Advanced Video Solution > AV over IP Solution

iSDV-200CTR

4K HDR SDVoE IP combo transceiver supports 10G copper & fiber

Features

» Encoder/Decoder hybrid and copper/fiber combo device

» Visualization hardware design for IP management

» Flexible software, iSDV Network Video Orchestrator, for TX/RX configuration and applications

Specifications

System	
CPU	BlueRiver® AVP2000T
Memory	2 x 128M x16 2Gb DDR3 SDRAM onboard
Appearance	
Dimension	238 x 166 x 44.5 mm
Net Weight	1235g
I/O Interface	
Ethernet	2 x LAN : 1 x 1GbE RJ45, 1 x 10GbE RJ45
	1 x SFP+ : 10GbE
I/O Interface	4 x HID
	1 x IR In
	1 x IR Out
	2 x HDMI 2.0 : 1 x In, 1 x Out
	2 x 3.5mm audio jack : 1 x In, 1 x Out
	2 x RS-232
Control button	2 x Trigger & Tuning : 1 x Reset button, 1 x USB switch
Indicator	Description: 6 x LED indicator
Video Processing	
Video Format	HDMI 2.0 supporting all resolutions up to 594MHz
	4K60 RGB and 4:4:4 8-bit
	4K60 4:2:2 10-bit for broadcast and medical applications
	4K60 4:2:0 10-bit and 12-bit HDR
Display	
LCD Size	65 x 15 mm
LCD Color	Monochrome
Power	
Power Consumption	40W
Power Supply	12V DC In, 3.3A
Environment	
Operating Temperature	-20°C ~ 50°C w/o air flow
	-20°C ~ 60°C w/ air flow
Operating Humidity	20% ~ 95%, non-condensing
Functionality	
Application Mode	Transmitter / Receiver
	Extension / Switching / Video Wall / Multi Viewer / KVM supported

Software Support	
Software	Free management software (iSDV Network Video Orchestrator) supported
Compatible OS	Linux Ubuntu 18.04 LTS+
	Microsoft Windows 10 64-bit
	Microsoft Windows 11 64-bit
	QNAP NAS QTS 5
Certifications	
Safety & EMC	CE, FCC, CCC

Ordering Information

iSDV-200CTR-R10	SDVoE Transmitter&Receiver, Semtech BlueRiver® AVP2000T, 2x128M16 DDR3, 1x1GbE RJ45, 1x10GbE RJ45, 1x 10GbE SFP+, 2xIR, 2xHDMI2.0, 2x3.5mm audio jack, 4xUSB 2.0, 2xRS232, RoHS

4K HDR AV over IP Transceiver

SFP+ and RJ45 Combo Port, Zero Latency

IEI's new 4K video solution, iSDV-200CTR, is a high performance, zero latency, and 4K@60Hz (4:4:4) AV over IP video streaming transceiver, and is compliant with SDVoE technology. With its transceiver function, the iSDV-200CTR can act as a transmitter (Tx) and also a receiver (Rx) to deliver excellent flexibility of deploymentby software utility for different video scenarios. This transceiver built with the 10GbE combo port design is able to stream over copper cable or fiber cable in one device. Moreover, to offer a complete 4K video solution, IEI develops a value-added software utility, iSDV Network Video Orchestrator featuring intuitive user interface for centralization management, and enabling easy configuration of all iSDV-200CTR devices. As a leading 4K video streaming transceiver, the iSDV-200CTR delivers advanced capabilities for live event, video wall or situation room.

Seamless Switching, Video Wall, Multi-view and KVM Functions

IEI iSDV-200CTR transceiver can be configured and reconfigured via iSDV software to suit users' evolving needs in a cost-effective way without the need for any further third party, outboard processing equipments. The total savings over time can be massive due to its flexibility that reduces the cost of hardware upgrade. Moreover, the iSDV-200CTR equips a powerful AV processing unit, SDVoE (Software Defined Video-over-Ethernet), enabling real-time audio-visual functions.

- **MATRIX** OVER iP
- **VIDEO WALL** OVER iP
- **CONTROL** OVER iP
- **EXTENSION** OVER iP
- **MULTIVIEW** OVER iP

iSDV Application Block Diagram

Wide Applications

Improving Healthcare IT Systems

IEI's advanced 4K video streaming solution with iSDV-200CTR offers real-time high-resolution video sharing over hospital IP networks. It features zero latency and high efficiency of encode/decode allowing healthcare professionals to smoothly share live surgical or diagnosis video to improve medical outcomes.

Building Control Rooms with Improved Security and Reliability

IEI's iSDV-200CTR offers a scalable control room solutions. The security personnel are able to receive all high-resolution images from different IP cams, and simply manage video resources into multi-viewer, image compositing, or video wall with IEI's free software, iSDV Network Video Orchestrator, to support guards receiving any critical issues in the meantime and ensure dead spots can be avoided.

Maintain Fidelity and Synchronized Content in Live Events

To provide the best performance and experience of live conditions at concerts, IEI's iSDV-200CTR delivers maximum stability and high speed in switching of Pro AV solution to stream 4K@60Hz video over the 10GbE SFP+ ports.

Enabling Medical AV with Surgical Precision

With IEI iSDV-200CTR solution, any video source up to 4K resolution is available anywhere at any time. Content from surgical scopes, X-ray and CT/MRI scans, patient records, and even custom signage and infotainment can be distributed via low cost 10G Ethernet networks to provide the most flexible medical AV systems. Moreover, the iSDV featuring USB capability offers a full support of USB HID. This means sophisticated KVM applications can be deployed to workstations to control over keyboard and mouse.

Extension for Factory Automation Connectivity

In an industrial setting, connectivity is essential to guarantee faultless performance and control. The iSDV-200CTR addresses all the major challenges for connectivity in the plant floor: distance limitations, cable quality and cost, complex installations, latency and interactivity. IEI iSDV enables the use of a single category cable to meet all of industrial requirements, offering video & audio, Ethernet, controls and USB HID over 100m/40km via CAT 6A/fiber optics cables.

iSDV Control Center

iSDV Network Video Orchestrator

Simply log into the iSDV Network Video Orchestrator, a web-based application, to manage all your iSDV devices from a central console. It can run in different platforms, such as Windows 10/11, Ubuntu 18.04 LTS+, QNAP NAS QTS 5. Its intuitive user interface allows you to setup Tx and Rx modes, quickly configure display array or other settings, and check the status of all devices in real-time.

» Intuitive web-based GUI
» Control over matrix, video wall, and multi-viewer modes
» Simple installation procedure and intuitive user interface
» Display real-time status and setting of all connected transmitters and receivers

Display Configuration

The iSDV software provides a highly-customizable display layout. You can create display matrix according to your needs or choose from the built-in options. With drag-and-drop operation, you can easily arrange receivers from the device list onto the display layout. For signal routing, simply drag a transmitter to the display zo ne of the desired receiver to assign source to display.

Receiver Arrangement

Signal Routing

Flexible Deployment

iSDV makes creating multiviews and video walls simple and straightforward. Different video sources supplied by iSDV transmitters can be displayed on a multiview layout through one receiver. The iSDV software supports up to 32 video sources to meet your high-volume requirements.

With iSDV software, creating video walls of arbitrary size has never been easier. Just assign a transmitter to multiple receivers on the video wall layout, and you can build a video wall with perfectly synchronized outputs.

Multiviews

Video Walls

Download iSDV Software

Windows

Step 1: Double-click iSDV Installer to begin the installation.

Step 2: Follow the steps of the setup wizard to complete the installation.

Step 3: Once installed, click the iSDV web app to start using iSDV Network Video Orchestrator.

Step 4: Log in the app using the default username and password:

Username: admin

Password: admin

Ubuntu

Step 1: Go into Ubuntu 18.04 Desktop Version

Step 2: Install tools to create an environment for iSDV Network Video Orchestrator.

sudo su
apt-get update
apt-get install net-tools docker.io docker-compose unzip bash
setup.sh

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Step 3: Install iSDV Network Video Orchestrator

unzip ieiDocker.zip
cd ieiDocker
bash setup.sh

Step 4: Open the iSDV webpage by using the URL: https://localhost:1212

QTS 5

Step 1: Launch App Center in QNAP QTS 5

Step 2: Search for “iSDV”.

Step 3: Click the Install button to install the iSDV application.

Step 4: Once installed, click the Open button to launch the app.

Hardware Key Strengths

Transceiver

The iSDV-200CTR is a next generation transceiver which is unique in that it can be both an encoder and a decoder simultaneously, delivering ultimate performance, flexibility and cost savings. Furthermore, the TRX can transmit and receive up to 4K60 video simultaneously.

10GbE SFP+ and RJ45 Combo Port

To meet diverse network switch requirements, the iSDV-200CTR supports both SFP+ (fiber) and RJ45 (copper) ports for servicing a range of network needs.

* The SFP+ transceiver module is not included in the package.

* The SFP+ and RJ45 ports can't be used simultaneously.

Up to 100m over Cat-6a UTP copper cable

Extends the transmission over Cat-6a cable up to 100m from the HDMI source at Ultra-HD 4K2K@60 4:4:4 and extends flawless signal quality across a room or an entire facility.

Up to 40km over single mode fiber

Extends the transmission over optic cable up to 40km, and go beyond the limits of normal AV signal extensions to support massive building to building installations.
* The SFP+ transceiver module is not included in the package

Management Visualization

For easier management, the iSDV-200CTR is designed with a LCM to show the IP address of the device, and various LED indicators are provided on the front panel for you to check the device status on site directly.

Hardware I/O & Dimensions

Selection for SDVoE Total Solution

We provide a total solution for your 4K SDVoE deployment, including embedded systems for control centers, high-performance NAS for storage and web-managed switches for network management.

Embedded System & NAS

IDS-310-AL

Fanless Ultra-compact
Digital Signage system

ITG-100-AL

Fanless Ultra-compact
Size Embedded System

TS-464

QNAP Quad-core
Rackmount NAS

QNAP 10GbE Managed Switch

QSW-IM1200-8C

Industrial-grade Fanless full
10GbE Switch

QSW-M1208-8C

Layer 2 Web Managed
Switch with four 10GbE
SFP+ ports and eight 10GbE
SFP+/RJ45 combo ports

QSW-M1204-4C

Layer 2 Web Managed
Switch with eight 10GbE
SFP+ ports and four 10GbE
SFP+/RJ45 combo ports

QSW-M804-4C

Layer 2 Web Managed
Switch with four 10GbE
SFP+ ports and four 10GbE
SFP+/RJ45 combo ports

Maximum Compatibility and Stability

Fully Standard and SDVoE™ Alliance Compliant

To meet the universal market demands of 4K video solution, IEI complies with SDVoE technology and standard to offer 4K video streaming platforms with maximum compatibility, stability, and zero latency extension and switching.

SDVoE™ Alliance, the leading AV technology provider with complete ecosystem, integrates various expert teams of manufactures, system designers, software developers, and system integrators to accelerate the replacement of point-to-point connectivity and the matrix switch with Ethernet-based AV distribution, and achieve an excellent AV experience for users.