

VISIONXS-DVI-I 2.0

KVM extenders



VisionXS-DVI-I 2.0

The matrix-compatible KVM extenders of the VisionXS-DVI-I 2.0 series extend keyboard, video, and mouse signals, as well as other peripheral data (e.g., audio and USB), via a dedicated CAT or fiber connection (up to 5,000 m - optional extendable). An extender system consists of a computer module (CPU) and a compatible console module (CON). Computers can be controlled in near real-time – both in extender and matrix applications. The VisionXS-DVI-I 2.0 series supports SingleLink-DVI-I for analog and digital video resolutions up to 1920 × 1200 (60 Hz). Video data is processed pixel-perfectly and offers excellent handeye coordination, thanks to bluedec™ – G&D's advanced, multi-stage, lossless compression technology.

VisionXS-IP 2.0 – The new generation

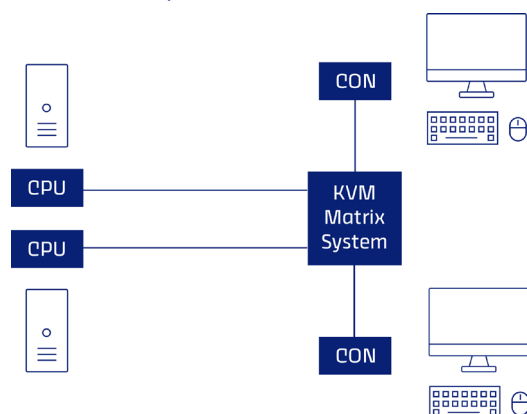
- **New, optimized housing design** – ensures higher operational reliability thanks to improved cooling and user-friendly placement of interfaces.
- **Durable surface finishing** – reliably protects the device and increases its service life, even in demanding environments.
- **Simple and cost-efficient installation** – saves time and resources without compromising stability or functionality.
- **Only computer modules with DVI-I are available** – these can be combined with compatible workstation modules featuring alternative video interfaces (e.g., DP-HR).
- **USB Type-C for power and service** – simplifies handling and eliminates the need for additional adapters or special solutions.
- **Individual transmission options (CAT or fiber, with or without redundancy)** – variants supplied from the factory in the desired configuration, with no additional licensing or extra effort required.
- **Extended USB input side with TypeC and separate USB K/M interface** – enables the optional physical separation of keyboard/mouse signals and USB data stream for enhanced security.
- **Audio and RS232 support as standard** – analog audio always included (bidirectional via adapter), RS232 available by default in the DT version.

Application Area

Dedicated extender operation



Dedicated matrix operation



Compatibility

VisionXS 2.0 is compatible with the existing product families MTX-CON/CPU, Vision, VisionXS, as well as ControlCenter-Compact and ControlCenter-Digital.

Key Benefits

- Optimal range and transmission – tailored to your dedicated infrastructure
 - Up to 140 m via CAT, 400 m via multimode fiber, and 5,000 m via singlemode fiber – optionally extendable.
- Highest video quality with minimal latency
 - Support for common video standards with brilliant image quality
Compatible with DVI-I (DVI and VGA signals up to 165 MPixel/s, e.g. Full HD @ 60 Hz). RGB 4:4:4 pixel encoding with 24 bpp ensures razor-sharp, color-accurate visuals – ideal for graphically demanding applications.
 - Pixel-perfect, lossless compression with bluedec™
G&D's advanced multi-stage lossless compression technology delivers outstanding video quality with virtually zero latency, enabling precise hand-eye coordination – ideal for mission-critical environments.
 - Freeze function for maximum operational reliability
If the video signal is lost, the last received image remains visible – frozen, framed in color, and with an on-screen timer. This feature ensures situational awareness is maintained, even in critical scenarios, and is specifically designed for air traffic control and other high-security applications.
- Extended peripheral and interface support
 - Transmits not only keyboard, video, and mouse, but also analog audio, RS232, and USB
Each use case is served by a tailored product variant equipped with the appropriate interfaces.
 - Demand-driven video transmission: Single and MultiChannel
Supports single-channel video and MultiChannel video (MC2/MC4 – 2 or 4 video signals over separate channels) – ideal for applications with multi-screen setups, such as control centers, control rooms, or high-performance workstations.
- Optimal Usability & User Guidance
 - Permanent emulation of mouse, keyboard, and monitor
Ensures stable system states at all times—even during signal changes or restarts. Peripherals remain continuously active and ready.
 - USB-HID support for standard and specialized devices
Compatible with conventional USB input devices as well as specialized Human Interface Devices (HIDs), e.g., for industrial or safety-critical environments.
 - Standard GenericUSB support for the USB classes HID (Human Interface Device), SmartCard, and Mass Storage enables the direct use of common USB peripherals for operation, authentication, and data transfer.
 - Flexible EDID management
The extender can either adopt EDID data (monitor profiles) from the connected monitor or use a predefined optimized profile from the CPU module—adaptable to your needs.
 - Central control of monitor parameters (DDC/CI)
Supports Display Data Channel / Command Interface for remote control of monitor settings such as brightness—transparently passed through the system.
 - Intuitive control via On-Screen Display (OSD) and hotkeys
An integrated OSD enables direct access to settings and controls, supported by customizable hotkeys for fast interaction.
 - Modern configuration via HTML5 web interface (Config Panel 21)
Platform-independent management through a Java-free, browser-based interface—offering easy configuration, monitoring, and live firmware updates..
- High System Compatibility and Expandability
 - Integrated Matrix Support
Enables seamless integration into G&D matrix systems – ideal for centralized switching scenarios in control rooms and monitoring environments.
 - Mix & Match Capability for Heterogeneous Setups
End devices can be flexibly combined, even across different video signal types – offering maximum compatibility in diverse system configurations.
- Reliability, Security, and Operational Safety
 - Physical separation between workstation and host system
No direct access to the computer – ensures enhanced system security through strict functional isolation.
 - Galvanic isolation via fiber connections
Transmitter and receiver are electrically decoupled – improving resistance to electromagnetic interference.
 - Access without local software installation
Users connect through standard interfaces – no need for additional software or agents.
 - High availability for 24/7 operation
Robust device design guarantees uninterrupted use in industrial, critical, or continuous-operation environments.

- Trusted Computing Platform for integrity and tamper protection
Bootloader, OS, and firmware are cryptographically secured. A TPM (Trusted Platform Module) protects configuration data from unauthorized access or manipulation.
- No security-critical data stored on the device
Console modules do not store access credentials – minimizing data leakage risk in case of loss or theft.
- Access management with role-based permissions
Detailed user rights management with configurable access per resource and mandatory authentication (e.g., in matrix setups).
- Integration with external directory services
Compatible with Active Directory, LDAP, and Radius – for seamless incorporation into enterprise policies and IT security frameworks.
- Customizable password and access policies
Allows configuration of password complexity, usage rules, and lockout limits – for maximum policy compliance.
- Built-in two-factor authentication (2FA)
A second factor can be used for login – for added protection in sensitive environments.
- Monitoring & early warning via Syslog, SNMP, and Web Interface
Security-relevant events and suspicious activities can be centrally monitored and analyzed.
- Auto-backup function for timely data protection
Performs automated configuration backups at defined intervals – ensuring reliable recovery without manual effort.
- Ident-LED for easy on-site identification
Devices can be quickly located in large installations using an LED signal.

Product details - video

- Support of the DVI-I video standard (DVI and VGA signals)
- bluedec™ – advanced multi-level lossless compression for pixel-perfect video quality and virtually latency-free transmission
- Pixel rate ca. 25 MPixel/s up to 165 MPixel/s
- Vertical frequency 24 Hz up to 120 Hz
- Horizontal frequency 25 kHz up to 135 kHz
- Color depth 24 bit
- Pixel encoding with RGB 4:4:4 at 24 bpp / 8 bpc
- Support for Display Data Channel Command Interface (DDC/CI)
- Support for Enhanced Extended Display Identification Data (E-EDID)
- Example resolutions:
 - 1920 × 1200 (60 Hz)
 - 1920 × 1080 (60 Hz)
 - Further VESA and CTA standardized resolutions are supported within the limits of pixel rate and horizontal/vertical frequency.
- MultiChannel variant: MC2 transmits two video signals via two transmission paths and MC4 transmits four video signals via four transmission paths

Product details - further signals

- Keyboard/Mouse (USB)
- Audio (analog, stereo), bidirectional via adapter for the mono audio backchannel
- GenericUSB support for the USB classes HID (Human Interface Device), SmartCard and Mass Storage
- U variant: Embedded USB 2.0 over the KVM line with full-speed 16 Mbit/s, transparent, all USB classes
- U2 variant: Separate USB 2.0 transmission path with high-speed 480 Mbit/s, transparent, all USB classes, not matrix-compatible, only available in variants without redundant transmission path
- RS232, always available in the DT variant
- 2C / 2F variants with two transmission paths (CAT or Fiber) for redundancy

Features and product overview

Abbreviation / Feature	Icon	Description
-	bluedec™	bluedec™ – advanced multi-stage lossless compression for best video quality and virtually latency-free transmission. This process enables pixel-perfect video transmission with efficient bandwidth utilization
-		Proprietary dedicated G&D transmission technology
-		Mix & Match: The devices can be flexibly combined with each other, even if they process different video signals
CPU	-	Computer module for feeding in the signals to be transmitted
CON	-	Console module for system operation
C	-	1G CAT transmission via twisted-pair cable for distances up to 140 m
F	-	2.5G fiber transmission via multimode or singlemode for distances up to 5000 m - optional extendable
2C / 2F		Two transmission paths (CAT or Fiber) for redundancy
DVI-I	 DVI-SL	DVI-I video signal (digital and analog/VGA)
-		Resolutions up to 165 MPixel/s possible, e.g. 1920 × 1200 (60 Hz) or 1920 × 1080 (60 Hz)
MC		Number of video channels; MultiChannel variants have two or four separate video signals via two or four transmission paths
LC		Local console at the computer module enables the display and operation of all video channels on site
GenUSB		Always included: GenericUSB support for the USB classes HID (Human Interface Device), Smart-Card, and Mass Storage
U		Embedded USB 2.0 over the KVM line with full-speed 16 Mbit/s, transparent, all USB classes
U2		Separate USB 2.0 transmission path with high-speed 480 Mbit/s, transparent, all USB classes; not matrix-compatible; only available in variants without redundant transmission path (2C / 2F)
-		Transparent audio signals (stereo, analog), bidirectional via optional adapter for the mono audio back channel
DT	 RS232	Transparent RS232 (max. 115,200 bps), always available in the DT variant
-		Product dimensions, ca. in millimeters, specified as width × height × depth

Computer modules, transmission via CAT twisted pair cable up to 140m

Item no.	Name							
A1111056	VisionXS-CPU-C-DVI-I 2.0	1	○	○	GenUSB	●	○	115 x 32 x 222
A1111053	VisionXS-CPU-2C-DVI-I 2.0	1	○	●	GenUSB	●	○	115 x 32 x 222
A1111050	VisionXS-CPU-C-DVI-I-DT 2.0	1	○	○	GenUSB	●	●	215 x 44 x 222
A1111047	VisionXS-CPU-2C-DVI-I-DT 2.0	1	○	●	GenUSB	●	●	215 x 44 x 222
A1111038	VisionXS-CPU-C-DVI-I-U 2.0	1	○	○	USB 2.0	●	○	115 x 32 x 222
A1111035	VisionXS-CPU-2C-DVI-I-U 2.0	1	○	●	USB 2.0	●	○	115 x 32 x 222
A1111032	VisionXS-CPU-C-DVI-I-U-DT 2.0	1	○	○	USB 2.0	●	●	215 x 44 x 222
A1111029	VisionXS-CPU-2C-DVI-I-U-DT 2.0	1	○	●	USB 2.0	●	●	215 x 44 x 222
A1111044	VisionXS-CPU-C-DVI-I-U2 2.0	1	○	○	USB 2.0 separate	●	○	115 x 32 x 222
A1111041	VisionXS-CPU-C-DVI-I-U2-DT 2.0	1	○	○	USB 2.0 separate	●	●	215 x 44 x 222
A1111017	VisionXS-CPU-C-MC2-DVI-I-DT 2.0	2	○	○	GenUSB	●	●	441 x 44 x 222
A1111011	VisionXS-CPU-C-MC2-DVI-I-U-DT 2.0	2	○	○	USB 2.0	●	●	441 x 44 x 222
A1111014	VisionXS-CPU-C-MC2-DVI-I-U2-DT 2.0	2	○	○	USB 2.0 separate	●	●	441 x 44 x 222
A1111026	VisionXS-CPU-C-MC4-DVI-I-DT 2.0	4	○	○	GenUSB	●	●	441 x 44 x 222
A1111020	VisionXS-CPU-C-MC4-DVI-I-U-DT 2.0	4	○	○	USB 2.0	●	●	441 x 44 x 222
A1111023	VisionXS-CPU-C-MC4-DVI-I-U2-DT 2.0	4	○	○	USB 2.0 separate	●	●	441 x 44 x 222

Computer modules, transmission via fiber multimode up to 400m

Item no.	Name							
A1111057	VisionXS-CPU-F(M)-DVI-I 2.0	1	○	○	GenUSB	●	○	115 x 32 x 222
A1111054	VisionXS-CPU-2F(M)-DVI-I 2.0	1	○	●	GenUSB	●	○	115 x 32 x 222
A1111051	VisionXS-CPU-F(M)-DVI-I-DT 2.0	1	○	○	GenUSB	●	●	215 x 44 x 222
A1111048	VisionXS-CPU-2F(M)-DVI-I-DT 2.0	1	○	●	GenUSB	●	●	215 x 44 x 222
A1111039	VisionXS-CPU-F(M)-DVI-I-U 2.0	1	○	○	USB 2.0	●	○	115 x 32 x 222

Item no.	Name							
A1111036	VisionXS-CPU-2F(M)-DVI-I-U 2.0	1	○	●	USB 2.0	●	○	115 x 32 x 222
A1111033	VisionXS-CPU-F(M)-DVI-I-U-DT 2.0	1	○	○	USB 2.0	●	●	215 x 44 x 222
A1111030	VisionXS-CPU-2F(M)-DVI-I-U-DT 2.0	1	○	●	USB 2.0	●	●	215 x 44 x 222
A1111045	VisionXS-CPU-F(M)-DVI-I-U2 2.0	1	○	○	USB 2.0 separate	●	○	115 x 32 x 222
A1111042	VisionXS-CPU-F(M)-DVI-I-U2-DT 2.0	1	○	○	USB 2.0 separate	●	●	215 x 44 x 222
A1111018	VisionXS-CPU-F(M)-MC2-DVI-I-DT 2.0	2	○	○	GenUSB	●	●	441 x 44 x 222
A1111012	VisionXS-CPU-F(M)-MC2-DVI-I-U-DT 2.0	2	○	○	USB 2.0	●	●	441 x 44 x 222
A1111015	VisionXS-CPU-F(M)-MC2-DVI-I-U2-DT 2.0	2	○	○	USB 2.0 separate	●	●	441 x 44 x 222
A1111027	VisionXS-CPU-F(M)-MC4-DVI-I-DT 2.0	4	○	○	GenUSB	●	●	441 x 44 x 222
A1111021	VisionXS-CPU-F(M)-MC4-DVI-I-U-DT 2.0	4	○	○	USB 2.0	●	●	441 x 44 x 222
A1111024	VisionXS-CPU-F(M)-MC4-DVI-I-U2-DT 2.0	4	○	○	USB 2.0 separate	●	●	441 x 44 x 222

Computer modules, transmission via fiber singlemode up to 5.000m

Item no.	Name							
A1111058	VisionXS-CPU-F(S)-DVI-I 2.0	1	☐	☐	GenUSB	☒	☐	115 x 32 x 222
A1111055	VisionXS-CPU-2F(S)-DVI-I 2.0	1	☐	☒	GenUSB	☒	☐	115 x 32 x 222
A1111052	VisionXS-CPU-F(S)-DVI-I-DT 2.0	1	☐	☐	GenUSB	☒	☒	215 x 44 x 222
A1111049	VisionXS-CPU-2F(S)-DVI-I-DT 2.0	1	☐	☒	GenUSB	☒	☒	215 x 44 x 222
A1111040	VisionXS-CPU-F(S)-DVI-I-U 2.0	1	☐	☐	USB 2.0	☒	☐	115 x 32 x 222
A1111037	VisionXS-CPU-2F(S)-DVI-I-U 2.0	1	☐	☒	USB 2.0	☒	☐	115 x 32 x 222
A1111034	VisionXS-CPU-F(S)-DVI-I-U-DT 2.0	1	☐	☐	USB 2.0	☒	☒	215 x 44 x 222
A1111031	VisionXS-CPU-2F(S)-DVI-I-U-DT 2.0	1	☐	☒	USB 2.0	☒	☒	215 x 44 x 222
A1111046	VisionXS-CPU-F(S)-DVI-I-U2 2.0	1	☐	☐	USB 2.0 separate	☒	☐	115 x 32 x 222
A1111043	VisionXS-CPU-F(S)-DVI-I-U2-DT 2.0	1	☐	☐	USB 2.0 separate	☒	☒	215 x 44 x 222

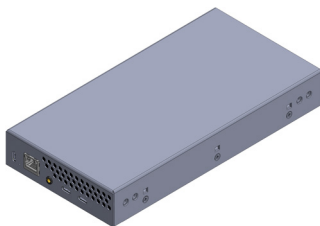
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A1111019	VisionXS-CPU-F(S)-MC2-DVI-I-DT 2.0	2	○	○	GenUSB	●	●	441 x 44 x 222
A1111013	VisionXS-CPU-F(S)-MC2-DVI-I-U-DT 2.0	2	○	○	USB 2.0	●	●	441 x 44 x 222
A1111016	VisionXS-CPU-F(S)-MC2-DVI-I-U2-DT 2.0	2	○	○	USB 2.0 separate	●	●	441 x 44 x 222
A1111028	VisionXS-CPU-F(S)-MC4-DVI-I-DT 2.0	4	○	○	GenUSB	●	●	441 x 44 x 222
A1111022	VisionXS-CPU-F(S)-MC4-DVI-I-U-DT 2.0	4	○	○	USB 2.0	●	●	441 x 44 x 222
A1111025	VisionXS-CPU-F(S)-MC4-DVI-I-U2-DT 2.0	4	○	○	USB 2.0 separate	●	●	441 x 44 x 222

Enclosure

The VisionXS 2.0 features a powder-coated sheet steel enclosure (color RAL 9006 White Aluminum with fine-texture metallic finish) with protection class IP20. It is available in the following enclosure sizes (H × W × D):

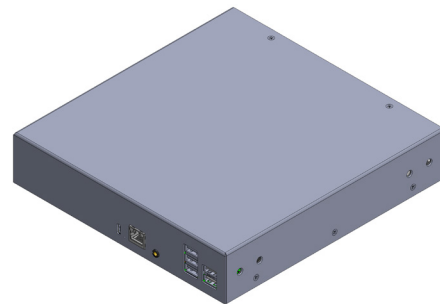
Compact enclosure

115 mm x 32 mm x 222 mm



Desktop enclosure (DT, ½ 19")

215 mm x 44 mm x 222 mm



MultiChannel Desktop enclosure (DT, 19")

441 mm x 44 mm x 222 mm



Operating conditions

- Area of application: Indoor use
- Operating temperature: 5°C to 45°C (35°C for under-desk or rack mounting)
- Operating air humidity: 20% to 80%, non-condensing
- Max. operating altitude: 3048m above sea level
- Storage temperature: -20°C to 60°C
- Storage air humidity: 15% to 85%, non-condensing
- Conformities: CE, FCC, UKCA, TAA, WEEE, REACH, RoHS

Scope of delivery – compact computer modules

Important: Requires an additional external power supply.

Note: Fiber variants (F / 2F) include the required SFP transceivers (M / S).

Quantity	Item no.	Name	Description
1	A3110017	Audio adapter cable, 1x 3.5mm jack plug to 2x 3.5mm jack socket	Adapter to split analog audio speaker and microphone
2	A6300083	Audio-M/M-2-ferrite cable 2m	Audio connection cable with ferrite core
1*	A6300100	DVI-D-DL-M/M-2 cable DVI-D 2m	Single cable for connecting a digital dual-link video channel
1*	A6300053	VGA-M/DVI-A-M-2 cable VGA-DVI 2m	Single cable for connecting an analog video channel
1	A6200112	TypeC-Service-Cable-M/M-2, 2m, USB Type-A / Type-C	Cable for system updates and configuration

*Two cables are included with MC2 variants. Four cables are included with MC4 variants.

Additional scope of delivery – computer modules in desktop enclosures (DT)

Note: Desktop enclosure variants can be operated using the internal power supply.

Redundant power supply can be realized with an additional external power pack.

Quantity	Item no.	Name	Description
1	A6300023	RS232-M/F-2 cable RS232 2m	Cable to connect a serial device
1	According to the shipping region	PowerCable 2m	Cable to connect the power supply

Additional available cables

Note: Further country-specific cables available on request.

Item no.	Name	Description
A6300118	Audio-M/M-3-ferrite cable 3m	Audio connection cable with ferrite core
A6300085	Audio-M/M-5-ferrite cable 5m	Audio connection cable with ferrite core
A6300164	DVI-D-DL-M/M-3 cable DVI-D 3m	Single cable for connecting a digital dual-link video channel
A6300104	DVI-D-DL-M/M-5 cable DVI-D 5m	Single cable for connecting a digital dual-link video channel
A6300068	DVI-I-DL-M/M-2 cable DVI-I 2m	Single cable for connecting an analog or digital dual-link video channel
A6300070	DVI-I-DL-M/M-3 cable DVI-I 3m	Single cable for connecting an analog or digital dual-link video channel

Item no.	Name	Description
A6300069	DVI-I-DL-M/M-5 cable DVI-I 5m	Single cable for connecting an analog or digital dual-link video channel
A6300024	RS232-M/F-3 cable RS232 3m	Cable to connect a serial device
A6300025	RS232-M/F-5 cable RS232 5m	Cable to connect a serial device
A6300066	PowerCable-3 Standard cable 3m	Cable to connect the power supply type Germany
A6300065	PowerCable-5 Standard cable 5m	Cable to connect the power supply type Germany
A6100173	TS-LED-blue-R-2	LED to tag the active console of a TradeSwitch configuration of a matrix
A6100172	TS-LED-blue-R-3	LED to tag the active console of a TradeSwitch configuration of a matrix
A6100171	TS-LED-blue-R-5	LED to tag the active console of a TradeSwitch configuration of a matrix
A6300177	PowerCable-C5-3 DE 3m	Cable to connect the external power supply type Germany
A6300178	PowerCable-C5-5 DE 5m	Cable to connect the external power supply type Germany

Mounting solutions

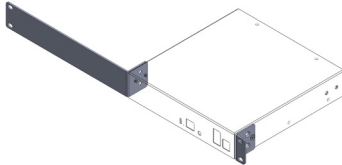
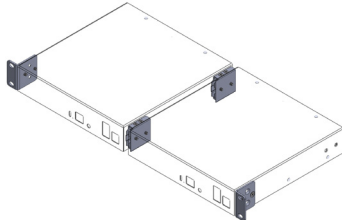
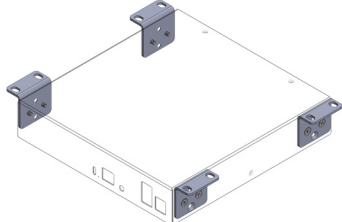
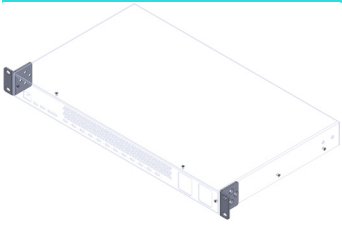
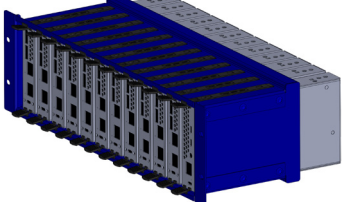
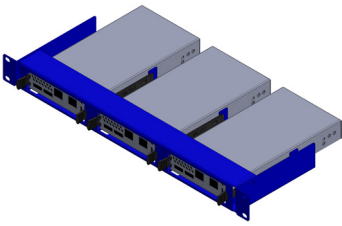
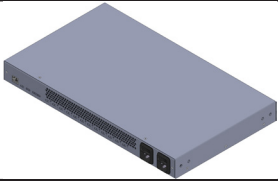
Figure	Item no.	Name	Description
	A7000073	19" RM-Set-VXSDT2.0-1RU	19" extension for rack mounting of one VisionXS(-IP) 2.0 desktop device within 1U (44 mm height)
	A7000071	19" RM-Set-VXSDT2.0-Twin-1RU	19" extension for combined rack mounting of two VisionXS(-IP) 2.0 desktop devices within 1U (44 mm height)
	A7000076	Table-Mount-Set-VXS2.0-436_MP12TypeC	Fastening kit for under desk mounting of devices of VisionXS 2.0 and VisionXS-IP 2.0 series as well as MultiPower-12-TypeC devices

Figure	Item no.	Name	Description
	A7000072	19" RM-Set-VXS2.0-436_MP12TypeC-1RU	19" extension for rack mounting VisionXS(-IP) 2.0 and MultiPower-12-TypeC devices of 436 mm width within 1RU (44 mm height)
	A7000075	19" DeviceCarrier 3RU 12x115mm for VisionXS(-IP) 2.0 variants	Device carrier for combined rack mounting of up to 12 compact VisionXS(-IP) 2.0 devices within 3U
	A7000074	19" DeviceCarrier 1RU 3x115mm for VisionXS(-IP) 2.0 variants	Device carrier for combined rack mounting of up to 3 compact VisionXS(-IP) 2.0 devices within 1U

External power supply

External power supply for the VisionXS 2.0 series is provided via USB Type-C PD (Power Delivery). Besides the universal external power adapter, the new MultiPower-12-TypeC allows centralized and redundant power supply. It further supports network-based control, monitoring, and updates, as well as intelligent energy management with automatic load balancing.

Figure	Item no.	Name	Description
	A4110063	PowerPack USB PD TypeC max. 65W 5V-20V	USB TypeC power supply with power delivery, max. 65W, 5V-20V, incl. power cable (Type according to the shipping region)
	A4110064	MultiPower-12-TypeC	Central power supply for up to 12 devices with USB Type-C PD interface. Max. total power 270W, max. 60W per port. Max. 22.5W per port if operating 12 identical devices.