Steering options – how to realise a dock solution for our customers

- Check what customers really need!
- Do they really need full manageability?
- Do they maybe just want to charge a notebook?
- What notebooks are they using? Is the equipment new?
- What kind of office type are they using? Shared desk or not?
- Are there Workstations deployed?
- Are they using conferencing tools?
- Are their displays maybe due for an update?



Major Steering Options for USB-C Docks



1. Is a multiport hub sufficient?

- Order the <u>HP Universal USB-C Multiport Hub</u> asap
- Strong availability right now
- Strong supply arrivals expected also in FQ4
- Part number:50H55AA





- Plan for defeatured <u>HPUSB-CG5 Essential Dock</u> will be available in good numbers in fall
- Part number: 72C71AA



4. You can charge for an upsell to Thunderbolt?

- Upsell to <u>HPTBDock G4</u>
- Also on allocation, but improving
- Part numbers:4J0A2AA/4J0G4AA



HP Private, Confidential for Internal Use Only

E24m and E27m instead of dock



Regular Display + Docking Station

- It allows to user older Displays adding flexibility and allowing extending Displays lifecycle
- More clutter. It requires a Dock, Display, 2x the number of cables and more devices to manage and maintain
- Using older Displays, power consumption is usually higher power versus Displays with the latest technology



Docking Display

- Full flexibility as it allows to connect to additional displays for dual display setup
- Full Integration with Webcam, IR Camera, Microphones, Speakers, all integrated and no cables required
- Clean workplace, with less cables and high compatibility with all USB-C capable devices
- Docking Display costs closer to Display + Dock costs

Dock Transition Guidance



CEP



Adicora A (5TW10AA)

Adicora D (5TW13AA) Supply constrained

Channel

MY CUSTOMER VALUES

- Security
- Enhanced Manageability features
- Increased speed and bandwidth
- · Multi displays support
- Power delivery to charge PCs & Mobile Workstations up to 230W

MY CUSTOMER PREFERS

- Immediate supply in Oct/Nov/Dec timeframe to support critical NBs orders
- · Support for older generation PCs
- Improved productivity with dual displays
- Power delivery to charge PCs up to 100W

MY CUSTOMER NEEDS

- A ready on demand dock
- Multiple ports
- Improved productivity with multiple displays
- Power delivery to charge PCs up to 65W
- · HP branded quality dock

HP THUNDERBOLT DOCK G4

- HP Sure Start for Docks
- Wired Intel vPRO allows updates to dock firmware anytime, even if disconnected, eTag, MAC Address Pass Thru, PXE boot
- Thunderbolt 4 technology with data transfer up to 40Gbs
- 4 external displays up to 4K@60 Hz
- Power supply 120W/280W (up to 100/230 to host)

280W

SKU # 4J0A2AA

120W

SKU#4J0G4AA

Shipping w/allocated supply

TARGUS USB-C UNIVERSAL DOCKING

- Committed supply available in Oct/Nov/Dec timeframe
- DisplayLink USB-A and USB-C compatible
- Supports (DP 1.2) 2 x 4K UHD @ 60 Hz
- Max Host Power100W

SKU #6X3S6U3

FCS: Oct/Nov 2022 While supply last

HP HP USB-C G5 ESSENTIAL DOCK

- Continuous supply availability starting fq4
- 1x USB-C, 4x USB-A, 1x HDMI, 2x DP, 1x RJ-45, 1x combo audio
- 3xFHD @30Hz, 2 x FHD @ 60Hz, 2 x 2.5K @ 60Hz or 1 x 4K @ 60Hz

SKU # 72C71AA

- Max. Host Power HP or non-HP 65W USB-C
- PXE Boot, connected FW updates, LAN/WLAN switching

FCS: Oct/Nov 2022

Commercial Dock Portfolio

HP Thunderbolt G4 Dock

Thunderbolt[™] 4 Technology with data transfer speeds up to 40Gbs

1012

- World's Most Secure Dock
- Expanded compatibility with multi-OS environments
- Enables up to 280W power delivery
- Wired Intel vPRO allows updates to dock firmware anytime, even if disconnected
- eTag



HPUSB-C G5 Dock

Manage your fleet with ease

- USB-CTM alt mode support
- 100W power delivery
- Disconnected firmware updates
- eTag
- Firmware manageability support



HP USB-C/A Universal G2 Dock

Legacy notebook support

- Driven by DisplayLink technology
- 100W power delivery
- USB-C to A adapter
- Disconnected firmware updates
- eTag
- Firmware manageability support

HP USB-C G5 Essential Dock

Ready on demand

- All the ports you need
- 65W power delivery
- Readily available for large deployments
- Connected firmware updates, PXE boot

Coming soon





Demand Steer to **Travel Dock**

HP UNIVERSAL USB-C MULTIPORT HUB

BPS: 50H55AA / 50H55UT	CPS: 50H98A#ABL						
Product Dimensions		150 × 55 × 21.5 mm (5.91 x 2.17 x 0.85 in)					
Product Weight		115 g (0.254 lbs)					
HP Tested, Warranty & Support							



Universal USB-C[®]. Every OS



One simple, single USB-C® cable plugs into your PC², regardless of the brand or OS so you can use your hub seamlessly. This hub now supports Windows®, macOS and ChromeOS®.

All Kinds of **Ports**



7 multifunction ports for just about any data, video, or network connection³. 1 HDMI 2.0. 1 Display Port 1.2, 2 USB-A ports, 1 USB-C®1 port, 1 USB-C^{®1} passthrough port, and 1 ethernet port.⁴

Powers Dual 4K Displays



This small but mighty hub supports⁴ HDMI 2.0 and Display 1.2 connections for a higher quality resolution at 4K1.

Connect & Power Your PC



Keep your PC charged via the USB-C® passthrough while powering⁵ up or connecting data through the 7 total ports³.

Designed to Travel



Slim and sleek design makes it easy to take on the go. Just pack alongside your PC and know that you can connect it all.

Enterpriseclass network manageability



Support network manageability⁶ of your device and this hub with PXE boot support, Wake-on LAN, MAC Address Pass-Through, and LAN/WLAN switching.



Where the Multiport Hub offers less

- Multiport Hub only supports two FHD 27" on EB G8 and G9
- On G7 and older it only supports one display with FHD, second display with reduced resolution
- Reduced manageability, equal to m-Displays
- Only two displays connectable
- Only charges with 65W
- 65W charger is needed for one cable UX
- Lower price, lower absolute margin

Product Definition HP USB-C G5 Essential Dock

Feature gaps summary

- → Only 65W charging power, not suitable for charging Firefly
- → Possible less displays at high resolution supported
- → Manageability has less functionalities, missing out of band manageability

Attributes	Product Details						
System compatibility	USB-C Alt mode - works with systems that have a USB-C Alt mode, USB4, or Thunderbolt port.						
Power Button to system	Yes (HP supported systems only)						
Video Resolution	(DP 1.4) 2 x FHD @ 60Hz 2 x 2.5K @ 60Hz 1 x 4K @ 60Hz						
Cable length	1.0 meter cable						
Power to system	HP or non-HP: Up to 65W USB-C						
Ports	4x USB-A 3.0 Gen 1 (2x Fast Charging – Side; 2x Charging - Rear) 1x USB-C (data + 15W) 1x RJ45 – Gb Ethernet 1x Combo Audio 1x Kensington Lock Slot						
Video ports	2x DP 1.4, Single up to 4k@60Hz 1x HDMl 2.0, Single up to 4k@60Hz						
Additional Features	PXE Boot, connected FW updates, LAN/WLAN switching 1-year warranty (US)						
Technology	USB-C (plug and play – no drivers required)						

USB-C Dock G5 v. USB-C DOCK G5 Essential Feature Comparison

Hardware/Features	G5	G5 Essential
[Hardware] Type-C port UFP - USB-C Cable to Host system	100W	65W
[Hardware] Type-C port DFP (Front) – 1 x USB-C® port with data and power out (15W)	•	•
[Hardware] USB-A charging ports (Side) – 2 x USB 3.0 charging ports		•
[Hardware] USB-A charging ports (Rear) – 2 x USB 3.0 ports (DMC)	Fast Charge	No Fast Charging
[Hardware] Audio Jack (Rear) – 1 x Combo Audio Jack	•	•
[Hardware] Display - DP Ports (Rear) - 2 x DisplayPort TM ports	•	•
[Hardware] Display - HDMI Port (Rear) - 1x HDMI 2.0 port	•	•
[Hardware] Ethernet LAN Port (Rear) - 1x RJ45 port	•	•
[Hardware] Security lock slot (Rear) - 1x Standard Lock Slot	•	•
[Firmware] Power button – Wake from Sleep Mode	•	•
[Firmware] Power button LED (HP alt mode support) – When connected, the dock's power button LED mimic's the host notebook power button (ex. blinks during S3)	•	LED is ON when docked, Off when undocked
[Firmware][Manageability] Disconnected Firmware update - Firmware Update while disconnected (DMC)	•	
[Firmware][Manageability] OOB Wake On LAN - ITDM can wake the connected notebook from sleep states through the dock LAN connection.	•	
[Firmware][Manageability]MAC Address Pass Through (MAPT) - ITDM can access the host notebook MAC address through the dock LAN connection	•	
[Firmware][Manageability] eTag - ITDM can discover the dock Product name, Serial Number, MAC Address and FW Version remotely	•	
[Firmware][Manageability] Disable LAN - ITDM can choose to disable the dock's LAN connection for added security	•	
[Firmware] Dock Secure FW Update - Additional Firmware Resiliency based on NIST SP800-193. Requires signed FW infrastructure implementation.	•	
[Firmware] Event messaging - Limited dock events notification (DMC)	•	

HP USB-C G5 Dock vs. HP USB-C G5 Essential Dock





- √ 100W Power Delivery
- ✓ Manageability

HP USB-C G5 Dock	Features	HP USB-C G5 Essential Dock		
Small, compact	Design	Small, compact		
USB-C alt. mode	Technology	USB-C alt. mode		
100W	Power Delivery	65W		
Mimics notebook	Power Button LED	On when docked, off when undocked		
Connected & Disconnected	FW Updates	Connected		
✓	PXE Boot	✓		
✓	OOB Wake on LAN	Х		
✓	MAC Address Thru	Х		
✓	eTag	Х		
✓	Disable LAN	Х		
✓	Secure FW Update	Х		
V	Event Messaging	Х		
X	Availability	✓		



- ✓ 65W Power Delivery
- ✓ Ready to ship

Where the USB-C Dock G5 Essentials offers less

- Very limited manageability
- Less power with 65W
- No single power on
- Less displays with high res supported
- Slower charging USB ports

HP Thunderbolt™ G4 Dock

The Dock That Does It All³



The Power To Be Productive

Multitask like a pro on up to four $4K^5$ displays through superfast Thunderbolt[™] 4^5 technology⁶. Create and collaborate faster with double the ethernet speed.



Expanded Compatibility. Easy Connectivity

Rigorous testing and certifications ensure this dock works seamlessly with most notebooks and operating systems³. One Thunderbolt^m 4 cable connects your device and peripherals without issue.



The World's Most Secure Dock¹

Feel safe and secure. Everything connected to the dock is protected with HP Sure Start² and meets full NIST 800-193 requirements.



Device Management Made Easy

Manage your mixed fleet more efficiently with wired Intel® vPro® support that allows authorized administrators to remotely access and manage vPro® enabled notebooks using wired connections to make updates⁷.



HP E24m, E27m und 34m

DIMENSIONS

DIMENSIONS 23.8 in (60.45 cm) Width 21.24 in Height 14 in (35.56 cm)







E24m, E27m and E34m Conferencing/Docking Displays

- USB-C mit Inband Management & RJ45 port, 65W PD
- E24m FHD, E27m QHD, E34m WQHD
- 5MP IR Webcam with tilt function, Windows Hello & Zoom certified
- Speakerbar
- E24m and E27m support DaisyChaining

HP Z24m G3 QHD Conferencing Display

World's First 4-Sided Borderless Conferencing Display¹⁰

World's First 5MP Webcam Conferencing Monitor with HDR 400¹¹



Share Your Ideas in Perfect Clarity

Make an outstanding impression with state-of-the-art integrated conferencing features enhanced by HP Presence¹². With an integrated 5MP webcam, noise-cancelling mics and fine-tuned, recessed speakers in a 4-sided borderless frame.



See Colors as They Really Are

Trust the colors you see on screen with the Z by HP color accuracy and factory color calibration. Equipped with the creative color gamuts you work in most for web, photography, and video creation on Mac® or PC. Lean into realism with HDR 400 for darker blacks and brighter whites.



A Smooth Screen Experience

Experience every pixel and movement with the precision of reality in crisp Quad HD resolution and a fast 90Hz refresh rate¹³ in Windows 11 and Adobe®.

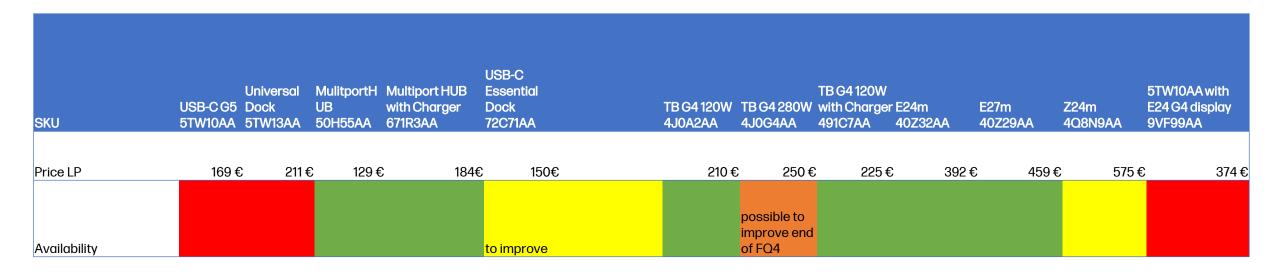


Technology that Responds to You

Stay in your creative flow with a display that keeps up with you. Achieve seamless dual displays with daisy-chaining or power your Mac® or PC with 100W USB-C® technology.



Price and Cost differences



Technical differences

SKU	USB-C G5 5TW10AA	USB-C Universal Dock 5TW13AA	Mulitport HUB 50H55AA	USB-C Essential Dock 72C71AA	TB G4 120W 4J0A2AA	TB G4 280W 4J0G4AA	E24m 40Z32AA	E27m 40Z29AA	Z24m 4Q8N9AA
MAPT in Band	yes	yes	yes	no	yes	yes	yes	yes	yes
MAPT out Band	yes	yes	no	no	yes	yes	no	no	no
PXE Support for G7 and newer	yes	yes	yes	?	yes	yes	yes	yes	yes
PXE Support for older than G7	yes		not on G5 and only with newest BIOS on G6		not on G5 and only with newest BIOS on G6	not on G5 and only with newest BIOS on G6			
WoL in band	yes	yes	yes	no	yes	yes	yes	yes	yes
WoL out band	yes	yes	no	no	yes	yes	no	no	no
eTag	yes	yes	no	no	yes	yes	?	?	?
Disable LAN	yes	yes	no	no	yes	yes	?	?	?
Secure FW Update	yes	yes	?	no	yes	yes	?	?	?
Single Power ON	yes	yes	no	no	yes	yes	with workaround	with workaround	with workaround
Power Button	yes	yes	no	no	yes	yes	yes	yes	yes
Two Display FHD with DP 1.2 Host	yes	yes	yes	yes	yes	yes	yes	yes	yes
	Only with High Res Mode (BIOS Setting)	,	no	no	In TB Mode	In TB Mode			
Works with Windows on G5,G6	yes	yes	yes	yes	yes	yes	yes	yes	yes

	Manageability	E24u & E27u G4	E24/7/34m & MultiportH UB	Z USB-C 2022	USB-C Essential Dock	USB-C Dock G5 &Tb Dock G4	Remarks
,	Remote Firmware Installer	✓	✓	✓	✓	√	For 2021 monitors, supported by HP Display Manager. For Docking Stations and E24d, supported by HP Firmware Installer, One Click Installer (OCI).
	HP Display Manager	✓	✓	✓			Includes remote monitor firmware installation, telemetry and asset tracking functionalities.
	Update Upon Disconnect					✓	
	Dock eTag					✓	IT can use to query product name, MAC address, FW version.
	Wake On LAN (WOL) In-band		✓	✓		✓	Wakes PC to push updates
	MAC-Address Passthrough (MAPT) In-band		✓	✓		✓	Shows address of PC, not monitor
	Preboot eXecution Environment (PXE) boot in-band		✓	✓	✓	✓	IT can issue commands to PC when awake or asleep
	Out-of-Band WOL (S4, S5)					✓	Wakes "off" PC. HP manageability is required.
	Out-of-Band MAPT (S4, S5)					✓	Connects to "off" PC. HP manageability is required
	Single Power On (Monitor Power Button controls PC)	✓				✓	HP manageability is required. SPO under discussion for Rose.
	KVM Switch			√ *			*Only on Z34c, Z32u; Z40c has Device Bridge 2.0

Connected PC IT Network Manageability

In-Band Wake On LAN (WOL), MAPT, PxE Boot

E24m, E27m, E34m, Z24u/m and Z27u/k monitors will deploy Manageability with a simpler implementation than Manageability 1.5 currently deployed in the USB-C G5 Docking Station.

For this core manageability, access is only supported when the PC platforms are awake, or during Sleep (S1-S3) when docked prior to entering standby mode.

Supported Connection Level

Hot Dock: System is running (S0) with dock attached, then placed into the Standby (S3). Support will end when PC enters Hibernate (S4) or Off (S5) state.

Not Supported Connection Level:

- Warm Dock: System is sleeping in Standby (S3), then connect dock.
- **Cold Dock**: System in Hibernate (S4) or Off (S5), then connect dock.

Network Manageability	SO PC Awake	S1-S3 PC in Sleep	S4 PC in Hibernate	S5 PC Off	When PC Disconnects
M-Displays &Mulitport HUB	✓	*If hot docked	X	X	X
Essential Dock	✓	X	X	X	X
USB-C G5 Docking Station	✓	✓	✓	✓	✓
Thunderbolt G4 Docking Station	✓	✓	✓	✓	✓