

ThinkPad

HOW-TO-SELL GUIDE:

LENOVO DOCKING SOLUTIONS

Lenovo



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WHO WE ARE

At Lenovo, our drive is to meet the demands of today's ever-changing workspaces. Since the introduction of the ThinkPad and its dock in 1992, we have dedicated ourselves to transform your work experiences. We offer innovative technology and practical solutions that complement and enhance productivity of the new workforce.

ThinkPad



WHY LENOVO THINKPAD DOCKS

Lenovo docking stations are designed to help users streamline their workflow, minimizing wasted time and amplifying productivity, whether in office or at home. Connect to a dock and charge your laptop or mobile devices, plug in to USB peripherals, transfer data, and enjoy multiple high-resolution displays all at once.

THINKPAD QUALITY ASSURANCE

UNIVERSAL COMPATIBILITY

SUSTAINABLE DESIGN

IT MANAGEABILITY

LENOVO DOCK MANAGER FW UPDATE TOOL

ThinkPad



01

THINKPAD QUALITY ASSURANCE

Lenovo's range of docks undergo rigorous ThinkPad quality assurance tests. Be it the 7,000+ cable bending tests, 100s of hot ejects, or the 48-hour extreme temperature testing cycles, this range of docking stations are meticulously designed keeping customer requirements in mind. They are ergonomically crafted and ensure smooth connectivity, delivering a quality experience every single time.



7,000+

Continuous Cable Bending Test



2000+

Torturous Plug and Play Tests



48-Hour

Extreme Temperature Test

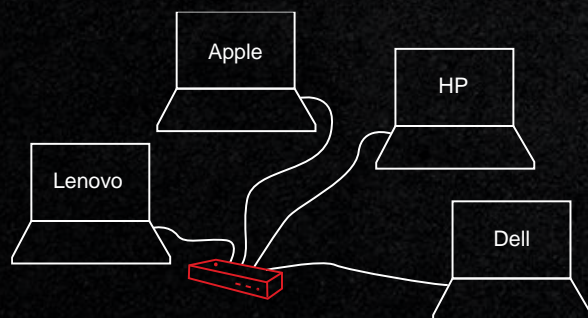
ThinkPad



02

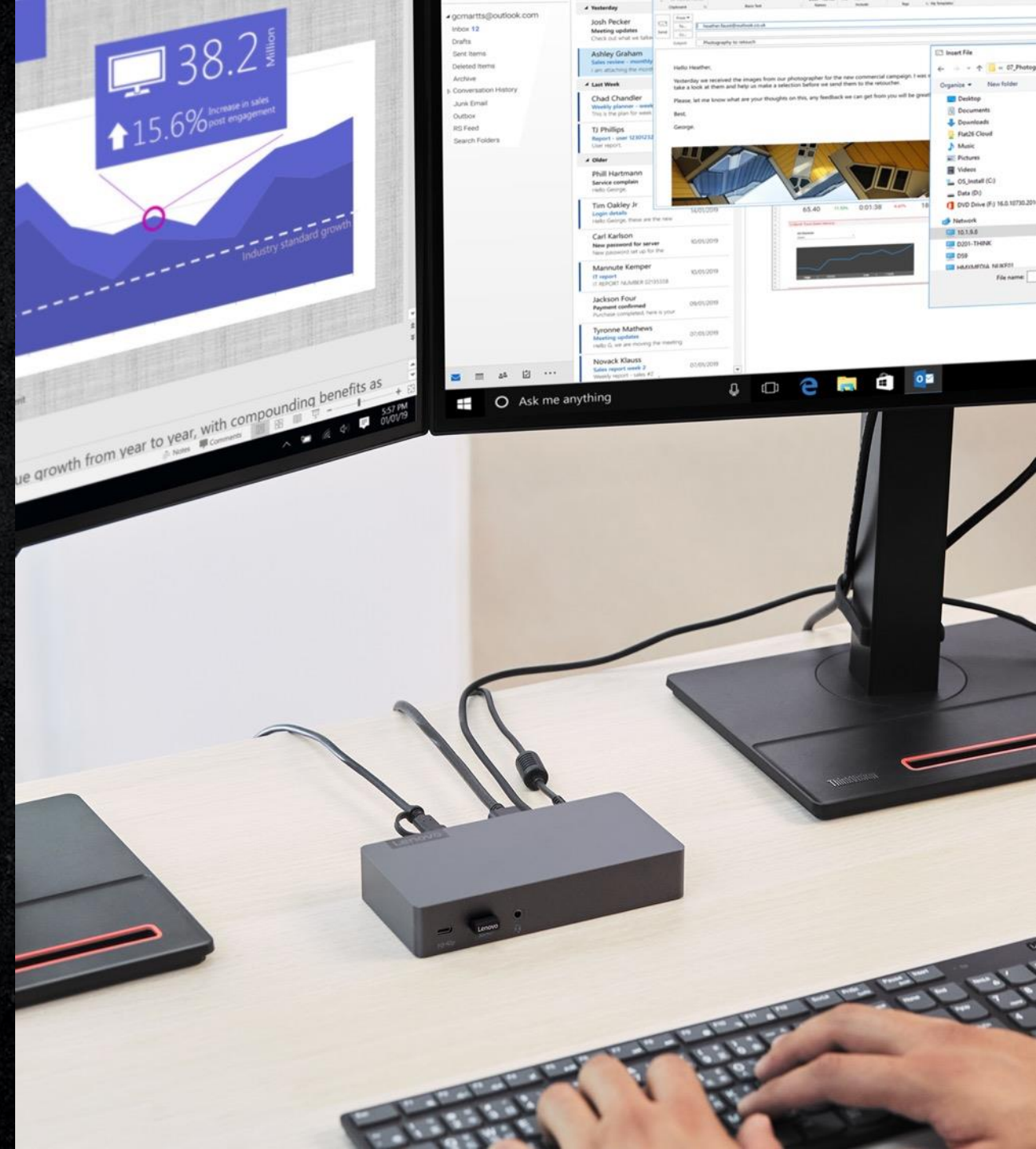
UNIVERSAL COMPATIBILITY

At Lenovo, we understand that most businesses use a variety of brands to meet their ever-changing technology needs. To better serve our customers, Lenovo cable docks are designed to be compatible with not just Lenovo laptops, but also laptops from HP, Dell, and Apple.* Regardless of brand, Lenovo docking station will expand the data, power, and video capabilities of laptops. Moreover, ThinkPad laptop user also gets the extra benefit of great IT management features like such as PXE Boot, WOL and MAC address pass-through.



Lenovo USB-C and Thunderbolt™ Docks function with laptops that support industry standard USB-C Alt-Mode or Thunderbolt™ protocols through their Type-C™ port. User may experience reduced performance when not used with matching protocol.

Lenovo USB-C and Thunderbolt™ Docks support additional features, such as MAC address pass-through WOL and mirrored power button, on most Lenovo ThinkPad laptops, but such features may not be available on certain other Lenovo laptops or non-Lenovo branded laptop systems.



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SUSTAINABLE DESIGN

For fifteen years, Lenovo's research and development teams have been working with post-consumer content suppliers to develop and qualify new grades of plastic resins for reuse in the manufacturing of new Lenovo products. In accordance with Lenovo's sustainability efforts, the docking stations in our portfolio feature recycled materials. Of the plastics used, approximately 25% are post-consumer recycled content (PCC), to help reduce waste.



25%



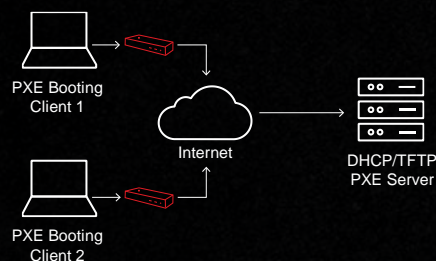
Post-consumer Recycled Content

ThinkPad



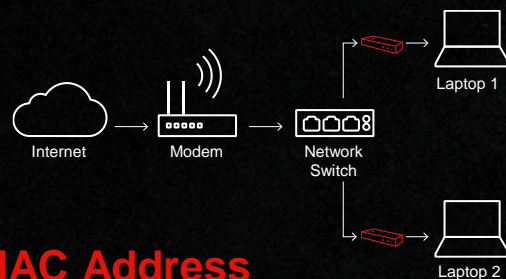
04

MANAGEABILITY



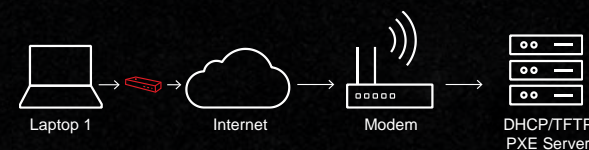
PXE Boot

- Preboot execution environment
- Makes the computer more manageable by enabling the computer to start from a server



MAC Address Pass-through

- Overrides dock MAC address when connected to a ThinkPad laptop
- Helps IT Manager identify authorized systems for corporate security management



Wake-on-LAN (WOL)

- Wakes up or boots your laptop from sleep, hibernation, or power-off mode.
- Remotely triggers laptop to boot and perform scheduled maintenance tasks, without need for the IT Manager to physically visit each laptop.

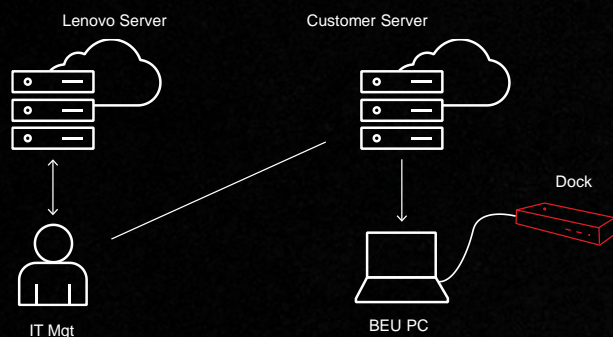


*PXE boot, MAC Address Pass-through, WOL supported on selected ThinkPad. Refer to www.lenovo.com/accessoriesguide.
*You can enable the PXE function, the MAC address Pass Through function, and the Wake on LAN function through configuring the BIOS on your computer. For more information about configuring the BIOS, refer to the user guide that comes with your computer.

05

IT Tool: Lenovo Dock Manager FW Update Tool

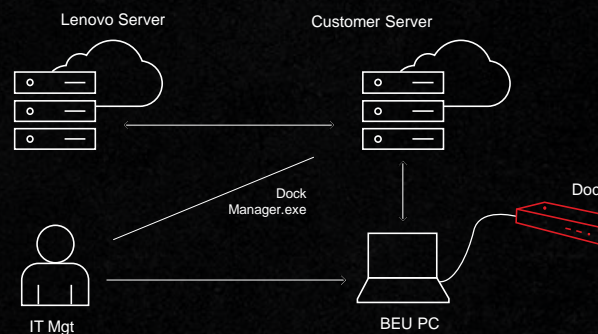
Today's Industry Experience



Manual Operations

- Access Lenovo Support page for FW updates
- Manually updates FW updates onto local server
- FW deployed via SSCM or LANDesk to BEU PC
- Dock updates when BEU PC is connected

Lenovo Experience with Dock Manager*



**No More Manual Checking.
No More Manual Triggers!**

Dock Manager Operations

- Automatically runs Lenovo Dock Manager on laptops
- Detects, downloads and updates FW files if there is new FW package
- No interruptions to end users
- Seamlessly configure dock manager with local repository details



*Dock manager tool will be available in September 2020 ; Download Link: <https://download.lenovo.com/cdrtp/wp/usb-docks.html>

LENOVO—BEST IN CLASS DOCKING PORTFOLIO

USB-C & TBT DOCK

USB 3.0 DOCK

MECHANICAL DOCK

\$419

ThinkPad Thunderbolt 3
WorkStation Dock Gen 2



\$329

ThinkPad Thunderbolt 3
Dock Gen2



\$274

Lenovo Thunderbolt 3
Essential Dock



ThinkPad Hybrid USB-C
with USB-A Dock



\$219

ThinkPad USB-C
Dock Gen2

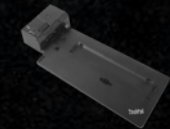


\$159

Lenovo USB-C Mini Dock



ThinkPad Ultra Docking
Station CS18 - 135W



ThinkPad Pro Docking
Station CS18 – 135W



ThinkPad Basic Docking
Station CS18 – 90W



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THINKPAD THUNDERBOLT™ DOCKING STATIONS

Powered by Intel® Thunderbolt™ technology, you can enjoy extended compatibility on both USB-C and Thunderbolt™-enabled laptops. Enhance work efficiency with one-cable docking solution for 40Gbps high-speed data (max) and connect to multiple 4K displays. The single cable can also be used to charge ThinkPad laptops (65W) and ThinkPad Mobile Workstation laptops (170W).

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Affordable dock
for enterprise customers



Lenovo Thunderbolt™ 3 Essential Dock

- Supports up to two 4K UHD* resolution monitors
- Two video ports: 1 x DisplayPort 1.4 and 1 x HDMI 2.0
- Four USB ports: 2 x USB 3.0 (5 Gbps), 2 x USB-C (10 Gbps)
- Best-suited for enterprise customers who want Thunderbolt™ 3 dock at an affordable price

Designed for
large enterprises



ThinkPad Thunderbolt™ 3 Dock Gen 2

- 5K video capability
- Supports up to four external displays or three 4K UHD* monitors
- Five video ports: 2 x DisplayPort 1.4, 2 x HDMI 2.0, and 1 x Thunderbolt™ 3 Downstream Port (video/data)
- Five USB 3.1 ports (10 Gbps; 1 x always-on charging)
- Best-suited for enterprise customers who want Premium Thunderbolt 3 dock supports 40Gbps data

Ideal for
advanced users



ThinkPad Thunderbolt™ 3 Workstation Dock Gen 2

- 5K video capability
- Supports up to four external displays or three 4K UHD* monitors
- Five video ports: 2 x DisplayPort 1.4, 2 x HDMI, and 1 x Thunderbolt™ 3 Downstream Port (video/data)
- Five USB 3.1 ports (10 Gbps; 1 x always-on charging)
- Charge (max 170W) Mobile Workstations
- Support for ThinkPad systems and ThinkPad Mobile Workstation with Split Slim Tip and Thunderbolt™ docking ports
- Best-suited for enterprise customers who want Premium Thunderbolt™ 3 dock that supports both MWS and USB-C laptops

ThinkPad

* Final video capability depends on system graphics capability.

THINKPAD USB-C AND HYBRID DOCKING STATIONS

Uncover the full capability of any device with the new-gen ThinkPad USB-C and hybrid dock. Based on the latest USB-C and DisplayLink technology, it provides power charging, high-speed data transfer, and supports 4K UHD resolution for select ThinkPad and Lenovo laptops.

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Portable dock
ideal for employees
on the move



Lenovo USB-C Mini Dock

- Supports max one 4K UHD* resolution monitor
- Two video ports: 1 x HDMI 2.0 & 1 x VGA
- Three USB ports: 1 x USB-A 3.1 Gen1, 1 x USB-C 3.1 Gen 1, 1 x USB-A 2.0

One-cable docking
solution for enterprise
networking



ThinkPad USB-C Dock Gen 2

- Supports up to three 4K UHD* resolution monitors
- Three video ports: 2 x DisplayPort 1.4 and 1x HDMI 2.0
- Six USB ports: 2 x USB-A 2.0, 3 x USB-A 3.1 Gen2 (10 Gbps, 1 x always-on charging); 1 x USB-C (10 Gbps, 5V/3A)

Best-suited for
mixed-PC or shared-desk
environments



ThinkPad Hybrid USB-C with USB-A Dock

- Supports up to two 4K UHD* resolution monitors
- Four video ports: 2 x DisplayPort 1.4 and 2 x HDMI 2.0
- Six USB ports: 2 x USB 2.0: 3 x USB 3.1 (Gen2–10 Gbps, 1 x always-on charging); 1 x USB-C (10 Gbps, 5V/3A)
- Port replication to non-USB-C laptops through the USB-C to USB-A adapter

ThinkPad

* Final video capability depends on system graphics capability.

THINKPAD MECHANICAL DOCKING STATIONS

Offering the best docking experience for large enterprise customers, the ThinkPad mechanical docking stations come with an innovative side connector designed exclusively for ThinkPad laptops. Compatible with select systems, you can now connect conveniently and securely to a range of USB accessories and external displays. The RapidCharge* support and a mirrored power button simplifies going mobile instantly.

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*Note that Rapid Charge requires the 65W power adapter



Affordable mechanical
docking solution



ThinkPad Basic Docking Station

- Supports one 4K UHD* resolution monitors
- Two video ports: 1 x DisplayPort 1.4 and 1 x VGA
- Four USB ports: 2 x USB 3.1 Gen 1 (5 Gbps, 1 x always power-on), 2 x USB 2.0)

Desktop expansion solution
for graphic-intensive work



ThinkPad Pro Docking Station

- Supports up to two 4K UHD* resolution monitors
- Two video ports: 2 x DisplayPort 1.4
- Six USB ports: 3 x USB 3.1 Gen 1 (5 Gbps, 1 x always power-on); 2 x USB 2.0, 1 x USB-C (5 Gbps, 5V/3A bus power)

Enterprise-class
universal docking




ThinkPad Ultra Docking Station

- Supports up to three 4K UHD* resolution monitors
- Four video ports: 2 x DisplayPort 1.4, 1 x HDMI 2.0 and 1 x VGA
- Six USB ports: 4 x USB 3.1 Gen 2 (10 Gbps, 1 x always power-on); 2 x USB-C (10 Gbps, 5V/3A bus power)

ThinkPad










* Final video capability depends on system graphics capability.

LENOVO DOCKING PORTFOLIO CHEAT SHEET

CUSTOMER	Basic single display docking needs	Core dual display productivity	USB-C and legacy USB-A laptop support	Dual 4K advanced users	The most advanced data and high-resolution display	Single dock for all users, mobile workstations, Thunderbolt™, USB-C	Simplified security
PRODUCT	Lenovo USB-C Mini Dock 	ThinkPad USB-C Dock Gen 2 	ThinkPad Hybrid Dock 	Lenovo Thunderbolt 3 Essential Dock 	ThinkPad Thunderbolt 3 Dock Gen 2 	ThinkPad Thunderbolt 3 WorkStation Dock Gen 2 	ThinkPad Basic/Pro/Ultra Docking Station 
KEY FEATURES	1 x display (4k@60hz) - VGA port support	2 x display (4k@60hz) or 3 x display (1080p)	2 x display (4k@60hz) -supports Legacy compatibility (USB-A)	2 x display (dual 4k@60hz)	4 x display (dual 4k@60hz, 5K display capability) - USB-C or Thunderbolt™ monitor support	4 x display (dual 4k@60hz, 5K display capability) - delivers 170W to MWS universal dock for X/T series - USB-C or Thunderbolt™ monitor support	Up to 3 x display (dual 4K @ 60hz), - native ethernet, vPro pass-through supported - Master key slot



DOCKING PORTFOLIO COMPARISON

	Lenovo USB-C Mini Dock 	ThinkPad USB-C dock Gen 2 	ThinkPad Hybrid USB-C with USB-A Dock 	Lenovo TBT Essential Dock 	ThinkPad Thunderbolt™ 3 Dock Gen 2 	ThinkPad Thunderbolt™ 3 WorkStation Dock Gen 2 	ThinkPad Basic Docking Station 	ThinkPad Pro Docking Station 	ThinkPad Ultra Docking station 
Price	\$159.99	\$219.99	\$296.99	\$274.99	\$319.99	\$419.99	\$219.99	\$274.99	\$329.99
Docking Solution	DP Alt Mode	DP Alt Mode	DisplayLink DL6950	Thunderbolt™ 3	Thunderbolt™ 3	Thunderbolt™ 3	Side Dual USB-C and Ethernet	Side Dual USB-C and Ethernet	Side Dual USB-C and Ethernet
Video Ports	1 x HDMI2.0, 1 x VGA	2 x DP1.4, 1 x HDMI2.0	2 x DP1.2, 2 x HDMI2.0	1 x DP1.4, 1 x HDMI2.0	2 x DP1.4, 2 x HDMI2.0, 1 x TBT	2 x DP1.4, 2 x HDMI2.0, 1 x TBT	1 x DP1.4, 1 x VGA	2 x DP1.4	2 x DP1.4, 1 x HDMI2.0, 1 x VGA
Max Display Number*	1	3	2	2	4	4	1	2	3
Max Video Resolution*	1 x 4k@60Hz	2 x 4K@60Hz + 1 x 4k@30Hz**	2 x 4K@60Hz	2 x 4k@60Hz	1 x 5K 2 x 4K@60Hz + 1 x 4K@30Hz	1 x 5K 2 x 4K@60Hz + 1 x 4K@30Hz	1 x 4K@60Hz	2 x 4K@60Hz	3 x 4k@60Hz
USB (downstream)	1 x USB-A 3.0 5Gbps 1 x USB2.0 1 x USB-C 5Gbps data	3 x USB-A 3.1 10Gbps 2 x USB2.0 1 x USB-C 10Gbps data	3 x USB-A 3.1 10Gbps 2 x USB2.0 1 x USB-C 10Gbps data	2 x USB-A 3.0 5Gbps 2 x USB-C 10Gbps data	5 x USB-A 10Gbps (1 always on) 1 x TBT 40Gbps, 5V/3A	5 x USB-A 10Gbps (1 always on) 1 x TBT 40Gbps, 5V/3A	2 x USB3.0 5Gbps 2 x USB2.0	3 x USB3.0 5Gbps 2 x USB2.0 1 x USB-C 10Gbps data, 5V/3A	4 x USB3.1 10Gbps 2 x USB-C 10Gbps data, 5V/3A
3.5mm Combo Audio	YES	YES	YES	YES	YES	YES	YES	YES	YES
System Charging	45W	60W	90W	65W	65W	170W	65W	85W	65W
Ethernet	1GbE, WOL/PXE Boot, MAC address Pass Thru	1GbE, WOL/PXE Boot, MAC address Pass Thru	1GbE, WOL/PXE Boot, MAC address Pass Thru	1GbE, WOL/PXE Boot, MAC address Pass Thru	1GbE, WOL/PXE Boot, MAC address Pass Thru	1GbE, WOL/PXE Boot, MAC address Pass Thru	1GbE, WOL/PXE Boot, MAC address Pass Thru, vPro	1GbE, WOL/PXE Boot, MAC address Pass Thru, vPro	1GbE, WOL/PXE Boot, MAC address Pass Thru, vPro
FW update (Dock Manager)	YES	YES	YES	YES	YES	YES	YES	YES	YES
Power Button clone	N/A	YES	YES	N/A	YES	YES	YES	YES	YES
Docking Cable	240mm undetachable USB-C cable	1m detachable USB-C cable	1m detachable USB-C cable with USB-C to USB-A adapter	0.7m TBT3 cable	0.7 TBT cable	0.7m split cable(Slim tip and TBT split connector)	Side Connection	Side Connection	Side Connection
Warranty	1 year	3 year	3 year	1 year	3 year	3 year	3 year	3 year	3 year

PART NUMBER LIST

Refer to Dock support (FW/Driver/Video matrix) with link:
<https://support.lenovo.com/us/en/solutions/migr-4tpjf4>

Refer to more dock information with link:
<https://accessorysmartfind.lenovo.com/dock>



MARKETING DESCRIPTION

OPTION PN

ThinkPad Basic Docking Station		40AG0090XX
ThinkPad Pro Docking Station		40AH0135XX
ThinkPad Ultra Docking Station		40AJ0135XX
ThinkPad Hybrid USB-C with USB-A Dock		40AF0135XX
ThinkPad Thunderbolt™ 3 Dock Gen 2		40AN0135XX
ThinkPad Thunderbolt™ 3 Workstation Dock Gen 2		40ANY230XX
ThinkPad USB-C Dock Gen 2		40AS0090XX
Lenovo USB-C Mini Dock		40AU0065XX
Lenovo Thunderbolt™ 3 Essential Dock		40AV0135XX

* XX stands for specific country code, please refer to smartfind for country specific PN

LENOVO DOCKING CABLE PORTFOLIO

USB-C	<p>USB C → USB C male cable 2m/1m</p>  <p>4X90Q59480 – 2m 4X90U90619 – 1m</p>	<p>Lenovo Hybrid USB-C with USB-A Cable</p>  <p>4X90U90618</p>	<p>Hybrid USB-C with USB-A Cable – 2m *</p>  <p>4Z50V83108</p>
THUNDERBOLT	<p>Lenovo Thunderbolt 3 Cable 0.7m</p>  <p>4X90U90617</p>	<p>Thunderbolt 3 Cable – 1m *</p>  <p>4Z50P35645</p>	<p>Thunderbolt 3 Cable – 2m *</p>  <p>4Z50Q79291</p>
SPECIALITY	<p>ThinkPad TBT3 Workstation Dock Split Cable</p>  <p>4X90U90616</p>	<p>ThinkPad TBT3 Workstation Dock Slim tip Y cable</p>  <p>4X90U90620</p>	<p>ThinkPad TBT3 Workstation Dock 1.5M Split Cable</p>  <p>4X90U90621</p>

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* VLH cables

DOCK AND MONITOR-BASED EXPANSION: USER CASE COMPARISON

Standalone Docking



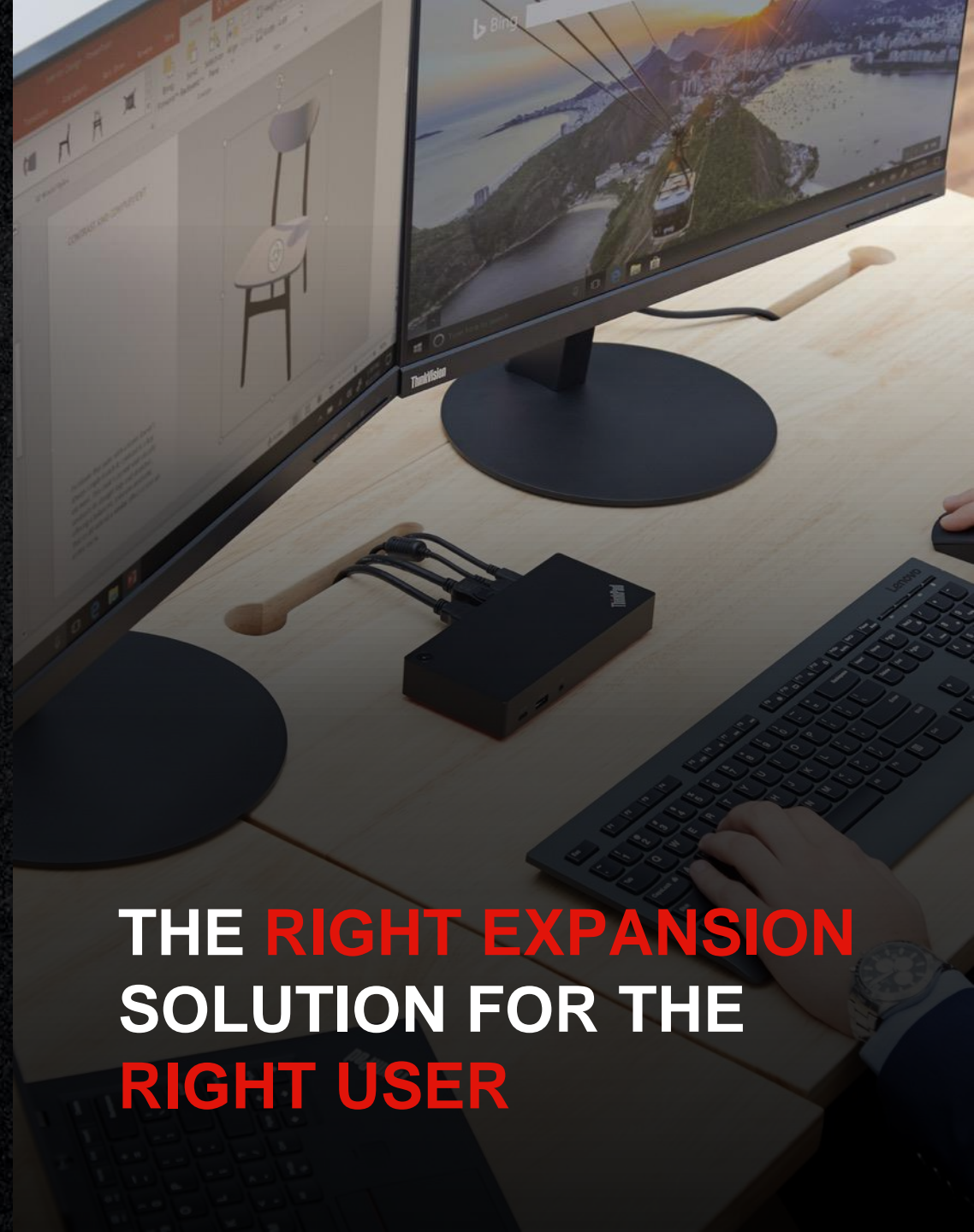
BEST FOR
users in need of **advanced expansion**
and a premium experience in
**manageability, flexibility, and easy
port accessibility**

Monitor Docking



BEST FOR
users needing **basic expansion with
1 monitor** and port replication for a
streamlined desktop experience

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**THE RIGHT EXPANSION
SOLUTION FOR THE
RIGHT USER**

CUSTOMER NEED VS RIGHT DOCKING SOLUTION



Docking-integrated Monitors

“It’s time to replace my monitors and I want a single display-docking solution”



Stand-alone Docking Solutions

“My current monitors have plenty of life, but I need to update my docks to latest standards”

“I need simple connection for more than 2 monitors”

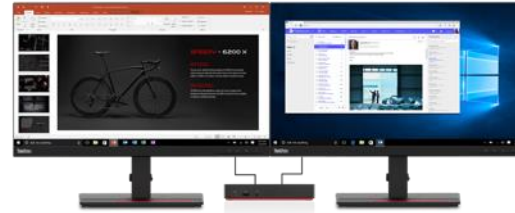
“I find firmware deployment and updating a challenge”

“I want one dock that can support both classic ThinkPads and Mobile Workstation”

TWO MONITORS USE CASE

Standalone Docking Competitive Points Summary

- Friendly UX with Front Access
- Power button mirrored for ease of use
- More USB-A and Audio combo ports
- FW update tool for easy IT manageability



	USB-C Dock G2 + 2 x T24i - 20	2 x P24h-20
Benefits to BEU	Easy access and user friendly with abundant front ports; Future proof with higher spec	Neat look but not easy access with back ports, industry legacy spec
Power Button	Dock Power button mirrors laptop's power button to power on/off; wake up laptop even when the lid is closed	N/A
USB-A Port	9 usable USB-A with one cable connection, up to 10 Gbps data speed (total 13 ports) <ul style="list-style-type: none"> • 5 x USB-A (2 x USB2.0, 3 x USB-A 10Gbps, 5V/1.5A) • 4 x USB-A 3.0 5Gbps, 900mA per monitor, only 4 are useable 	Total 8 USB-A but only 4 are usable with one cable connection, 5V/900mA <ul style="list-style-type: none"> • 4 x USB-A 3.0 5Gbps, 900mA per Monitor, daisy-chain support display only,
USB-C Device Port	1 x USB-C downstream port, 5V/3A, 10Gbps	N/A
3.5mm Combo Audio	Combo Audio	No, only speaker
Manageability to IT Manager	Devices are manageable and controllable IT Tool helps IT manager to make it easier	N/A
FW Update Utility	One click tool to update Dock FW with silence installation, ease IT manager's workload	N/A

LENOVO DOCKING STATION MOUNTING KIT

The Lenovo Docking Station Mounting Kit is the perfect solution for professionals who need a clutter-free workspace that doesn't cramp their style. Rather than messing up your desk with a tangle of cables, you can now hide your docking station neatly underneath your desk or behind your ThinkVision monitor stand.

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COMPATIBLE DISPLAYS AND DOCKS

MOUNTING SCENARIOS	Back-to-Monitor, Under-the-Desk
COMPATIBLE DOCKS	ThinkPad USB-C Dock Gen 2 ThinkPad Hybrid USB-C with USB-A Dock ThinkPad Thunderbolt 3 Essential Dock ThinkPad Thunderbolt 3 Dock Gen 2 ThinkPad Thunderbolt 3 Workstation Dock Gen 2
COMPATIBLE MONITORS	ThinkVision Monitors: P24h-10, P24q-10, P27u-10, P27h-10, P27q-10, T2054p, T2254, T2254p, T23d, T24d, T22i, T23i, T24i, T27i, T22v, T24m, T24v, New LT1913p, T1714p
PN	4XF0S99497



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LENOVO DOCKING SOLUTIONS



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Depending on many factors such as the processing capability of peripheral devices, file attributes, and other factors related to system configuration and operating environments, the actual transfer rate using the various USB connectors on this device will vary and is typically slower than the data rates as defined by the respective USB specifications: - 5 Gbit/s for USB 3.1 Gen1; 10 Gbit/s for USB 3.1 Gen2 & 20 Gbit/s for USB 3.2.

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