Up to 75W on non HP machines. For HP ZBooks that require more than 100W power delivery should use the host platforms		



Technical Specifications

AC adapter for additional power.

- 1. Some audio buttons no longer work with Skype due to Microsoft changes in support. Some do not work with Teams or Zoom.
- 2. The dock power button is not functional when connected to non-supported HP notebooks or non-HP notebooks.
- 3. Your computer might support Wake On Lan from the Off, Sleep or Hibernate States, or only when the computer is On or in Sleep.
- 4. Your computer might support MAC Address Pass-Through the On, Off, Sleep or Hibernate States, or only when the computer is On or in Sleep.
- 5. WLAN LAN switching is supported only on select computers running Windows 10 operating system.

NOTE: For video specifications, please refer to page 16 of this quick specs



HP Thunderbolt™ Dock G2 Audio Module



- 1. LED indicator (power button to power, wake, sleep host system)¹
- 2. Pick up / accept / hold call
- 3. Mic Mute

- 4. Volume down
- 5. Volume up
- 6. Hang up / decline call

1. The dock power button is not functional when connected to non-supported HP notebooks or non-HP notebooks. **NOTE:** Some audio buttons no longer work with Skype due to Microsoft changes in support. Some do not work with Teams or Zoom.

Technical Specifications

	Components		
Part number	3AQ21AA/3AQ21UT/3AQ21ET		
Dimensions (H x W x D)	3.9 x 3.9 x 1.28 in (98 x 98 x 32.5 mm)		
Weight	0.66 lb (0.30 kg)		
Top cover buttons	LED indicator (power button to power, wake, sleep host system) Pick up / accept / hold call Mic Mute Volume up Volume down Hang up / decline call NOTE: This feature requires Skype for Business or Lync 2013 running on Microsoft Exchange or Office 365 servers.		
LED colored ring	Incoming call (blinking green) On call (solid green) On muted call (solid red) Hold (blinking green)		
Speakers/mics	Two side-firing speakers and two microphones		
Microphone type	Omni-directional		
Analog audio	Yes		
Number of channels	Stereo (left and right channels)		
Speaker rated power	2W		

Service and Support

HP Dock Solutions are supported by a one-year limited warranty. Additional support is available 24 hours a day, seven days a week by phone as well as online support forums.

NOTE: Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.



Summary of Changes

Date of change	Version 1 to 2		Description of change
•	V1 to V2	Launch	
July 6, 2018	V1 to V2	Update	Typo corrected on "LED colored ring" specs
October 5, 2018	V2 to V3	Update	1050 G1 added to HP Thunderbolt Dock 230W G2 (2UK38AA) and HP
,		'	Thunderbolt Dock 230W G2 cable (3XB95AA) compatibility
May 7, 2019	V3 to V4	Update	HP USB-C Dock G5, HP USB-C/A Universal Dock G2 and HP 4.5 mm and
			USB-C Dock Adapter G2 added
June 25, 2019	V4 to V5	Update	General update
September, 2019	V5 to V6	Update	General Update
March 10,2020	V6 to V7	Update	HP UltraSlim Docking Station – Rear side image call out #11 corrected
May 27, 2020	V7 to V8	Update	HP USB-C Dock G5 operating systems updated
July 29, 2020	V8 to V9	Update	Image call outs and call outs section corrected for Thunderbolt Dock G2
			Typo in HP ZHANN Pro 13 G2 corrected
			ZBook Firefly 14/15 G7added to Thunderbolt Dock 120W G2
			HP ZHAN 99 Mobile Workstation added to HP ZHAN 99 G1, G2, added G7
			to Studio, added ZBook Create G7, added ZBook Firefly 14/15 G7 into
		<u> </u>	compatibility table.
October 16, 2020	V9 to V10	Update	General update
January 5, 2020	V10 to V11	Update	HP ZBook Firefly 14/15 G7, G8 from HP Thunderbolt™ Dock 230W G2
10.2020	V44 1 . V42	11- 1-1	compatible notebooks
January 19, 2020	V11 to V12	Update	ZBook 15u G7 removed
			Reference footnote sign removed from Firefly 14/15 G7 and G8
			HP 4.5mm and USB Dock Adapter and HP USB-C Universal Dock Non- Flash with USB & 4.5mm Adapter removed
March 2, 2021	V12 to V13	Update	Video Resolution table updated (p5 and p6)
April 26, 2021	V12 to V13	Removal	HP EliteBook 800/700 G7 and G8 from HP Thunderbolt™ Dock 230W G2
April 20, 2021	V13 t0 V14	Kelliovat	compatibility statement.
August 5, 2021	V14 to V15	Update	(discontinued) added to index / Introduction added / Footnote and NOTE
- J , -			added to item listed in the introduction / Footnote arrangement on HP
			TB 120W G2 w/Audio
April 16, 2022	V15 to V16	Update	HP USB-C Dock G5, HP USBC/A Universal Dock G2, HP Thunderbolt Dock
			G2 resolution tables corrected / HP UltraSlim Docking Station stated as
			discontinued.
April 21, 2022	V16 to V17	Update	Thunderbolt G4 removed
May 11, 2022	V17 to V18	Removal	Win 7 from OS for HP USB-C Dock 5
June 1, 2022	V18 to V19	Update	General arrangement.
November 15, 2022	V19 to V20	Update	HP USB-C Dock G4, HP USB-C Universal Dock w/4.5mm Adapter, HP USB-
			C Universal Dock, HP USB-C Mini Dock, HP USB Travel Dock, HP UltraSlim
			Docking Station removed / General arrangement.
January 9, 2023	V20 to V21	Update	Part numbers and USB ports version updated
March 1, 2023	V21 to v22	Update	Combo audio jack updated to 1x
April 17, 2023	V22 to V23	Update	Network Manageability Features and 1x Kensington Lock Slot added to
			HP USB-C Dock G5, HP USB-C/A Universal Dock G2 and HP Thunderbolt™
May 12, 2022	V22 to V24	l la data	Dock G2 components tables.
May 12, 2023	V23 to V24	Update	External monitor support for HP USB-C/A Universal Dock G2 updated

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