OMNI USB

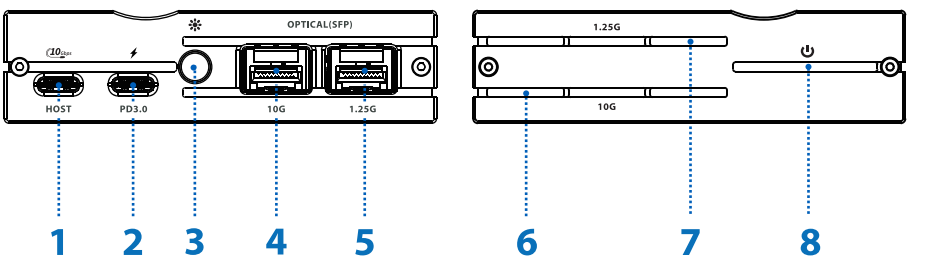
User Manual

Thank you for purchasing the USB from the OMNI series. The OMNI USB is an Battery Powered, Optically Isolated USB Hub.

FEATURES:

- Dedicated dual-fibre 10G/1.25G optical isolation ensures noise-free data transmission
- Three ANC-enabled USB Pure Port; additional two dedicated power supply port
- Dual-head USB cable compatible for fully isolated power and data connections
- High-capacity 8,000mAh battery with a battery only mode, isolating power from both the source and mains
- BMS with charging optimisation to extend battery lifespan
- Fast charge with PD3.0 – quick charging passthrough for connected source device
- 10MHz synchronous clock input for precise timing accuracy
- Digital-to-Digital Conversion with Hi-Res 24/192kHz Coaxial and Optical S/PDIF outputs
- Normal and Enhanced Coaxial outputs to suit your DAC
- Real-time display of voltage, current, power and noise – for each USB port
- Ultra-Speed USB 3.2 for rapid data transfer rates up to 10Gbps
- NEXIS app compatible for wireless remote control and OTA firmware updates

USB OPTILINK



1. USB-C Host Port

a. Use the included USB-A to USB-C or USB-C to USB-C cable to connect the source device's USB output port to the USB OptiLink's 'Host' port. The source device will supply both a digital signal and power to the USB OptiLink, provided it can output sufficient current.

b. Next, connect a PD3.0 (2) power supply. It provides the necessary power for the USB OptiLink, while also supporting passthrough fast charging for the source device.

Tip: If the standalone power supply (2) is not used, the source device must be able to provide a minimum rated 5V/2A continuous current, as the USB OptiLink will not function properly with a minimum operating power requirement of 5V/2A.

2. USB-C PD3.0 Fast Power input Port

If your source device cannot meet the power requirements of USB OptiLink, you can use a common USB-C power adapter 5V/2A (maximum power 10W) to power it.

If you want to quickly charge the source device, connect the USB OptiLink to a PD USB-C power adapter (20V/5A, maximum power 100W) that support the PD3.0 charging protocol.

Tip: The above USB-C power adapter is not included in the OMNI USB accessories list and needs to be purchased separately.

3. LED brightness control

This button adjusts the brightness of the front panel connection status LEDs (6,7,8). The default setting is 'Bright'.
Short press this button to cycle the LEDs (6,7,8) through three modes: bright, soft and off.

Bright	'Bright' brightness mode. The LED brightness always remains bright.
Soft	'Soft' brightness mode. The LED brightness always remains soft.
Off	'LED' will turn off.

4. SFP 10G Optical Fibre output port

This is the SFP 10G optical output port. Please plug the supplied USB OptiLink 10G fibre optical module into this port.

Tip: The USB OptiLink 10G SFP fibre optic modules are factory-fitted to the USB OptiLink fibre optic module port.

5. 1.25G SFP Optical Fibre output port

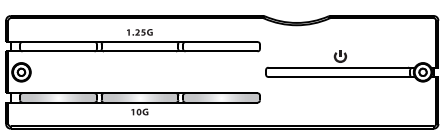
This is the SFP 1.25G optical output port. Please plug the supplied USB OptiLink 1.25G fibre optical module into this port.

Tip: The USB OptiLink 1.25G SFP fibre optic modules are factory-fitted to the USB OptiLink fibre optic module port.

6. SFP 10G Optical Fibre connection status LEDs

The LEDs show the current SFP 10G optical connection status of the USB OptiLink.

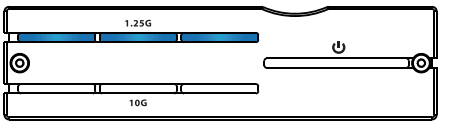
LED	Status
White	Connected
Off	Unconnected



7. SFP 1.25G Optical Fibre connection status LEDs

The LEDs show the current SFP 1.25G optical connection status of the USB OptiLink.

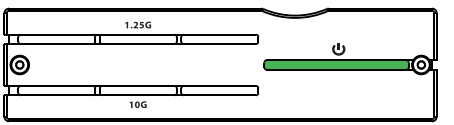
LED	Status
Blue	Connected
Off	Unconnected



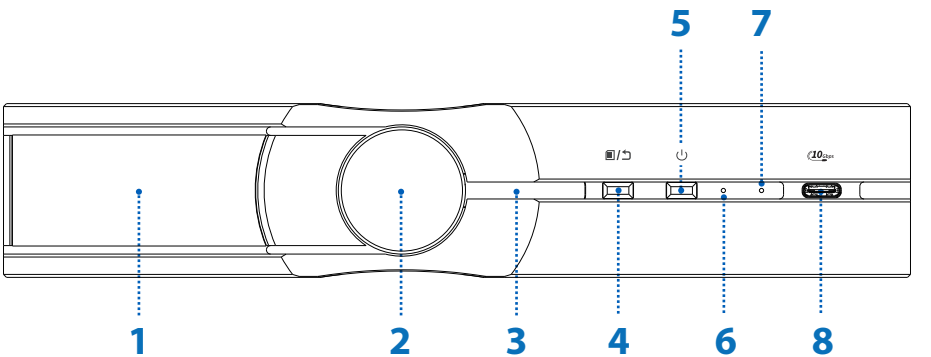
8. Power Connection Status LED

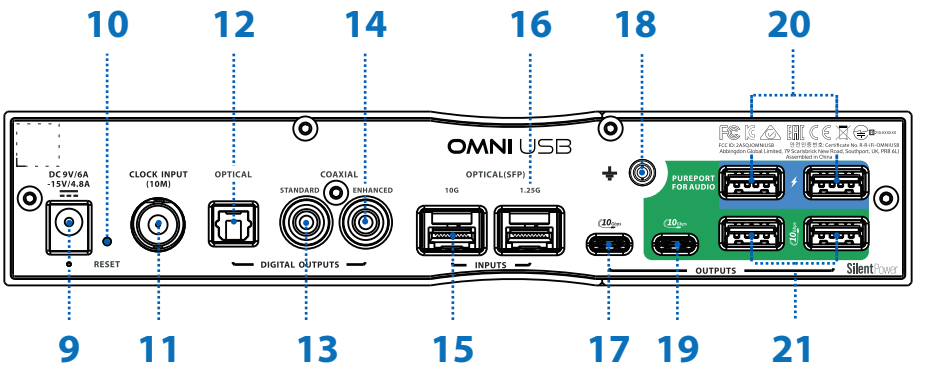
The LEDs show the current power connection status of the USB OptiLink.

LED	Status
Green	Connected
Off	Unconnected



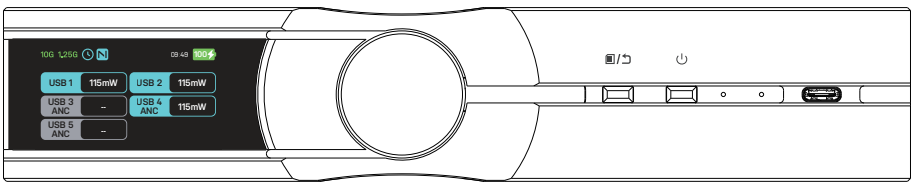
OMNI USB





1. TFT display

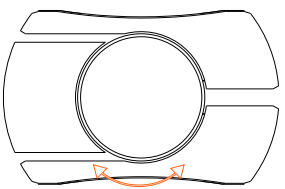
The TFT display shows the user interface in real-time: SFP 10G/1.25G optical input, external clock input, NEXIS application connection, battery charge, battery charge duration, USB port voltage, current, power and noise.

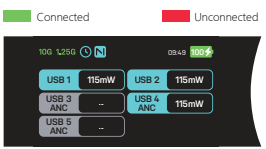


Tip: The TFT screen should be on the left-hand side when OMNI USB is positioned horizontally, and at the top when positioned vertically.

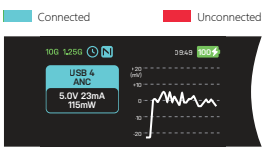
2. Multi-function Dial

a) On the home page, turning the rotary ial switches the information displayed on the display, such as the individual standards and the voltage, current, power and noise of the pure port USB port.

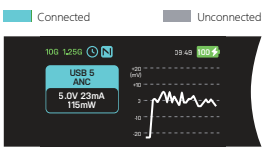




10G and 1.25G SFP Optical Connection Status



Clock and NEXIS Connection Status



09:48 100 Remaining battery time/Battery status

b) Once you're in the menu, turn the rotary dial to scroll through the options. Press it to select or switch your choice.

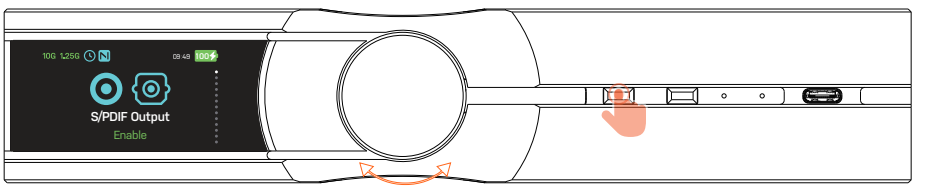
3. Power On/off LED

This LED lights up when the unit is on and turns off when it's powered down.

4. Enter/exit menu settings

Short press to enter or exit menu settings and return to the homepage.

- S/PDIF Output
- S/PDIF Jitter Elimination
- External Clock
- Auto Power Restore
- Charging Optimisation
- USB Port 1
- USB Port 2
- USB Port 3 ANC
- USB Port 4 ANC
- USB Port 5 ANC
- Brightness
- About
- Reset

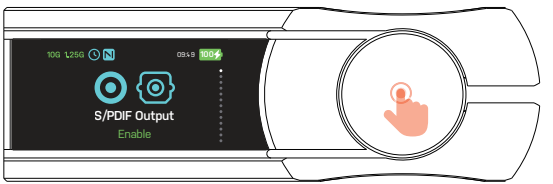


Turn Short Press

Tip: Turn to select function, short press to confirm selection or toggle on/off mode. If there is no operation within 10 seconds, the display will return to the home screen.

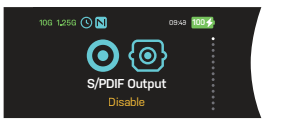
I) S/PDIF Output

This setting Enables or Disableds S/PDIF output functionality. The default setting is 'Enabled'.
When set to 'Disabled', the S/PDIF port (12) (13) (14) Disables digital signal output.



Short Press

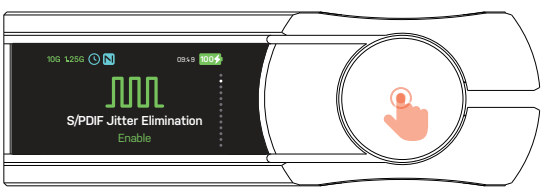
Enabled



Disabled

II) S/PDIF Jitter Elimination

This setting Enableds or Disableds S/PDIF Jitter Elimination functionality. The default setting is 'Enabled'.
When set to 'Disabled', the input digital signal remains unchanged - without Jitter Elimination or enhanced decoding. This may cause issues with high-sampling-rate audio files, preventing them from opening or causing noise during playback.



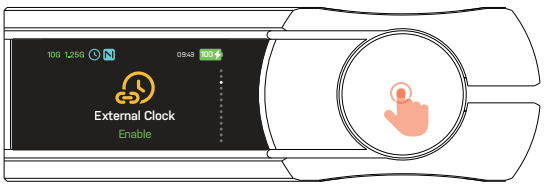
Short press

Enabled

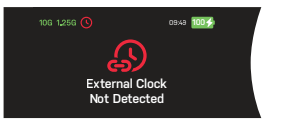
Disabled

III) External Clock

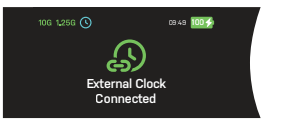
This setting Enables or Disableds External Clock (11) functionality. The default setting is 'Disabled'.
To use an external clock input, set this to 'Enable'. For more information on external clocking, refer to section (11).



Short press



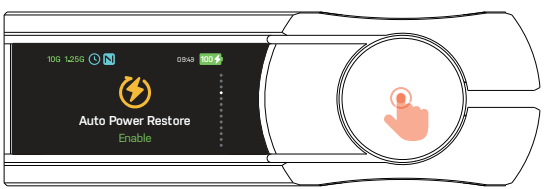
Enabled



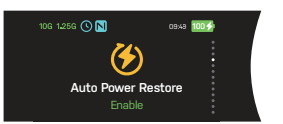
Disabled

IV) Auto Power Restore

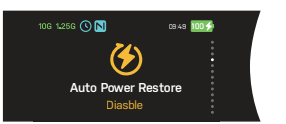
This setting Enables or Disableds Auto Power Restore functionality. The default setting is 'Disabled'.
When set to 'Enabled', the OMNI USB will automatically turn on and resume its previous state when reconnected to DC power (9) after the battery has drained or following a power interruption.



Short press



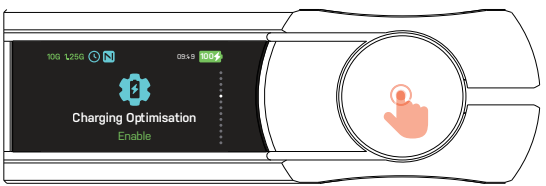
Enabled



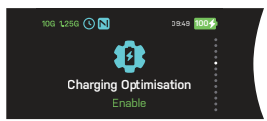
Diasbled

V) Charging Optimisation

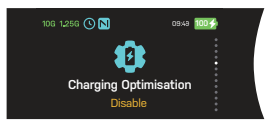
This setting Enables or Disables Charging Optimisation functionality. The default setting is 'Disables'.d
When set to 'Enable', the Charging Optimisation function balances the battery pack's charging voltage, reducing overcharging and over-discharging.
This helps extend battery life and improve charging efficiency through precise management and intelligent equalisation technology. It also controls temperature and voltage during charging to prevent lithium decomposition and excessive heat, ensuring safety.



Short Press



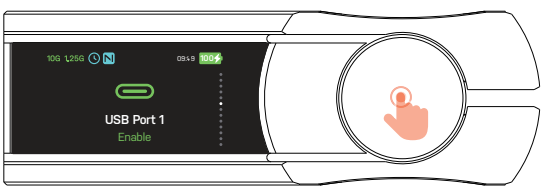
Enabled



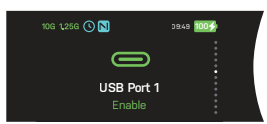
Disabled

VI) USB Port 1

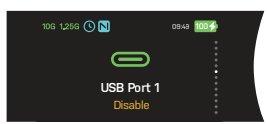
This setting Enables or Disableds USB Port 1 (8). The default setting is 'Enabled'.



Short Press



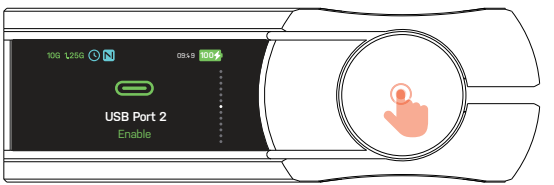
Enabled



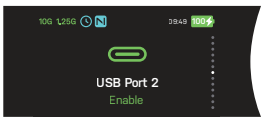
Disabled

VII) USB Port 2

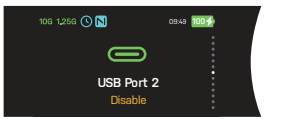
This setting Enables or Disableds USB Port 2 (17). The default setting is 'Enabled'.



Short press



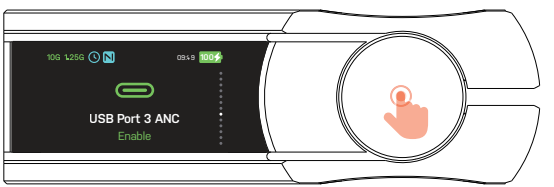
Enabled



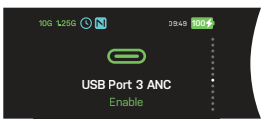
Disabled

VIII) USB Port 3 ANC

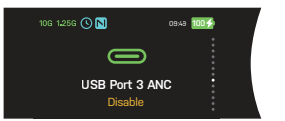
This setting Enables or Disableds USB Port 3 ANC (19). The default setting is 'Enabled'.



Short press



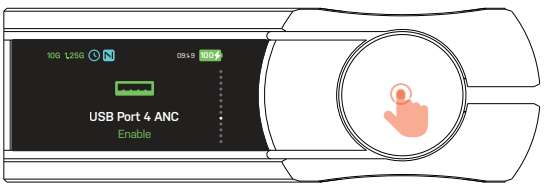
Enabled



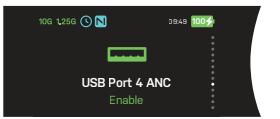
Disabled

IX) USB Port 4 ANC

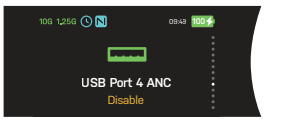
This setting Enables or Disableds USB Port 4 ANC (20). The default setting is 'Enabled'.



Short press



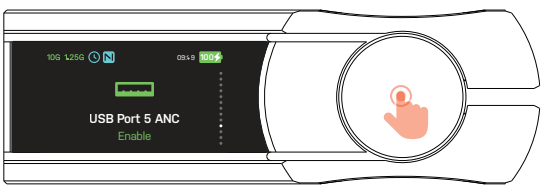
Enabled



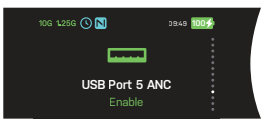
Disabled

X) USB Port 5 ANC

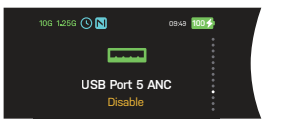
This setting Enables or Disableds USB Port 5 ANC (21). The default setting is 'Enabled'.



Short press



Enabled

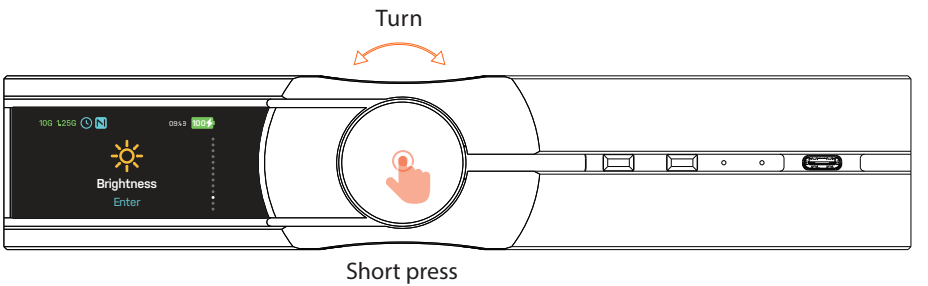


Disabled

XI) Brightness

This setting controls the TFT display screen brightness. The default setting is 'Bright'.

Short press the dial to enter brightness mode selection, turn the dial to choose a setting, then short press to confirm.



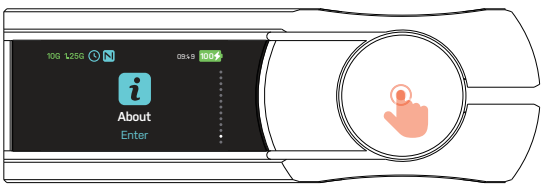
Bright The display brightness always remains bright.

Soft The display brightness always remains soft.

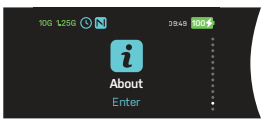
Auto Turns off the display after 10 seconds of no activity.

XII) About

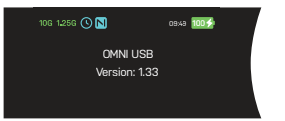
View the device name and the current firmware version number (pictures are for illustration only, subject to the actual version of the device).



Short press



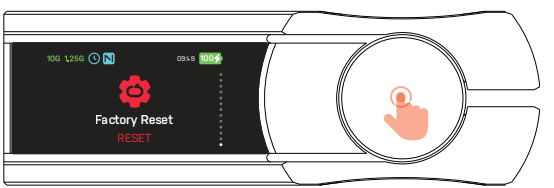
Enter



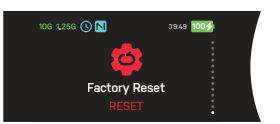
Version

XIII) Factory Reset

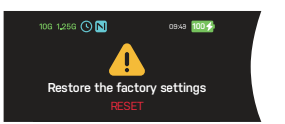
Short press to confirm your selection. A prompt will appear on the screen to reset, and the device will restart once the operation is complete.



Short press



Enter

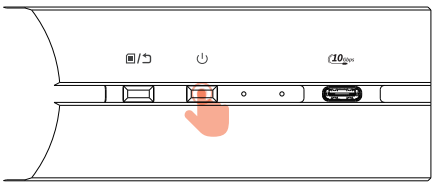


RESET

WARNING: A factory reset will restore the menu setup options to default mode.

5. Power On/Off

Long press ≥2s to switch the OMNI USB on/off.



Long press **≥2s**

On

Off

6. SFP 1.25G Optical fibre module connection LED

The LED indicates the current status of the OMNI USB's SFP 1.25G optical connection.

LED	Status	Display iCons
On	Connected	**1.25G**
Off	Unconnected	**1.25G**

7. SFP 10G Optical fibre module connection LED

The LED indicates the current status of the OMNI USB's SFP 10G optical connection.

LED	Status	Display iCons
On	Connected	**10G**
Off	Unconnected	**10G**

STANDARD USB PORT SECTION (8) (17)

Each USB port supports input and output bi-directional transmission, and can be connected to USB devices. It supports USB2.0 and USB3.2. It is recommended to use the standard USB ports as input ports.

8. STANDARD USB-C Port

The standard USB-C ports support input and output bi-directional transmission, can be connected to USB devices, and support USB2.0 and USB3.2.

a) Output - Connect to USB DAC (Data & Power)

b) Input - Connect to HDD, USB DISK etc.

9. DC power supply and battery charge input port and LED for Battery Status

I) DC power supply input

DC 9V/6A, 12V/5A, 15V/4A* power input. Please connect OMNI USB to the enclosed power supply.

**A power supply unit must be able to deliver minimum rated repetitive current.*

WARNING: Please use the standard power supply device. Using a non-standard power supply may prevent the device from functioning properly.

II) Battery charge input

When the OMNI USB is connected to DC power, it will draw power from the DC supply instead of the battery. The battery will fully charge in approximately 3 hours using the supplied DC power adapter.

Tip: We recommend charging the OMNI USB when it is switched off. Once fully charged, switch to battery power by unplugging the DC power supply, as this will enable the full electrical isolation feature to be utilised to its full extent!

When the OMNI USB is in normal use or charging, the surface of the casing may become warm; this is normal and nothing to worry about.

III) LED for Battery Status

When the OMNI USB detects DC power or a change in battery status, the battery icon in the top right shows the updated time or status with the matching colour.

LED	Status
Red	0%-20%
Orange	21%-49%
Green	50%-100%

Tip: When the OMNI USB detects a DC power supply, the Power LED will change colour and flash to indicate the various charging states.

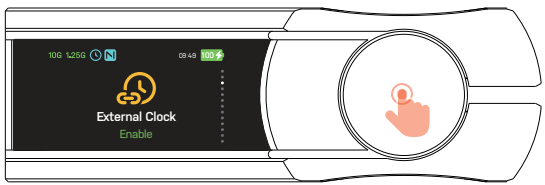
10. Factory Reset

This button restores factory settings if the product encounters an error.
Long press >3s to perform a factory reset. A "Resetting" message will appear on the screen, and the device will reboot once the reset is complete.

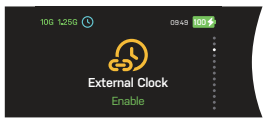
WARNING: Do not power off the OMNI USB during a factory reset. Loss of power during this period may damage your device and leave it unusable.

11. External Clock input port

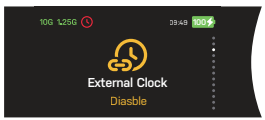
Enabled/Disabled External Clock (11) function, default 'Disabled'.
If you need to use an external clock input, please set to 'Enabled'. For external clock, please see (11).
With 'External Clock' set to 'Enabled', the OMNI USB will automatically detect the external clock input signal.
If no input 10 MHz clock signal is detected or the external clock signal is not recognised, the OMNI USB will automatically switch back to the internal clock, and the clock icon in the top left of the display will turn red.
A sine or square wave signal may be used, 1Vpp nominal, 75Ω.



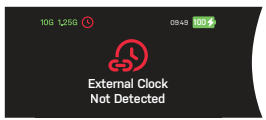
Short press



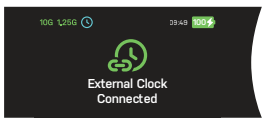
Enabled



Diasbled



Connected



Unconnected

12. S/PDIF Optical output port

This is the S/PDIF TOSLINK Optical signal output. Connect it to the Optical input port of a digital device.

13. STANDARD S/PDIF Coaxial output port

This is the standard S/PDIF Coaxial signal output (Output level 1-2V). Connect it to the coaxial input port of a digital device.

14. ENHANCED S/PDIF Coaxial output port

This is the standard S/PDIF Coaxial signal output (Output level 1-2V). Connect it to the coaxial input port of a digital device.

Tip: (12) (13) (14) S/PDIF standard supports PCM sample rates up to 192kHz.

15. SFP 10G Optical fibre input port

This is the SFP 10G optical input port. Please plug the supplied OMNI USB 10G fibre optical module into this port.

16. SFP 1.25G Optical Fibre input port

This is the SFP 1.25G optical input port. Please plug the supplied OMNI USB 1.25G fibre optical module into this port.

Tip: The OMNI USB 10G and 1.25G SFP fibre optic modules are factory-fitted to the OMNI USB fibre optic module port.

Tip: Please use the supplied dedicated optical fibre cable to connect the 10G and 1.25G SFP Optical Fibre Output Port of the USB OptiLink with the 10G and 1.25G SFP Optical Fibre Input Port of the OMNI USB.

17. STANDARD USB-C Port

The standard USB-C port support input and output bi-directional transmission, can be connected to USB devices, and support USB2.0 and USB3.2.

a) Output - Connect to USB DAC (Data & Power)

b) Input - Connect to HDD, USB DISK etc.

18. Grounding Terminal

This is the ground terminal for the OMNI USB. Use an earth wire to connect it to any grounded object or device capable of being earthed.

PUREPORT USB PORT SECTION (19) (20) (21)

Each USB port supports bi-directional transmission for both input and output, and can be connected to USB devices that support USB2.0 and USB3.2. As the ultra-pure ports feature Active Noise Cancellation III (ANC3) technology, it is recommended to use them as output ports.

19. PUREPORT USB-C Data and Power output port

The Pure Port USB-C port supports bi-directional input and output transmission. It is compatible with USB devices and supports both USB 2.0 and USB 3.2 standards.

a) Output - Connect to USB DAC (Data & Power)

b) Input - Connect to HDD, USB DISK etc.

20. PUREPORT 2 x USB-A Power output port

The 'Pure Port' USB-A Power ports only output power, and can provide power to USB devices.

21. PUREPORT USB-A Data and Power output port

The 'Pure Port' USB-A ports support bi-directional input and output transmission. It is compatible with USB devices and supports both USB 2.0 and USB 3.2 standards.

a) Output - Connect to USB DAC (Data & Power)

b) Input - Connect to HDD, USB DISK etc.

“iFi Nexis”

Available on the App Store

GET IT ON Google Play

Download the Nexis app for added features and future updates

Set up your OMNI USB using our iFi Nexis App
Please search for "OMNI USB" within the iFi Nexis app.

The iFi Nexis app gives you access to all OMNI USB features and settings, including OTA upgrades, network status monitoring*, and more**.

**OTA (Over-the-Air) technology enables automatic firmware updates via the network.*

***You can easily and conveniently view the status of all OMNI USB network ports.*

Scan the QR code to view the official iFi audio OMNI iDSD 2 video on YouTube.

Cautions

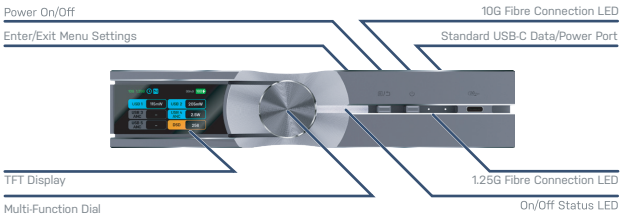
1. Avoid extreme heat, cold and humidity.
2. Avoid dropping or crushing the OMNI USB.

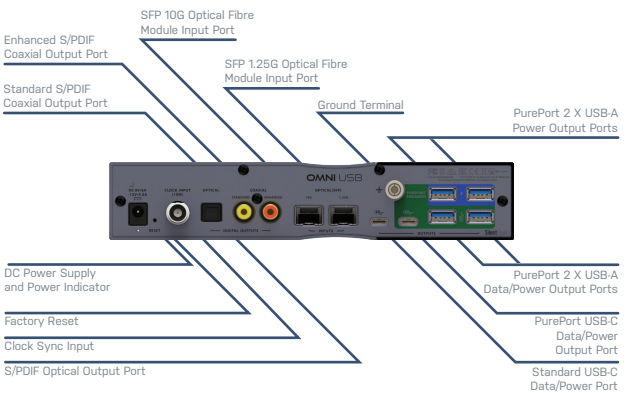
Prolonged Heat Exposure

Your OMNI USB may become very warm during normal use. It is important to keep it on a hard, stable, and well-ventilated work surface when in use.

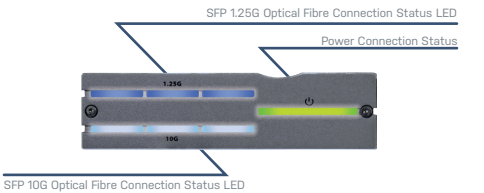
Quick Start Guide

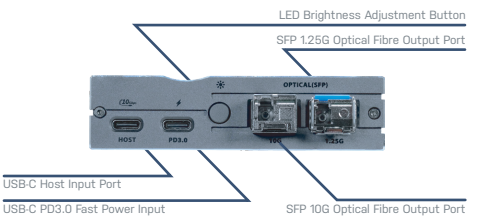
OMNI USB





USB OPTILINK

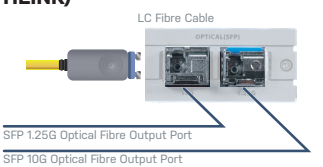




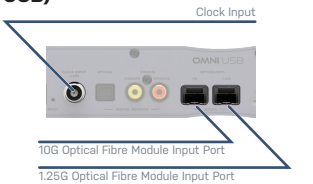
1 Power (OMNI USB)

2 Input (OPTILINK)

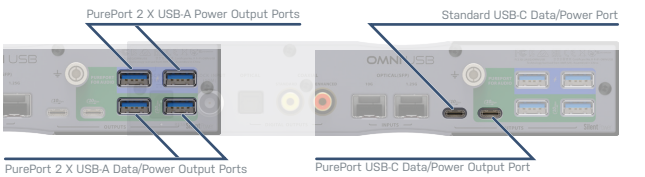
3 Output (OPTILINK)

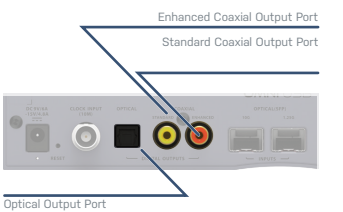


4 Input (OMNI USB)

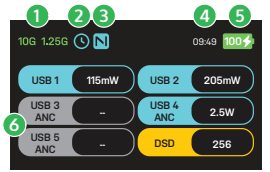


5 Output (OMNI USB)





6 TFT Display Screen (OMNI USB)



1. Module Connection Status
2. External Clock
3. Nexis App Connection
4. Remaining Battery Life
5. Battery Status
6. Signal Inputs

7 TFT Menu (Rotate for Menu)

S/PDIF Output
S/PDIF Jitter Elimination
External Clock
Charging Optimisation
USB Port 1
USB Port 2
USB Port 3 ANC
USB Port 4 ANC
USB Port 5 ANC
Brightness
Auto Power Restore
About
Factory Reset

8 Brightness

Power ON/OFF - Screen Brightness

Auto
Bright
Soft

OMNI USB

SPECIFICATIONS

Inputs:	
Optical	1 x SFP 10G Optical Fibre
	1 x SFP 1.25G Optical Fibre
Clock Sync	1 x 10MHz BNC External Clock
Outputs:	
Standard	1 x S/PDIF Optical/TOSLINK (PCM up to 192kHz, 24-bit)
	1 x S/PDIF Coaxial (PCM up to 192kHz, 24-bit)
Enhanced	1 x S/PDIF Coaxial (PCM up to 192kHz, 24-bit)
USB port:	
Standard (Input)	2 x USB-C (Front & Back)
Pure (Output)	2 x USB-A (Power & Data)
	1 x USB-C (Power & Data)
Pure Power (Output)	2 x USB-A (Power Only)
USB compliancy:	USB 3.2 (USB 2.0 compatible)
Data speeds:	10Gbps/5Gbps/480Mbps/12Mbps/1.5Mbps

General

Power supply requirement:	DC 9V/6A, 12V/5A, 15V/4A* (centre pin +ve)
Power consumption:	<2W idle, 50W max.
Battery:	Lithium-Polymer 8,000mAh
Battery life:	10-15 hours
Grounding terminal:	Binding post
Dimensions:	214 x 158 x 41 mm (8.4" x 6.2" x 1.6")
Net weight:	1.25kg (2.76lbs) with SFP optical module installed
Limited Warranty:	12 months*

**A power supply unit must be able to deliver minimum rated repetitive current*

See FAQ at silentpower.tech for more information

12 months typical or as permitted/required by local reseller laws.

Specifications are subject to change without notice.

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USB OPTILINK

SPECIFICATIONS

USB port:

Power & Data input:	1 x Host USB-C
Power input:	1 x PD3.0 USB-C
Power output:	1 x PD3.0 USB-C (via Host USB-C)
Optical outputs:	1 x SFP 10G Optical Fibre
	1 x SFP 1.25G Optical Fibre
USB compliancy:	USB 3.2 (USB 2.0 compatible)
Data speeds:	10Gbps/5Gbps/480Mbps/12Mbps/1.5Mbps
USB-C PD3.0 Power support:	100W (20V/5A)

General

Power supply requirement:	DC 5V/2A*
Power consumption:	~3W max.
Dimensions:	99 x 92.8 x 24.2mm (3.9 x 3.7 x 1")
Net weight:	268g (0.59lbs) with SFP optical module installed
Limited Warranty:	12 months*

**A power supply unit must be able to deliver minimum rated repetitive current*

See FAQ at silentpower.tech for more information

12 months typical or as permitted/required by local reseller laws.

Specifications are subject to change without notice.