Rocstor

Rocstor ThunderConnect RD12 Thunderbolt 4
Multi-Display Docking Station

User Manual
Y10P036-S1

Important Safety Notice

WARNING:
Please follow these safety instructions. Failure to do so may result damages or injury. It is normal that the device becomes very warm during use.

Please note that:
Continuous contact with warm surfaces for extended time may cause discomfort or injury. In order to reduce the possibility of overheating or heat-related injuries, always allow needed ventilation around the device and use care when handling it. Avoid instances where your skin is in extended contact with the device when plugged into the host computer. It is not recommended to sleep with the device when plugged into a host computer. Avoid placing the device under a pillow, blanket, or your body when connected to a host computer. If you have a medical condition that affects your ability to detect heat against the body, extra care should be used. Never use the device in locations with water, such as a sink, bathtub, or shower stall. Never connect or disconnect the device with wet hands.

Introduction

Rocstor introduces the most powerful Thunderbolt™ 4 dock, offering an advanced, efficient, and versatile I/O solution with speeds of up to 40Gb/s for data and video transmission. The Thunderbolt 4 port enables cascading Thunderbolt devices up to 6 levels, supporting one 8K monitor or two 4K/60Hz monitors. Additionally, it allows for connecting three displays simultaneously, achieving triple displays output (max 4K/60Hz*2 + 4K/30Hz) with distinct images when paired with TBT4/USB4 Windows PCs. The RJ45 port supports a maximum bandwidth of 2.5G, while the USB ports facilitate rapid 10G data transmission. The Type-C PD port supports either max 10G data transmission or mobile phone charging at up to 30W. Furthermore, it features a smart power function that optimally distributes power based on connected device consumption, maximizing the use of external power supply. Designed for TBT4/USB4-based PCs, it's also compatible with TBT3/DP-Alt-mode PCs.

Package Contents

Before utilizing this unit, kindly inspect the packaging to ensure the following items are included:

- Main Unit x1
- User Manual x1
- 150W DC Power Adapter x1
- Thunderbolt 4 M/M Cable x1 (optional)

Features

- Adopting Goshen Ridge solution.
- Slim, compact design.
- Designed for TBT4/USB4-based PCs and compatible with TBT3/DP-Alt-mode PCs.
- Supports Thunderbolt 4 max 40Gbps for high-speed data and outstanding video transfer, compatible with TBT3, USB4, DP Alt mode, and USB protocols.
- Among all video ports, supports max 8K/30Hz for one port, dual 4K/60Hz, or 4K/60Hz+4K/60Hz+4K/30Hz on Windows MST host.
- USB-C 10G DFP supports PD3.0 max 30W output to charge mobile phones.
- RJ45 supports 10M/100M/1000M/2.5G bandwidth.
- SD/TF supports SD4.0 with max 312MBps.
- USB ports support max 10G data transmission.
- SD/TF supports max 96W for host, max 140W for host and Dock.
- Self-powered from DC power adapter with max 96W for host, max 140W for host and Dock.
- Supports smart power, which enables flexible power distribution to PC and Hub in real-time according to the consumption of connected devices.
- Supports TBT4/USB4/TBT3/DP-Alt-mode Hosts.
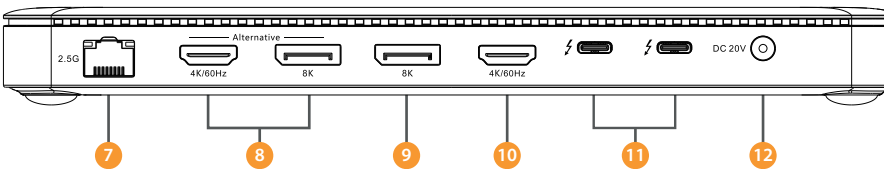- Supports Windows/Mac OS/Chrome OS.

Panel Description

Front Panel
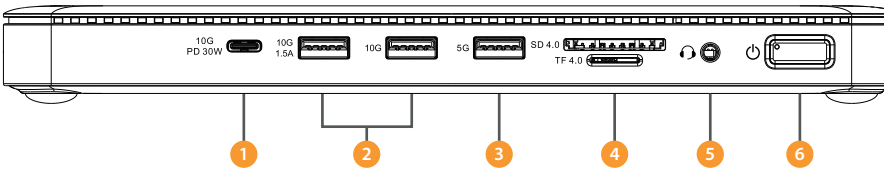
1 USB-C 10G or Max Output PD 30W		**4** SD/TF (Max 312Mbps)	
2 USB-A 10G		**5** 3.5mm Audio	
3 USB-A 5G		**6** LED/Power Switch	

Back Panel

7 RJ45 Max 2.5G	**10** Stream1: HDMI (4K/60Hz)
8 Stream3: DP2 (8K/30Hz) or HDMI2 (2K/60Hz)	**11** Thunderbolt 4 x2 (to device)
9 Stream2: DP1 (8K/30Hz)	**12** 20V Power Supply

Panel Description

Side Panels
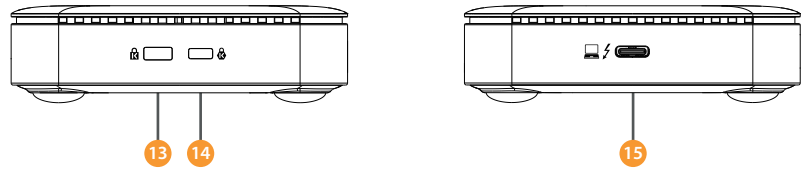
13 Kensington Anti-Theft Lock	**15** Thunderbolt 4 (to host)
14 Standard Nano Anti-Theft Lock	

Specifications

Input/Output Connector	
Upstream	Thunderbolt™ 4 Female (to host) x1
Downstream	Thunderbolt™ 4 Female x2
	DP x2
	HDMI x2
	USB-C(10G or PD 30W output) x1
	USB-A (10G) x2
	USB-A (5G) x1
	SD/TF 4.0 x1
	RJ45 (2.5G) x1
	3.5mm Audio JACK (384KHz) x1
	Power Jack (150W) x1
Physical	
Size (L-W-H)	8.8x3.3x0.8in - (225x85x22mm)
Weight (Net)	14.4lbs - (410g)
Warranty	
Limited Warranty	3 Years
Environmental	
Operating Temperature	0°C to 45°C (32°F to 113°F)
Operating Humidity	10% to 85% RH (no condensation)
Storage Temperature	0°C to 70°C (32°F to 158°F)
Storage Humidity	10% to 90 % RH (no condensation)
Regulatory Approvals	
Certifications	Thunderbolt, FCC, CE
Accessories	
User Manual	English Version

Port Specs

Thunderbolt 4 Female (to host)

• Adopting Goshen Ridge solution with max 40Gbps for high speed data and outstanding video transfer
• Supports Thunderbolt 4 up to 40Gbps, compatible with Thunderbolt 3,USB4, DP Alt mode, USB protocol
• Supports TBT4/USB4/TBT3/DP-Alt-mode Hosts
• Supports Windows/Mac OS/Chrome OS
• Supports max 96W, 5V/9V/15V@3A,20V@4.8A Host charging

Thunderbolt 4 Downstream Port X2

• Supports Thunderbolt 4 up to 40Gbps, compatible with Thunderbolt 3,USB4, DP Alt mode, USB protocol
• Allow you to cascade Thunderbolt devices up to 6 levels
• Supports max 8K or dual 4K/60Hz video
• Each Thunderbolt 4 port supports 15W downstream charging for connected device
Note: 2 ports do not support PD charging

USB-C PD & Data X1

• Compliant with USB3.2 Gen 2 with max 10Gbps data transmission, downward compatible with lower versions
• Supports PD3.0 max 30W output to charging for the mobile phone
• Supports 5V/3A, 9V/3A, 15V/2A, 20V/1.5A output

USB3.2 Type-A Gen2 X2

• Compliant with USB3.2 Gen 2 with max 10Gbps data transmission, downward compatible with lower versions
• The port (close to USB-C) support max 1.5A downstream charging, another one support max 900mA downstream charging

Video Ports:

• Stream1: HDMI 1 (close to Thunderbolt 4 downstream port)
• Stream2: DisplayPort1
• Stream3: HDMI 2 or DisplayPort 2 (close to RJ45)

Among all video ports, support max 8K/30Hz for one port, or 4K/60Hz+4K/60Hz+4K/30Hz with different pictures on windows system

DisplayPort X2

• Supports up to 8K/30Hz, 4K 60/120/144Hz, 1080P 60/120/144/240Hz
• Supports x1/2/4 lane configuration and 8.1G/5.4G/2.7G/1.62 Gbps per lane
• Supports HDCP v1.4/2.2
• Supports HDR
• Supports RGB, YCC444, YCC422, YCC420
• Supports 6/8/10/12 bit color depth

HDMI X2

• Supports 4K 30/60Hz, 1080P 60/120/144/240Hz
• Supports HDCP v1.4/2.2
• Supports HDR
• Supports RGB, YCC444, YCC422, YCC420
• Supports 8/10/12 bit deep color

SD4.0/TF 4.0

• SD/TF supports SD4.0 with max 312MBps
• Supports 2 card slots to work simultaneously

USB3.2 Type-A Gen1 X1

• Compliant with USB3.2 Gen 1 with max 5Gbps data transmission, downward compatible with lower versions
• Max 900mA downstream charging per port

Port Specs

RJ45 X1

• Supports 10M/100M/1000M/2.5G bandwidth
• Complies with IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3bz. support IEEE 802.3az-2010(EEE), IEEE 802.1P, IEEE 802.1Q, IEEE 802.3x
• Supports Wake-On-LAN and Wake-On-WAN
• LED indicator:
 1) No light: power off.
 2) Orange: power on.
 3) Blue: Host connection OK.

Power Switch & Power indicator LED

• The product turns off by default. After connecting the power supply, you need to press the switch to enable the product to work.
• The LED is bright orange when the product is powered on and bright blue when the product is connected to the host.

3.5mm Audio JACK X1

• Supports 16/24/32-bit, 8/16/22.05/24/32/44.1/48/96/176.4/192/384KHz Sample Rate
• Supports Stereo output and microphone input
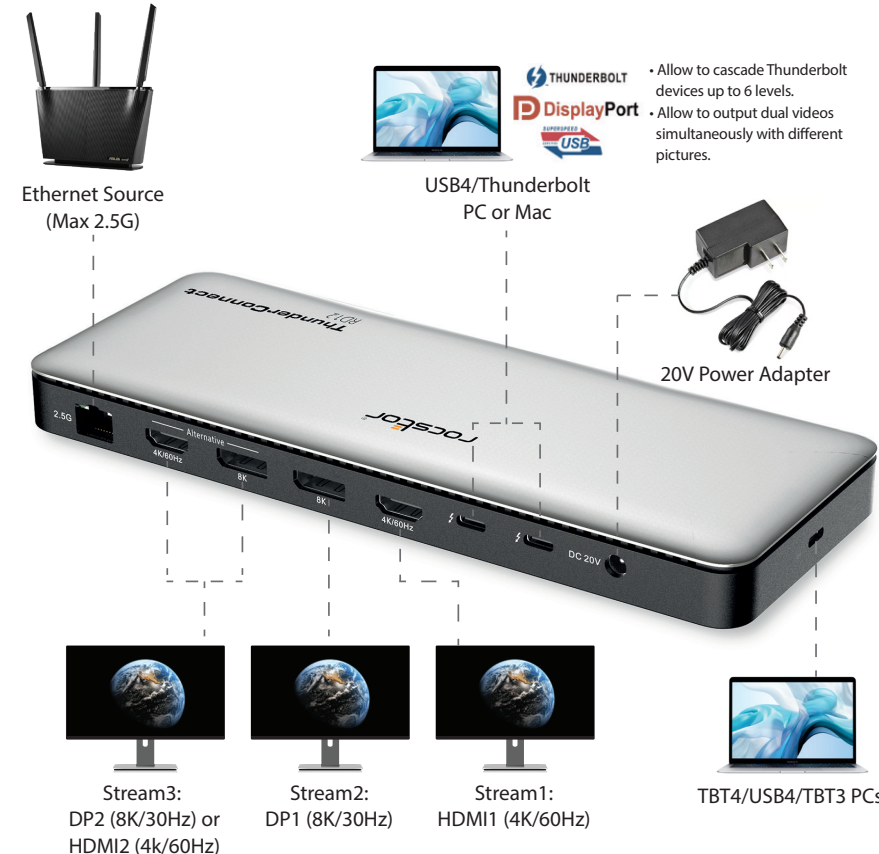• Automatic detection switch to CTIA/MTP mode

DC Power Jack X1

• Supports smart charging, dynamically distribute power to PC and Hub according to the requirement of the connected devices
• Used to connect 20V 150W DC power supply. Compatible with 20V ~ 22V, 150W or higher power DC power supply
• Max 140W power for host and the DOCK
• Max 96W for host charging

Connection Diagram (Front Panel)

USB-C 10G Devices or Max Output PD 30W

USB 10G Devices

Standard Nano Anti-Theft Lock

Kensington Anti-Theft Lock

USB 5G Devices

Micro SD

Power Switch

LED

SD Card Max 312 Mbps

Headset

Connection Diagram (Back Panel)

Ethernet Source (Max 2.5G)

USB4/Thunderbolt PC or Mac

• Allow to cascade Thunderbolt devices up to 6 levels.
• Allow to output dual videos simultaneously with different pictures.

20V Power Adapter

Stream3: DP2 (8K/30Hz) or HDMI2 (4k/60Hz)

Stream2: DP1 (8K/30Hz)

Stream1: HDMI1 (4K/60Hz)

TBT4/USB4/TBT3 PCs

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Our Corporate Sales Team's goal is to help our U.S.A. and Canadian customers find a storage solution that best serves their needs. We will help you determine your best purchasing options. For more information please contact the appropriate department below or call us at +1 (818) 727-7000.

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