Dock & Display Guide for MacBook Air & MacBook Pro

Connecting multiple displays to MacBook Air and MacBook Pro

How many displays can be attached? How do you connect them? Can more be added?

Follow this 3-step guide to easily find the optimal display configuration.

Step 1:

Determine if the Mac will support the number of displays needed

Different machines will support a different number of displays due to processor and number of ports.

	Processor	# Displays	Display Configurations
MacBook Air 13 & 15-inch	Intel (2018-2019)	2	‣ One 5K at 60Hz, or ‣ Up to two 4K at 60Hz
	Intel (2020)	2	‣ One 6K at 60Hz, or ‣ One 5K at 60Hz, or ‣ Up to two 4K at 60Hz
	M1/M2	1	‣ One display up to 6K at 60Hz
MacBook Pro 13-inch	Intel (2017-2019)	2	‣ One 5K at 60Hz, or ‣ Up to two 4K at 60Hz
	Intel (2020)	2	‣ One 6K at 60Hz (4-port model only), or ‣ One 5K at 60Hz, or ‣ Up to two 4K at 60Hz
	M1/M2	1	‣ One display up to 6K at 60Hz
MacBook Pro 14-inch	M1 Pro	2	‣ Up to two 6K at 60Hz
	M2 Pro	2	‣ Up to two 6K at 60Hz over Thunderbolt, or one 6K at 60Hz over Thunderbolt and one 4K at 144Hz over HDMI ‣ One 8K at 60Hz or one 4K at 240Hz over HDMI
	M1 Max	4	‣ Up to three 6K and one 4K at 60Hz

	M2 Max	4	‣ Up to four external displays:
			  ‣ Up to three 6K at 60Hz over Thunderbolt and one 4K at 144Hz over HDMI
			‣ Up to three external displays:
			  ‣ Up to two 6K at 60Hz over Thunderbolt and one 8K at 60Hz or one 4K at 240Hz over HDMI

MacBook Pro 15-inch	Intel (2017-2019)	4	‣ Up to two 5K at 60Hz ‣ Up to four 4K at 60Hz
MacBook Pro 16-inch	Intel	4	‣ Up to two 6K at 60Hz ‣ Up to four 4K at 60Hz
	M1 Pro	2	‣ Up to two 6K at 60Hz
	M2 Pro	2	‣ Up to two 6K at 60Hz over Thunderbolt, or one 6K at 60Hz over Thunderbolt and one 4K at 144Hz over HDMI ‣ One 8K at 60Hz or one 4K at 240Hz over HDMI
	M1 Max	4	‣ Up to three 6K and one 4K at 60Hz

	M2 Max	4	‣ Up to four external displays:
			  ‣ Up to three 6K at 60Hz over Thunderbolt and one 4K at 144Hz over HDMI
			‣ Up to three external displays:
			  ‣ Up to two 6K at 60Hz over Thunderbolt and one 8K at 60Hz or one 4K at 240Hz over HDMI

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Step 2:

Plan out what needs to be connected and pick a dock with the connections needed

You can connect displays directly into the Mac, but a lot of times a dock is more convenient and less to plug and unplug as you arrive and leave your workstation.

Things to remember

Built-in ports, optional use

Some machines will have a built-in HDMI in addition to the Thunderbolt (USB-C) / USB4 connections that can be used in addition to a dock.

Multiple Thunderbolt / USB4 buses

Some machines will have multiple buses which means that each bus can have up to two displays through it. The total number of displays will be limited to the machine's overall display capability.

Multiple Docks

In addition to each Thunderbolt / USB4 bus supporting up to two displays, each bus will support a dock being used. Our docks will support up to two displays.

Bus 1   HDMI
Bus 2   Bus 3

16-inch & 14-inch MacBook Pro

Supports 4 total displays natively

	3+ Thunderbolt Ports	USB	Audio	Video	# Displays Supported	Card Reader	Portable	Professional Ports	
Thunderbolt Go Dock	✔	✔ Type-C & Type-A	✔ Combo 3.5mm	✔ HDMI	2 Up to one 8K or two 5K	✔ SD UHS-II		✔ 2.5GbE	Built-in power eliminates two power bricks for the most mobile full-featured dock
Thunderbolt Dock	✔	✔ Type-C & Type-A	✔ Combo 3.5mm		2 Up to one 8K or two 5K	✔ SD UHS-II			More Thunderbolt plus an incredible balance of everyday use ports
Thunderbolt Hub	✔	✔ Type-A			2 Up to one 8K or two 5K				Most cost-effective way to get more Thunderbolt ports
Thunderbolt Pro Dock		✔ Type-C & Type-A		✔ DisplayPort	2 Up to one 8K or two 4K	✔ SD UHS-II CFexpress Type B		✔ 10GbE CFexpress reader	AVB-ready 10GbE and dual SD/CFexpress card slots make this the complete pro solution
Thunderbolt 3 Dock		✔ Type-C & Type-A	✔ Combo 3.5mm S/PDIF optical	✔ Mini DisplayPort	2 Up to one 5K or two 4K	✔ SD UHS-II			Excellent selection of ports right where you need them
Thunderbolt 3 mini Dock		✔ Type-A		✔ Dual HDMI	2 Up to 4K		✔		Dual displays, USB, and Ethernet perfect at the desk and on the move
USB-C Travel Dock		✔ Type-A		✔ HDMI	1 Up to 4K	✔ SD UHS-II	✔		All the connectivity options you need for travel
USB-C Travel Dock E		✔ Type-A		✔ HDMI	1 Up to 4K	✔ SD UHS-II	✔		All the connectivity options you need for travel with Ethernet

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Desktop Docks Spec Comparisons

	OWC Thunderbolt Go Dock	OWC Thunderbolt Dock	OWC Thunderbolt Hub	OWC Thunderbolt Pro Dock	OWC Thunderbolt 3 Dock
Standout Feature(s)	Built-in power eliminates two power bricks for the most mobile full-featured dock	More Thunderbolt plus an incredible balance of everyday use ports	Most cost-effective way to get more Thunderbolt ports	AVB-ready 10GbE and dual SD/CFexpress card slots make this the complete pro solution	Excellent selection of ports right where you need them
Interface	Thunderbolt 4 & USB-C 10Gb/s	Thunderbolt 4 & USB-C 10Gb/s	Thunderbolt 4 & USB-C 10Gb/s	Thunderbolt 3	Thunderbolt 3
Total Ports	12	11	5	10	14
Power Source	Wall powered built-in power supply	Wall powered external power supply	Wall powered external power supply	Wall powered external power supply	Wall powered external power supply
Power (Charging)	Up to 90W dynamic	Up to 96W dynamic	Up to 60W dynamic	Up to 85W	Up to 85W
Ports	1 x Thunderbolt 4 uplink 2 x Thunderbolt 4 1 x USB-C 10Gb/s 2 x USB-A 10Gb/s 1 x USB-A 480Mb/s high-powered (5V, 1.5A) 1 x HDMI (2.1) 1 x 2.5Gb Ethernet 1 x 3.5mm combo audio 1 x SD 4.0 UHS-II reader	1 x Thunderbolt 4 uplink 3 x Thunderbolt 4 3 x USB-C 10Gb/s 1 x USB-A 480Mb/s high-powered (5V, 1.5A) 1 x Gigabit Ethernet 1 x 3.5mm combo audio 1 x SD 4.0 UHS-II reader	1 x Thunderbolt 4 uplink 3 x Thunderbolt 4 1 x USB-A 10Gb/s high-powered (5V, 1.5A)	1 x Thunderbolt 3 uplink 1 x Thunderbolt 3 1 x USB-C 10Gb/s 3 x USB-A 10Gb/s 1 x DisplayPort (1.4) 1 x 10Gb Ethernet (AVB compliant) 1 x SD 4.0 UHS-II reader 1 x CFexpress (Type B) reader	1 x Thunderbolt 3 uplink 1 x Thunderbolt 3 1 x USB-C 10Gb/s 3 x USB-A 5Gb/s 2 x USB-A 5Gb/s high-powered (5V, 1.5A) 1 x miniDisplayPort (1.2) 1 x Gigabit Ethernet 1 x 3.5mm combo audio 1 x S/PDIF 1 x SD 4.0 UHS-II reader 1 x micro SD 4.0 UHS-II reader
Security Lock	1 x Kensington Security Slot	1 x Kensington Security Slot 1 x Kensington Nano Security Slot	1 x Kensington Security Slot	1 x Kensington Security Slot	
Dock Display Support	Up to two displays via HDMI port and Thunderbolt (USB-C) ports. Thunderbolt (USB-C) ports support: ‣ Thunderbolt and USB-C displays natively ‣ HDMI and DisplayPort via USB-C adapter	Up to two displays via Thunderbolt (USB-C) ports supporting: ‣ Thunderbolt and USB-C displays natively ‣ HDMI and DisplayPort via USB-C adapter	Up to two displays via Thunderbolt (USB-C) ports supporting: ‣ Thunderbolt and USB-C displays natively ‣ HDMI and DisplayPort via USB-C adapter	Up to two displays via DisplayPort and Thunderbolt (USB-C) ports. Thunderbolt (USB-C) ports support: ‣ Thunderbolt and USB-C displays natively ‣ HDMI and DisplayPort via USB-C adapter	Up to two displays via mini DisplayPort and Thunderbolt (USB-C) ports. Thunderbolt (USB-C) ports support: ‣ Thunderbolt and USB-C displays natively ‣ HDMI and DisplayPort via USB-C adapter
OWC ClingOn	Yes	Yes	Yes	Yes	
Dimensions	1.4 in (H) x 3.7 in (L) x 9.5 in (W) 3.6 cm (H) x 9.2 cm (L) x 24.1 cm (W)	1.0 in (H) x 2.9 in (L) x 7.8 in (W) 2.6 cm (H) x 7.3 cm (L) x 19.8 cm (W)	0.7 in (H) x 2.9 in (L) x 4.6 in (W) 1.7 cm (H) x 7.3 cm (L) x 11.8 cm (W)	1.4 in (H) x 4.3 in (L) x 8.3 in (W) 3.5 cm (H) x 10.8 cm (L) x 21.2 cm (W)	1.0 in (H) x 3.5 in (L) x 9.1 in (W) 2.5 cm (H) x 8.9 cm (L) x 23.0 cm (W)
Weight	2.1 lb / 949 g	0.88 lb / 400.0 g	0.46 lb / 209.0 g	1.41 lb / 640.0 g	1.10 lb / 500.0 g
Part Number	OWCTB4DKG11P	OWCTB4DOCK	OWCTB4HUB5P	OWCTB3DKPRO	OWCTB3DK14PSG

ClingOn

Secure your workflow by stabilizing any USB-C connection including Thunderbolt™

Dropping a cable during file transfers or a work session can be devastating. ClingOn is designed to hedge that risk by reducing – if not completely eliminating – the slight and ongoing cable strain of external devices with any USB-C connection including Thunderbolt 3 and 4 ports.

‣ Fits most USB-C and Thunderbolt 3 and 4 ports
‣ Use on external drives, enclosures, eGPUs and other devices where a secure connection is desired
‣ Strong adhesive backing for universal compatibility (where space allows)
‣ Supports screw mounting for ultimate cable security (with compatible devices)
‣ Rigid plastic exterior and soft foam interior lining

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Portable Docks Spec Comparisons

GREAT TO PAIR WITH POWER ADAPTERS

	OWC Thunderbolt 3 mini Dock	OWC USB-C Travel Dock	OWC USB-C Travel Dock E
Standout Feature(s)	Dual displays, USB, and Ethernet perfect at the desk and on the move	All the connectivity options you need for travel	All the connectivity options you need for travel with Ethernet
Interface	Thunderbolt 3 (integrated cable)	USB-C (integrated cable)	USB-C (integrated cable)
Total Ports	5	5	6
Power Source	Bus powered	Bus powered	Bus powered
Power (Charging)		Up to 100W pass-though	Up to 100W pass-though
Thunderbolt			
USB-C		1 x power pass-through only	1 x power pass-through only
USB-A	1 x 5Gb/s 1 x 480Mb/s	2 x 5Gb/s	2 x 5Gb/s
Display	2 x HDMI (2.0)	1 x HDMI (2.0)	1 x HDMI (2.0)
Ethernet	1GbE		1GbE
Audio			
Card Reader		1 x SD 4.0 UHS-II	1 x SD 4.0 UHS-II
Security Lock			
OWC ClingOn			
Dimensions	0.7 in (H) x 2.6 in (L) x 4.9 in (W) 1.9 cm (H) x 6.5 cm (L) x 12.4 cm (W) Integrated cable length: 7.9 in / 20.0 cm	0.9 in (H) x 3.1 in (L) x 3.1 in (W) 2.3 cm (H) x 8.0 cm (L) x 8.0 cm (W) Integrated cable length: 5.9 in / 15.0 cm	1.0 in (H) x 3.1 in (L) x 3.1 in (W) 2.5 cm (H) x 8.0 cm (L) x 8.0 cm (W) Integrated cable length: 5.9 in / 15.0 cm
Weight	0.33 lb / 150.0 g	0.26 lb / 120.0 g	0.38 lb / 174.0 g
Part Number	OWCTB3MDK5P	OWCTCDK5P2SG	OWCTCDK6P2SG

Power Delivery
(a.k.a Charging Power)

How much is actually needed?
In real-world, probably not as much as you think. For example, with just 27W of power delivery to a MacBook Pro (14-inch, 2021), you can create a 30-minute 3D render and not lose 1% battery power.

What is dynamic power delivery?
When we say "Up to 85W" this means that the charging power going to the computer will be whatever the computer is capable of up to 85W.

When we say "Up to 90W dynamic" this means that the dock will dynamically adjust the charging power to the computer based on the power load the dock is receiving from bus-powered devices.

What is power pass-through?
Docks and adapters with a power pass-through USB-C port allows for a USB-C power adapter to be plugged in and the power passed through to the computer for charging. This means that you do not need to use up another port on your computer to charge. This also means that when using something like an iPad where there is only one Thunderbolt or USB-C port, you do not have to sacrifice charging for dock or adapter connectivity.

Disconnect in One Click
Safely disconnect multiple drives in a single click. OWC Dock Ejector was designed by OWC hardware and software engineers to ensure all data is written before disconnection, saving time and protecting against data loss. It makes losing your hard-earned work a thing of the past.

OWC DOCK EJECTOR

Apple SuperDrive Ready
OWC's free Dock Ejector software also includes a special driver that enables your OWC Dock to play and burn CDs and DVDs with the Apple SuperDrive. Just connect the SuperDrive to an open USB-A port on the OWC Thunderbolt Dock for bus power to watch a DVD movie, listen to music CDs, create a backup disk, and install software.

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Step 3:

Need to go beyond the native machine support? Add an OWC Dual Display Adapter…or two!

Hello Dual-Displays.
Now on M1 and M2 Mac Models.

Oh and BTW… it works with USB-C and Thunderbolt PCs and Mac models too 😉

Say hello to the **OWC USB-C Dual HDMI 4K Adapter**. It's the DisplayLink powered solution for expanding your M1 and M2 machine's digital window for easier video editing, seeing more of your workflow simultaneously, or even creating eye-catching digital signage. For the ultimate in convenience, we gave this compact, bus-powered adapter a USB-C power pass-thru port so you can charge/power your laptop. Being the leading dock innovator for Mac, we know you love having ports freed up on your machine!

Add displays to your Mac and PC with ease. Use any existing display, connect it to your adapter, install DisplayLink software, and plug it into any USB port.

Part Number: OWCCADPDL2HDMI

Question: How many adapters can be used?

On a Mac, macOS supports up to four displays via the OWC Dual Display Adapter. On a Windows PC, up to six displays can be attached via the OWC Dual Display Adapter.

Question: Can these adapters be used plugged into OWC docks?

Yes!

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