We are Lightware Visual Engineering, an AV equipment manufacturer and high-fidelity signal management specialist headquartered in Budapest, Hungary. We have been designing, developing and delivering devices and technologies since 1998. Our solutions tackle the challenges AV professionals face in the fast-paced world of digital integration.

Our mission is to deliver reliable and versatile, yet simple and consistent AV solutions that makes life easier and ensures that technology is not an obstacle, but instead a powerful tool.

Present Across 30+ Countries
Our products are available in more than 30 countries worldwide through our 18 offices and 14 distributors.

Serving the AV World Since 1998
All of our products are manufactured in the EU in our headquarters in Budapest, Hungary.

Dedicated Team of 250+ Professionals
We listen to the people who are the driving force of the AV industry – engineers, system designers, integrators and AV experts.

Out of a natural passion for cutting-edge AV technology, Our CEO, Gergely Vida, started Lightware in 1998 in a spare room of a downtown apartment.

Today, he still leads Lightware’s innovation solutions and is in the forefront of product development to ensure the company repeatedly surprises our industry and exceeds the expectations of our partners.

"New technologies must support people’s lives seamlessly and invisibly, just like air and water."

Gergely Vida, CEO
The Lightware Advantages for AV System Designers and Integrators

Lightware products and technologies offer unique benefits for AV professionals, helping at every step of the process from system design to installation, to configuration and beyond.

There are three main features that make Lightware products the best choice for system integrators, consultants and end-users: analytics, diagnostics and the open API.

Analytics

Lightware products have a built-in video frame rate analyser, a tool unmatched and unrivalled in our industry. Users can receive constant feedback about the exact pixel count and clock frequency in real time.

The possibility for constantly monitoring this data bring peace of mind to critical AV operations and the transparent data that Lightware’s devices provide about the system status can be used for higher-level integration.

Diagnostics

The cable diagnostics tool can monitor the status of each and every cable in the system and provide real-time feedback for the operators including the exact transmission error rate between transmitter and receiver.

Integrators and technicians no longer has to go and physically check if their cables are securely connected, having this information readily available on their screen saves tremendous amount of time.

Open-API

Every bit of data in a system powered by Lightware, all the way down to the device level, is openly available for higher level management and monitoring systems for troubleshooting and diagnostic purposes.

Lightware has a proven track record of seamlessly and effectively working together with third party systems to create a powerful combination for users and unlock the possibilities in any AV operation.
Share & Power Your Device
Just bring your own device, connect it easily and start sharing your desktop with the room right away whilst also charging your laptop in one go. The Taurus UCX offers USB-C connectivity for simplified handling of audio, video, power and control signals via one single cable.

The two USB-C ports on the Taurus UCX devices can not only transfer data and video/audio signals, but can also provide charging with 60W on each port.

Switch & Utilise
Take advantage of all the built-in assets of the room from the USB webcam to microphones and speaker systems and use them directly with your laptop or other device.

The Taurus UCX provides the possibility for meeting participants and collaborating teams to use their choice of video conferencing platforms while utilizing the USB assets in the room.

Control & Monitor
Access and control room facilities such as lights and shades without the hassle of using multiple controlling platform, as the Taurus UCX allows you to get everything done simply via the native control panel or touchpad that is already used for the video conference system.

The CEC (Consumer Electronic Control) support allows users can control sink devices (e.g. displays, projectors etc) on various end-points through HDMI connectivity, while the built-in web LDC makes it possible to easily configure the device through a web browser.

The new Taurus UCX is a Unified Communications platform that allows you to Conveniently Collaborate by simply Connecting your own device via a single USB-C cable to share your Content and Control the meeting room easier then ever before.

It’s time to forget about the frustration and the delays caused by confusing amount of tangled cables and dozens of plugs or stubborn webcams that somehow ‘never want to work’.

The Taurus UCX combines video, audio, control and Ethernet signals into one single cable, and together with the autoswitching and intuitive room control capabilities it brings you the experience of the future. Today.
Lightware’s UBEX is a fiber-optical, scaling AV-Over-IP system allowing uncompressed 4K60 4:4:4 signal extension with ultra-low latency multistreaming on 10G Ethernet network with dual 10G links.

UBEX brings a vast difference into AV operations through a powerful combination of capabilities unmatched by any other device on the market.

UBEX was designed to make a perfect fit for immersive applications, including XR screen studios, digital exhibitions and eSports arenas.

**Uncompressed Signals**
Pixel Accurate Delivery

UBEX is capable to manage uncompressed 4K60 4:4:4 signals for the ultimate visual experiences.

**Ultra-low Latency**
Real-Time Experience

A 0.01 ms latency that is undetectable for the human eye guarantees lag-free extension.

**Versatile Hardware**
3in1 - Freedom in System Design

UBEX can replace 3 devices by essentially being a receiver, a transmitter and a transceiver in one box.

**Quick Failover**
The Show Must Go on

Wide range of redundancy features ensure complete peace of mind during critical operations.

- Operates over 10G Ethernet networks with 2x10G links
- **End-to-end redundancy** and double scaling
- **Save rack space** and streamline operations
- **Short Boot time**
- **Seamless switching**: Switch between video sources in less than a second.
- Easy to get into: The entire network **setup can be made in less than a day.**
- **Great compatibility** with off-the-shelf networking equipment
- Lightware’s UBEX comes with **Dolby Atmos support**
- Manufactured in Europe. Green transportation, availability of the developers.

4K UHD @ 60Hz 4:4:4 uncompressed AV over IP via 20 Gbps designed for rental and professional users; dual channel 4K transmitter, receiver or transceiver with scaling and multi stream, including two 10G SFP+ multimode fiber modules with two Neutrik OpticalCON DUO connectors and EtherCON control port.
Lightware Advanced Room Automation

LARA’s mission is to provide a future-proof room automation platform for system integrators so they can seamlessly and invisibly support people’s collaboration to make the most out of their virtual or in-person meetings all over the world.

Why JavaScript?

Open source language with long-term viability

JavaScript is a modern, open source programming language that has continuously expanding libraries and modules. Its components are accessible online, making configuration development faster and cost-efficient.

Easy Learning Curve

JavaScript is relatively easy to learn, it has a steep learning curve with its event-loop basis. Programmers can pick up JavaScript relatively easily and they can quickly get up to speed to program LARA modules.

Enormous online community and online support

Various online communities provide strong support for those interested in learning JavaScript programming.

Configuration flexibility

LARA’s aim is to create value for system integrators who are not comfortable with programming or want to develop their programming skills as well as for experienced programmers. One of LARA’s key goals is to allow integrators to create room automation:

- without deep programming knowledge due to continuously expanding pre-written driver module-set
- by writing modules and configurations in JavaScript
- by mixing the two approaches, do part of the configuration with wizards and templates, do part of it by programming.
For System Integrators / Feel in control of your meeting room automation process

Open approach
- Control both Lightware and 3rd party devices and access remote services over the network
- Control through TCP/IP, Ethernet, RS232, GPIO, CEC interfaces
- Re-use generic pre-written modules for the most common protocols (REST, TCP/IP, LW3) to control devices like DSPs, microphones, matrices

Readiness to Use
- Will not need to have deep programming knowledge due to continuously expanding pre-written driver-set
- Possibility for advanced programmers to write modules and configurations in Javascript
- Set up parameters easily and reuse modules due to LARA’s modular software design
- No need for certificated trainings

No Need for External Controller
- Integrated in Lightware products
- Updates come with firmware upgrade
- Optimize costs and reduce environmental impact by not having to add an additional controller unit

For Corporates / Make the most out of your corporate meetings

Meeting efficiency
- Let the meeting participants control the meeting room from a single touchscreen. No need to bother with several device controls.
- Focus fully on your personal or hybrid meetings and let LARA set up the technical meeting space for you.
- Have standard meeting room experience with devices always behaving according to the same automation rules: no surprises or embarrassing situations for the less technical-minded colleagues.

Invisible meeting support
- Let LARA seamlessly and invisibly support your corporate life. Embedded in Taurus UCX, LARA can ensure that devices in the meeting space are ready to use by the start of the meeting and manage device behavior all along even after meetings.
- Make remote team interaction seamless for colleagues from all over the world.

Environment
- Support the environment by setting LARA to manage automated room switch-off.
- Optimize costs and reduce environmental footprint by not having to add an additional controller unit to each meeting room.

For Education / provide seamless learning and teaching experience

Class efficiency
- Let the professor control the auditorium, classroom from a single touchscreen. No need to bother with several device controls.
- Let the professors focus on what they are best at: imparting knowledge to students and let LARA set up the technical space for them.

Invisible groupwork and exam support
- Make personal or hybrid groupwork sessions and exams a seamless experience for students. Embedded in Taurus UCX and MMX2, LARA can ensure that devices in the meeting space are ready to use by the start of the groupwork session and manage device behavior all along even after the session is over.

Environment
- Support the environment by setting LARA to manage automated auditorium and study room switch-off.
- Optimize costs and reduce environmental footprint by not having to add an additional controller unit to each auditorium or group study room.
The VINX series devices were designed for 1G Ethernet networks and can also operate in point-to-point configuration with diverse application possibilities. We recommend VINX for applications where scalability, flexibility and rapid deployment are in focus. They are simple to install and to operate, and have numerous built-in services that most other manufacturers only provide for an extra cost.

**Unlimited Endpoints**
VINX can be expanded from a single point-to-point extension to virtually unlimited endpoints.

**Advanced EDID Management**
The extenders all major EDID resolutions and are capable to scale video up to 4K30.

**Built-in USB 2.0 ports**
The built-in USB 2.0 ports support KVM functionality and can also handle USB mass storage.

**HDCP Compliant**
The units are HDCP compliant with streaming bitrate variable between 10Mbps and 800Mbps.

VINX has an option for password-protected login.
End-users and integrators are required to use a password to configure their devices, which provides protection against unauthorized access.

**Smart Bandwidth Management**

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<thead>
<tr>
<th>Mode</th>
<th>Bandwidth Range</th>
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<tbody>
<tr>
<td>Still frame</td>
<td>&lt; 206 Kbps</td>
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<tr>
<td>Web browsing</td>
<td>70-100 Mbps</td>
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<td>Youtube</td>
<td>21-132 Mbps</td>
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<tr>
<td>Movie</td>
<td>165-315 Mbps</td>
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**Variable Bitrate, Video and Graphic Modes**
The built-in, selectable Video and Graphic Modes optimize streaming and compression to match the transferred media.

The **Variable Bitrate feature** provides an even more accurate adjustment option for smart bandwidth management.
Extend Signals Like Never Before

Lightware’s new, SDVoE-compatible TPX devices are the next generation point-to-point extenders that allow HDMI 2.0 signal management over a single CATx cable with HDCP 2.3 and Dolby Vision support.

**EDID Management**
Stores one EDID or mirrors the EDID of the display on the transmitter’s HDMI input

**Ultra-low Latency**
Less than 0.1 ms signal latency for real-time visual experience

**Audio Transmitter**
Output on the transmitter side to send audio signal directly to local audio systems

**Flexibility From Anywhere**
Beyond the benefits of sending high-resolution video over long distances, the extenders are also capable to handle various connectivity standards, from bi-directional RS-232 and command injection over IR making them particularly versatile for a wide range of applications.

**The Most Cost-Effective Solution**
As many as four TPX extenders can fit into one standard rack unit, making these devices more cost-effective. Passive-cooling not only ensures less noise, but results in lower energy consumption for long-term benefits.

TPX is an SDVoE compatible extender product family that utilises this industry-accepted standard. As Lightware’s first such device, it lays the foundation of future variants and product lines to bring out the most of SDVoE technology.

The widely-recognised Dolby Vision technology is synonymous with crystal-clear picture quality. In order to accurately deliver and display these high-dynamic-range (HDR) content, the TPX series supports the Dolby Vision standard.
Cisco Integration

Add Simple and Consistent Controls to Your Touch 10 / Navigator Panel

It’s time to empower the Touch 10 and the Room Navigator by making the control of the meeting space simple, intuitive and consistent with dedicated Lightware bundles.

Lightware’s technology allows users to unlock the full potential of their Webex Room Devices. Easily expand the number of available sources, extend signals without compromise and utilise your room kit as an independent USB webcam.

Lightware bundles seamlessly integrate with Cisco Webex Room Devices, can be easily configured using the Room Configuration Wizard and come with all the necessary components needed to get the system up and running in no time.

Expand

Easily access four additional sources and select them directly from the Touch 10 / Navigator interface with this essential bundle that is a perfect fit for small to medium sized meeting rooms.

At the heart of this setup there is a Lightware matrix switcher with four HDMI inputs and two outputs that makes it a perfect fit for small to medium sized meeting rooms.

This essential bundle comes with every component you need and can be swiftly configured using Lightware’s Room Configuration Wizard.

Extend / Extend the Signals of Cisco Webex Room Devices with Lightware

Lightware have created three different ‘Extend’ bundles to complement the Webex Room Devices, each with slightly different focus to meet the specific requirements of different meeting rooms. All of these bundles come with every component you need and can be swiftly configured using Lightware’s Room Configuration Wizard.

Extend 01

Take advantage of four additional sources with this bundle that also allows users to extend signals to distances beyond the reach HDMI cables, making them an ideal choice for medium to large meeting spaces.

Extend 02

Enhance the Touch 10 / Navigator with four additional sources, extend signals over longer distances and empower your Cisco Room with additional input formats such as DisplayPort, HDMI and USB-C.

Extend 03

Display content on multiple displays without being limited by physical distances and easily control your meeting room assets such as lights and shades with this uncompromising bundle that truly thrives in large meeting environments.
Camera Share / Share Your Webex Room Device

When it comes to versatility, Lightware’s ‘Camera Share’ bundles represent the most sophisticated solution to enhance the possibilities of Cisco-powered rooms allowing users to easily utilize the Webex Room Devices’ webcams and audio equipment as independent USB peripherals.

Camera Share 01

Comes with an HDMI to USB converter Inogeni 4KXUSB3 is included in the bundle.

For small to medium sized meeting rooms, the Camera Share 01 bundle is an ideal choice to achieve unprecedented freedom in utilizing the room’s assets as USB devices. Its four HDMI inputs and two HDMI outputs also provide essential flexibility to access up to four additional sources while four USB 2.0 ports provide seamless switching across hosts.

Camera Share 02

Comes with an HDMI to USB converter Inogeni 4KXUSB3 is included in the bundle.

Collaboration spaces of extensive size can greatly benefit from the Camera Share 02 bundle that offers the same benefits as the Camera Share 01 setup, such as easy host-switching over USB 2.0, but on an enhanced layout that allows access up to eight HDMI sources and eight HDMI displays or endpoints.

Camera Share 03

The HDMI to USB converter is not included

Please see our recommendations below.

For small to medium sized meeting rooms, the Camera Share 01 bundle is an ideal choice to achieve unprecedented freedom in utilizing the room’s assets as USB devices. Its four HDMI inputs and two HDMI outputs also provide essential flexibility to access up to four additional sources while four USB 2.0 ports provide seamless switching across hosts.

Divisible Rooms / Easily Control Your Divisible Rooms with Lightware

Divisible Rooms offer ultimate flexibility and versatility for collaboration teams by allowing meeting spaces to be physically divided or merged, and thus being used in line with the size and the requirements of the meeting.

This flexibility and versatility is matched by Lightware’s Divisible Room bundles that allow users to control their Webex Room Devices in divisible room as well as other AV assets easily and intuitively from their Cisco Touch 10.
The Power of USB-C in AV Applications

USB-C technology was designed to make signal transmission more convenient and provide users with unprecedented speeds, easy connectivity, and useful features.

However, not every USB-C cable is created equal and come with the same range of benefits, and the same applies for different USB-compatible devices -, such as webcam, audio systems and everything in-between.

Although it is widely overlooked, choosing a certain cable can mean the difference between seamless operation and unnecessary hassle.

By using Lightware’s tried-and-tested USB-C cables, users can bring out the full potential of their USB-C devices.

Lightware offers a wide range of various lengths from 1 to 5 meters, including active, Full Feature USB-C cables as well as editions that feature Microcoax technology.

Lightware’s cables have also been vigorously tested to ensure they work seamlessly with the Taurus UCX universal switcher and make possible for users to utilise all the benefits offered by USB-C technology.
Product Portfolio
Find the Right Device for All of Your AV Needs

Lightware’s product portfolio consists of more than 300 different devices to ensure that we offer the most suitable technology for every AV project. From stand-alone matrix switchers, to AV-over-IP systems, Lightware is truly a one-stop-shop for every professional within the global AV industry.

Standalone & Modular Matrix Switchers
Route HDMI 2.0, DisplayPort and DVI signals from multiple sources to multiple destinations with Lightware compact matrix switchers.

Extenders
Transmit video, audio and control signals over a twisted-pair, fiber-optic, or even USB-C cable to medium and long distances.

Distribution Amplifiers
Distribute video signals to multiple outputs with signal regeneration and take advantage of Lightware’s easy installation and configuration tools.

AV-over-IP
Lightware’s AV-over-IP multimedia systems bring together the best of both worlds and open up unprecedented possibilities in AV system design.

Cables & Accessories
Lightware offers a wide range of tried-and-tested accessories that help to seamlessly integrate Lightware’s devices into any AV infrastructure.
Vertical Markets
Industries and Applications

Lightware’s devices have a proven track record of powering a wide-range of AV applications across various industries.

Take a closer look at these different operations and learn more about how Lightware’s technology tackles the unique challenges of these specific AV environments.

**Education & Training**

Lightware offers intuitive and automated room control solutions for educational institutions allowing students and educators to focus on the task at hand.

**Corporate**

Collaboration, presentation and training rooms play a crucial role in corporate communication of today’s business world.

**Defense & Intelligence**

Deployed to challenging and often highly-classified environments, Lightware is proud to support mission-critical systems across land, air and sea domains.

**Esport & Gaming**

Lightware brings game-changing AV technology into the world of E-sports and Gaming Tournaments through uncompromising signal management.
Digital Signage
Robust and reliable AV solutions for digital displays across various applications, from media content to hospitality & leisure to local information.

Medical
AV systems and solutions for healthcare applications offering visualizations with zero latency combined with pixel-perfect, high resolution images.

Government
Secure, ‘data-diode class’ device versions dedicated for operations and environments where high levels of security and integrity are key concerns.

Industrial
Real-time operating centers, control rooms, simulation and training facilities, tele-presence and video conferencing centers.

Rental & Staging
Widely acclaimed AV technology and devices that offer versatility, reliability and redundancy features to ensure that the show must go on.