

# CVT4K-S

Fiber Converter



## Specifications

## Change History

Document Version	Release Date	Description
V1.0.6	2024-10-25	Updated the power consumption information.
V1.0.5	2023-12-11	Updated the power supply information.
V1.0.4	2021-09-28	<ul style="list-style-type: none"> <li>• Updated the appearance diagram.</li> <li>• Updated the dimensions diagram.</li> <li>• Added the PowerCON, installation, certification and power consumption related description.</li> </ul>
V1.0.3	2021-02-06	<ul style="list-style-type: none"> <li>• Updated the dimensions diagram.</li> <li>• Updated the quantity of screws in the accessories.</li> <li>• Deleted the certificate of approval in the accessories.</li> <li>• Updated the certification information.</li> </ul>
V1.0.2	2020-11-20	<ul style="list-style-type: none"> <li>• Updated the document template.</li> <li>• Optimized the feature description.</li> <li>• Optimized the appearance description.</li> <li>• Optimized the dimensions diagram.</li> </ul>

## Introduction

The CVT4K-S is a high-performance fiber converter developed by NovaStar Tech Co., Ltd. (hereinafter referred to as NovaStar). It is used for conversion between optical signals and electrical signals, allowing for long-distance signal transmission that is stable and not easily interfered with. Easy to use, the CVT4K-S makes it convenient to connect terminal devices and simplifies on-site wiring connections.

## Certifications

CE, RoHS, FCC, UL&CUL, EAC, CB, IC, RCM

**If the product does not have the relevant certifications required by the countries or regions where it is to be sold, please contact NovaStar to confirm or address the problem.**

Otherwise, the customer shall be responsible for the legal risks caused or NovaStar has the right to claim compensation.

## Features

- 16x Neutrik Ethernet inputs or outputs
- 4x Single-mode twin-core LC optical ports, two as master inputs or outputs and the others as backup
- Dual redundant power supplies, more stable and reliable
- 2 types of power connectors (3-pin power socket and PowerCON), satisfying different customer needs
- 2 types of control ports (type-B USB and Ethernet), more flexible and convenient to connect a control computer
- Various indicators on the front panel to show device status clearly

## Appearance

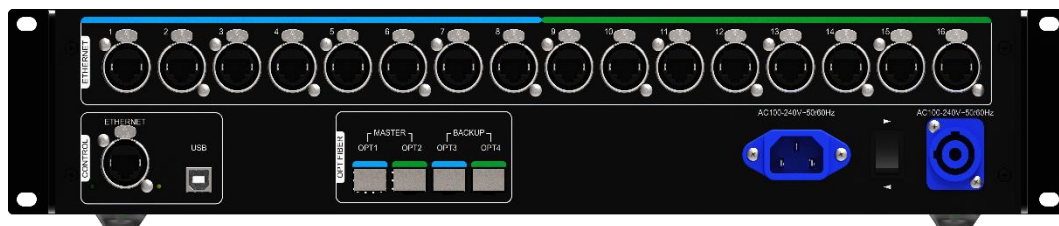
### Front Panel



All product pictures shown in this document are for illustration purpose only. Actual product may vary.

Indicator	Color	Status	Description
1-16	Green	Always on	The Ethernet cable connection is normal.
	Yellow	Flashing	There is data transmission.
		Always on	There is no data transmission.
OPT1-OPT4	Green	Always on	The optical fiber connection is normal.
PWR	Red	Always on	The power input is normal.
STAT	Green	Flashing	The device is functioning normally.

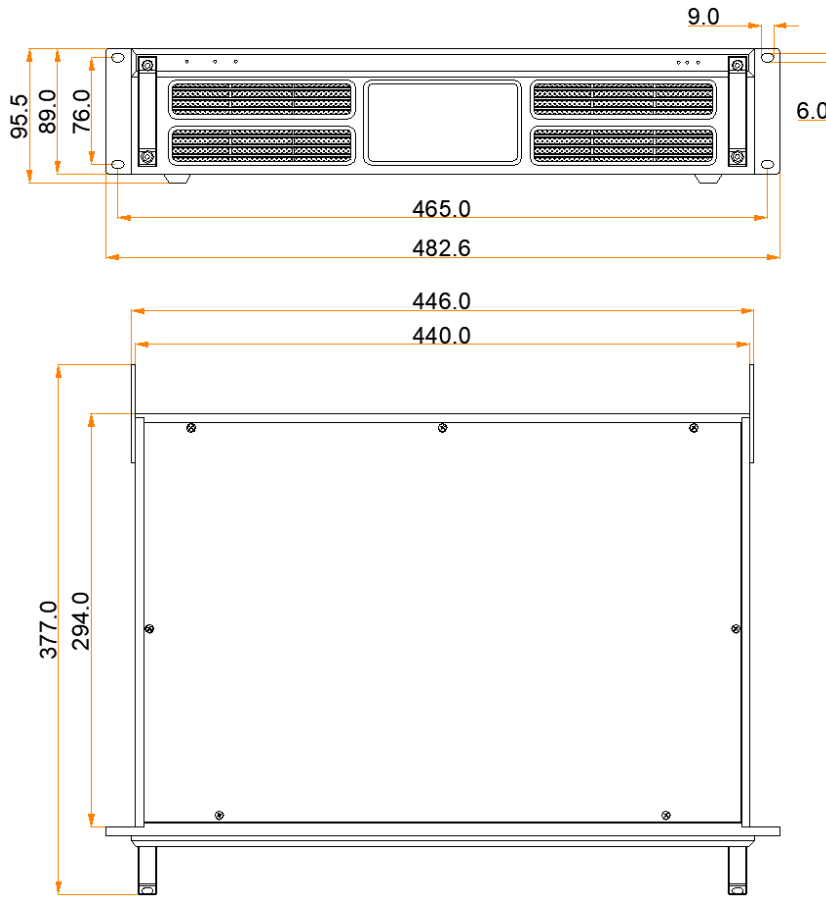
## Rear Panel



All product pictures shown in this document are for illustration purpose only. Actual product may vary.

Name	Description		
OPT1–OPT4	<p>4x optical ports for data input or output</p> <p>OPT1 corresponds to Ethernet ports 1–8 and OPT2 corresponds to Ethernet ports 9–16.</p> <p>OPT3 is the backup of OPT1 and OPT4 is the backup of OPT2.</p> <table border="1"> <tr> <td> <p>Description of the optical module:</p> <ul style="list-style-type: none"> <li>• Installed at the factory, hot pluggable</li> <li>• Transmission rate: 9.95 Gbit/s to 11.3 Gbit/s</li> <li>• Wavelength: 1310 nm</li> <li>• Transmission distance: 10 km</li> </ul> </td> <td> <p>Optical fiber selection:</p> <ul style="list-style-type: none"> <li>• Model: OS1/OS2</li> <li>• Transmission mode: Single-mode twin-core</li> <li>• Cable diameter: 9/125 <math>\mu\text{m}</math></li> <li>• Connector type: LC</li> <li>• Insertion loss: <math>\leq 0.3</math> dB</li> <li>• Return loss: <math>\geq 45</math> dB</li> </ul> </td> </tr> </table>	<p>Description of the optical module:</p> <ul style="list-style-type: none"> <li>• Installed at the factory, hot pluggable</li> <li>• Transmission rate: 9.95 Gbit/s to 11.3 Gbit/s</li> <li>• Wavelength: 1310 nm</li> <li>• Transmission distance: 10 km</li> </ul>	<p>Optical fiber selection:</p> <ul style="list-style-type: none"> <li>• Model: OS1/OS2</li> <li>• Transmission mode: Single-mode twin-core</li> <li>• Cable diameter: 9/125 <math>\mu\text{m}</math></li> <li>• Connector type: LC</li> <li>• Insertion loss: <math>\leq 0.3</math> dB</li> <li>• Return loss: <math>\geq 45</math> dB</li> </ul>
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1–16	16x Neutrik Gigabit Ethernet ports for data input or output		
ETHERNET	Ethernet port for control computer connection		
USB	Type-B USB port for control computer connection, not for cascading		
AC 100–240V~50/60Hz	<p>Power input connectors, including a 3-pin power socket and a PowerCON socket</p> <p>For the PowerCON connector, users are not allowed to plug in hot.</p> <p>Pour le connecteur PowerCON, les utilisateurs ne sont pas autorisés à se connecter à chaud.</p>		

## Dimensions



Tolerance:  $\pm 0.3$  Unit: mm

## Specifications

Electrical Specifications	Power supply	100-240V~, 50/60Hz, 1.6A
	Rated power consumption	21 W
Operating Environment	Temperature	-20°C to +60°C (-4°F to 140°F)
	Humidity	10% RH to 90% RH, non-condensing
Storage Environment	Temperature	-20°C to +70°C
Physical Specifications	Dimensions	482.6 mm × 377.0 mm × 96.0 mm
	Net weight	4.6kg

Packing Information	Carrying case	530.0 mm × 193.0 mm × 420.0 mm, white cardboard box
	Accessory box	405.0 mm × 290.0 mm × 48.0 mm, white cardboard box Accessories: 1x Power cord, 1x Ethernet cable, 1x USB cable, 12x M4*10 screws
	Packing box	550.0 mm × 440.0 mm × 210.0 mm, kraft paper box

The amount of power consumption may vary depending on various factors such as product settings, usage, and environment.

## Notes and Cautions

### Notes for Installation

The product can be mounted in a standard 19-inch rack capable of withstanding at least four times the total weight of the mounted equipment. Four M5 screws should be used to fix the product.

Caution: The equipment must be installed in a restricted access location.

Attention: L'équipement doit être installé dans un endroit à accès restreint.

### FCC Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely

to cause harmful interference in which case the user will be required to correct the interference at his own expense.

## Others




This is Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

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