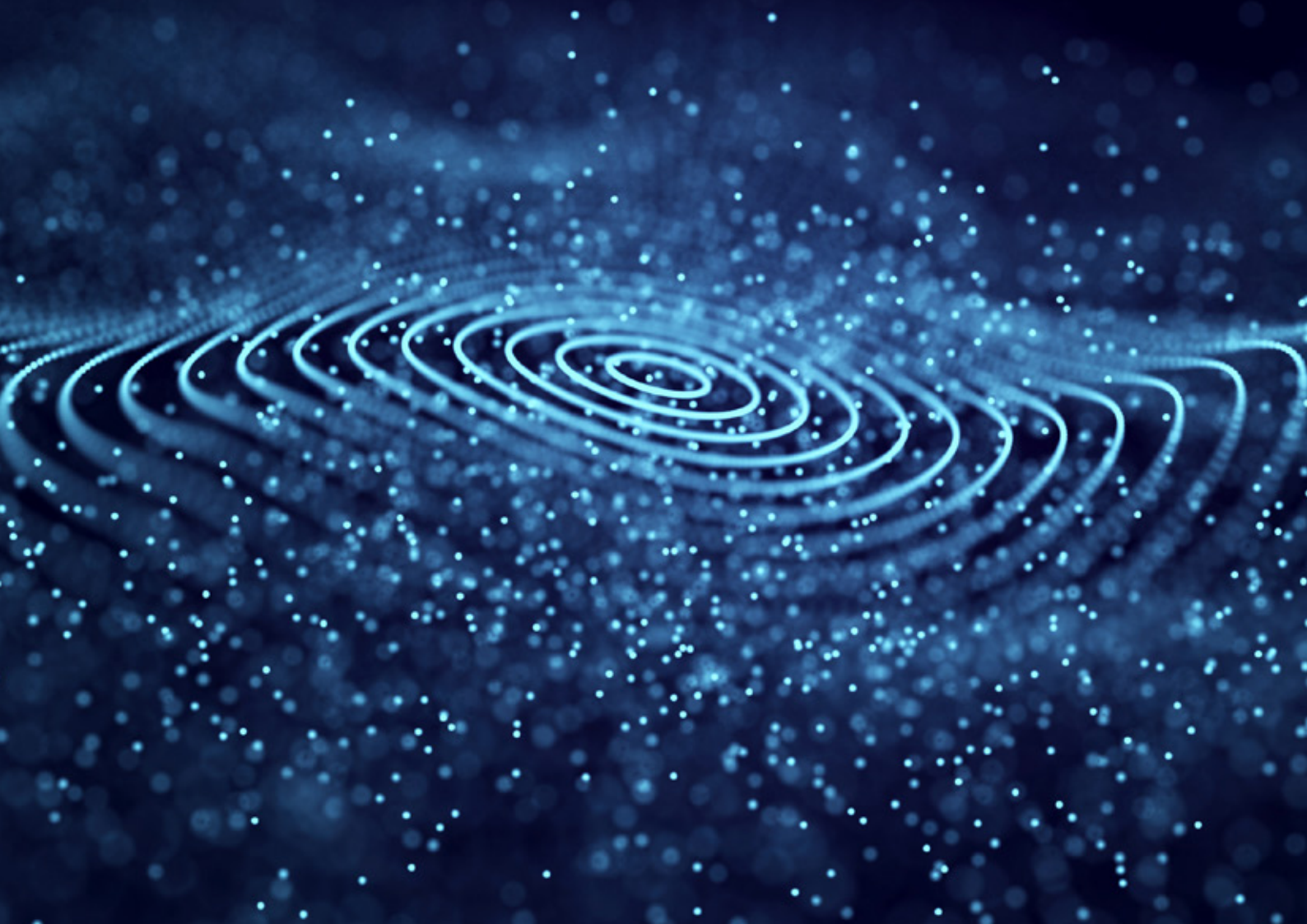


25<sup>th</sup> ANNIVERSARY visual engineering  
**LIGHTWARE**

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## The Beginning of Something Greater: Lightware Is Going to Be 25 Years Old This Year

**Lightware Visual Engineering is a professional AV manufacturer, and has been developing and supplying products for 25 years in the heart of Europe.** We design, develop and deliver devices and technologies ever since 1998 to tackle the challenges AV professionals face in the fast-paced world of digital integration.

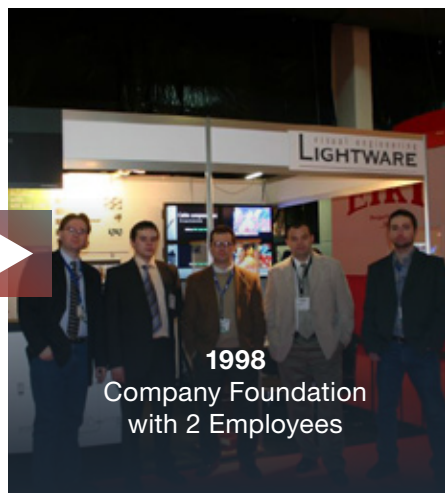
**Being on the market for 25 years now, we have always been strongly focused on expanding the horizons of what is possible within the realms of signal management, delivering numerous world-first technologies along the way.** During this time, we grew from a small niche venture into a global enterprise and industry leader, serving clients all across the globe in over 30 countries, and it has established itself as one of the leading AV corporations on the global market.

When Gergely Vida and his friends created the company, they repaired only projectors and plasma TVs. Our offering has expanded from the traditional AV devices that brought the company success (DVI, HDMI and DisplayPort matrix switchers, signal distributors and signal amplifiers) to AV over IP- HDBaseT and SDVoE solutions.

### European Manufactured - Secure Supply Chain

**Lightware, is a European company that designs, develops, assembles, integrates and tests all of its products in house.** Via a trusted and secure supply chain - we deliver innovative and reliable, robust and resilient products for mission-critical environments, that from the concept up to the delivery are EU-manufactured.

To trace the history of the last twenty-five years of Lightware is a journey through the technological advances which now define the modern world.



## We Keep

Listening  
Inventing  
Delivering  
Going the **Extra Mile**

Our mission has always been to deliver reliable and versatile, yet simple and consistent AV solutions that make life easier and that ensure that technology is not an obstacle but a powerful tool. **We focus on customers' needs and deliver viable solutions over expectations with an uncompromising level of customer service and support.**

## Lightware – Zero latency or loss of quality since 1998

Our European team of 250+ engineers, system designers, integrators and AV experts have been operating successfully for over 25 years. They focus on delivering intuitive technology for AV users and professionals through pioneering devices that invisibly support their work styles. This focus resulted in the unique Taurus UCX developed in 2021.



**25 Years of Experience**



**30+ Countries**



**300+ Employees**

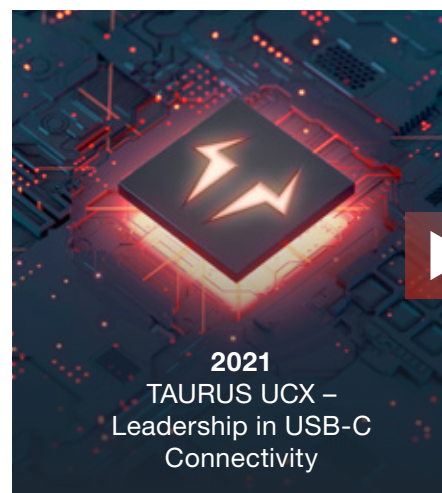


**600+ Products**



“Thank you to everyone who has supported our journey so far and to our amazing employees for their hard work and dedication. On the twenty-fifth anniversary of this prodigious company, and on behalf of our community of AV professionals, Lightware would like to salute those visionaries and leaders who have shaped our lives.”

– Gergely Vida  
CEO







# Corporate

At Lightware, we firmly believe that AV technology must support and encourage collaboration instead of causing unnecessary distraction.

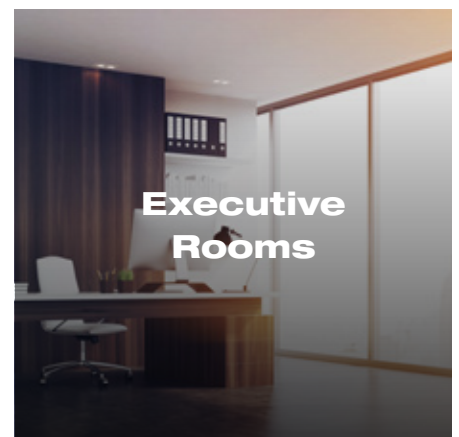
Our solutions unlock 'Bring-Your-Own-Device' capabilities and room automation features for a more enhanced meeting experience.

After the pandemic, organizations of all sizes were wrestling with serious issues, especially related to their changing workforces. Many **employees** are more tech-savvy and flexible than ever before as they **are working on their own time, from anywhere**. The time has never been better for **collaborative spaces with integrated technology for hybrid in-office and work-from-home schedules**.

More and more organizations deploy simple conference rooms using the **Bring Your Own Meeting (BYOM) philosophy**. In this implementation, rooms already have the necessary components – cameras, microphones, speakers and displays. **The meeting attendee brings a device that runs the Unified Communications (UC) software and the video codec**.

The ideal huddle spaces are equipped with state-of-the-art AV equipment, multiple high-resolution displays, built-in room PCs and everything else needed for seamless collaboration.

**Lightware offers the technology to help teams to share their content, control their environment and connect with each other easier than ever before.**





THE POWER OF  
USB-C

**Meet our powerful UCX switcher that improves productivity in hybrid collaboration and presentation.**

With a USB C + Taurus UCX, it only takes a few seconds to connect, join your meeting and share your presentation. Stay charged and enjoy the benefits of the wired internet.

**BYOM | COLLABORATION | CONNECTIVITY | CHARGING  
WITH ONLY ONE USB-C PLUG**



**Built-In  
Superspeed  
USB Hub**



**Achieving  
4K60 Video**



**Compatibility  
with variety of  
USB-C devices**



We are at the forefront of building the meeting rooms of the future, so **we provide you with our BYOM solutions for the Microsoft Teams, Zoom and Webex platforms.** These three major vendors are offering one-touch or even no-touch meeting joins in their enhanced rooms that include codec processing and other capabilities in the room. For the best and easiest internal meetings, using a vendor or partner system that includes the codec and advanced capabilities in the room is the best way forward. **All of them can function for you your needs seamlessly, just as you always wanted them.**



**zoom Rooms**



## Enterprise and AV Integrations

**Lightware products have a proven track record of seamlessly integrating with industry-leading 3<sup>rd</sup> party devices** from network switchers to USB webcams, audio systems and other AV or IT infrastructures. We provide world-class support for system architects and assist them with thorough testing to ensure we deliver the solution that fits perfectly with their project's requirements.

We have already announced the **expansion of the company's Integrations Partnership initiative with key global industry players.** Complementing the relationship with Cisco, a rapidly growing list of integration partners is headed by **Logitech, Poly, Zoom, Barco, Utelogy, TAD monitoring, QSC and Q-SYS**, just to mention a few.



logitech®

utelogy

Tad.monitor







# Education

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

Today's classrooms are equipped with state-of-the-art AV equipment; multiple high-resolution displays, built-in room PCs and everything else needed for seamless training, and Lightware offers the technology to help future generations connecting and collaborating more easily than ever before. equipment to seamlessly engage with their students.



## IT Security

Lightware devices adhere to the latest IT security protocols and also come with HDCP support for complete peace of mind



## Intuitive controls

Meeting participants can fully utilize their room's assets easily control them through user-friendly interfaces and room automatization



## BYOD Capabilities

Users can use their own laptops or mobile devices to share their work with the room or initiate a video call on the platform of their choice

## Hybrid education? – Lightware can help you!

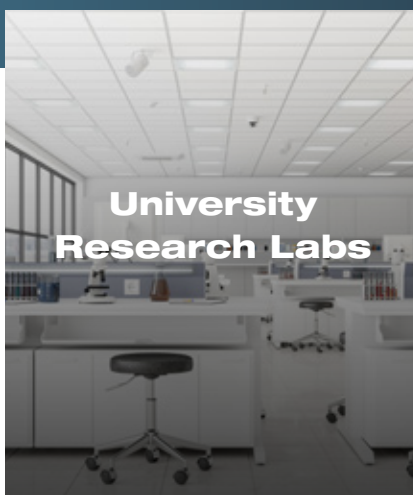
Hybrid learning is very much gaining increasing traction in the education space nowadays. Learning from the aftermath of the recent pandemic, we can say that **hybrid learning will stay with us, as it is proven to be an effective alternative to in-person lectures.** Therefore, we need to prepare ourselves to be technically ready for the new things coming up next.

Imagine an education environment where **teachers can prepare the room for their next class remotely using their own mobile device**, and by the time they get there everything from lights to displays are up and running. Once in the room, **they can then simply connect their own laptop to gain complete control over the room's integrated AV system** and start sharing their content right away or alternatively, **easily access any individual student's screen and assist them thanks to Lightware AV -over -IP solutions.**

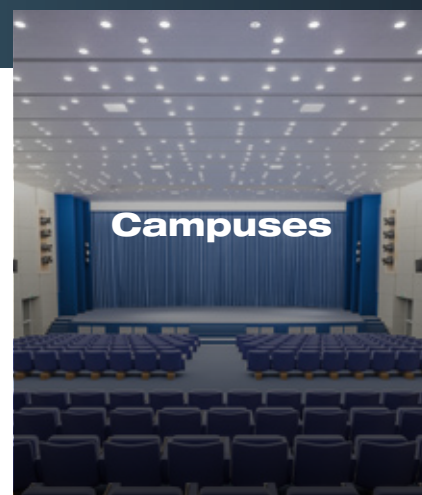
Classrooms at all levels are growing more interactive and connected, with a focus on active learning and BYOD environments to increase collaboration and interactivity between students and faculty.



Auditoriums



University  
Research Labs



Campuses

Taurus UCX leverages the **ability to combine video, USB, audio, control and Ethernet signals into one single USB-C cable**, which coupled with the unit's auto switching and **advanced room control capabilities** provides fast and intuitive set up with no downtime. Taurus UCX and MMX2 product family have a **built-in room automatization system, called LARA**. It lets the **professor access and control room facilities from a single touchscreen**. LARA also provides **remote control over the classrooms** to manage automated auditorium and study room switch-off.



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** most other manufacturers only provide for an extra cost.

TPX product family with **AVX technology** allows users to extend **HDMI 2.0 signals up to 4K60 4:4:4 video resolution** through a **single CATx cable** over distances **up to 100 meters**.

Beyond the benefits of sending **high-resolution video over long distances**, the extenders are also capable to handle various connectivity standards. This compact yet powerful device packs a whole range of useful features from HDCP 2.3 management to **Dolby Vision support to EDID management capabilities**.



## Lightware Education Audiovisual Developer (LEAD)

In our commitment to offering the best for education, we introduce the Lightware Education Audiovisual Developer (LEAD) program. **It is dedicated specifically to our highly esteemed education partners committed to Lightware audiovisual products in their standards.** LEAD was established to support the specific needs of educational institutions where **reliable and consistent, campus-wide solutions** are needed.

**The LEAD program provides exclusive features and benefits for schools**, offering consultancy and project design assistance, training for users, advanced technical support, extended warranty services, and a grant application opportunity.

If you're interested in our solutions, don't hesitate to connect us!  
**[education@lightware.com](mailto:education@lightware.com)**







# Defense & Intelligence

Deployed to challenging and often highly-classified environments, Lightware is proud to support mission-critical systems across land, air and sea domains. In this market we had the challenges ahead of us like the different classification levels within the networks, the demand for the highest level of security, and no signal latency is acceptable due to mission critical operations. We came up with the following solutions:



## Zero Latency

Providing real-time experience through Zero Frame Latency that is unnoticeable for the human eye.



## Data Diode

A data diode is a physical network device enforcing data to travel only in one direction to guarantee information security.



## Analytics

Products have a built-in video frame rate analyzer. Users can receive constant feedback about the exact pixel count and clock frequency.



## Open API

Every bit of data in a system is openly available for higher-level management and monitoring systems.



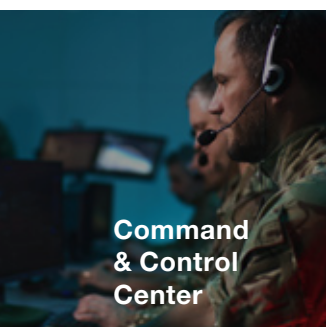
## Robust Build Quality

Devices built to deliver and extend signals even at the harshest and most challenging environments and applications.

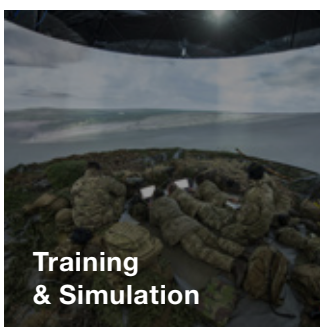


## IT Security

Lightware devices adhere to the latest IT security protocols and also come with HDCP support for complete peace of mind.



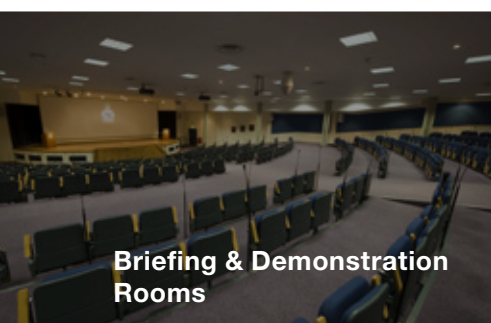
Command  
& Control  
Center



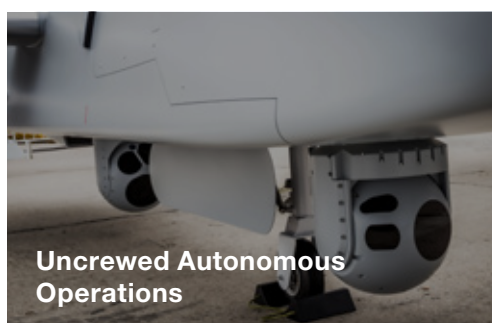
Training  
& Simulation



Naval



Briefing & Demonstration  
Rooms



Uncrewed Autonomous  
Operations



## LEVEL B - NATO SDIP-27 Certificated

The SDIP-27 Level B Certificate focuses on radiated magnetic waves of equipment used in classified environments i.e. secret and assesses the eavesdropping risk. **TEMPEST version (NATO SDIP Level B) of UBEX is also available on request.**



## UBEX 2x10G AV-over-IP System

### Be Mission Prepared:

Lightware's UBEX AV Over IP supports standalone operations or can be linked with multiple trainers for collective training to simulate the specific environments aircrew will encounter on their mission. Whether it be, Air-to-Air, Air-to-Ground, Surface-to-Air, Close Air Support, or Forward Air Controller missions, **you can train with confidence knowing that only the most reliable, resilient and best immersive AV technology with build in redundancy is provided** to ensure there is never a gap in training. This means more effective, realistic and repeatable training before the mission ever begins.



- 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.

### Technology and Security

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.

All Lightware products are **Open API and offer analytics and diagnostics** – so easily integrated and managed into legacy and new training architectures and systems as appropriate.



#### 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.



## A powerful tool that can improve the productivity in hybrid collaboration and presentation

Lightware's Taurus UCX is a universal switcher with the potential to transform any meeting space or huddle room into a unified communication powerhouse by unlocking all the benefits offered by USB-C technology.

This unique device is a true champion of collaboration applications, allowing users to share their content, switch hosts and control their meeting room easily and intuitively.

**All you need is just one USB-C cable.  
That's the Taurus UCX.**



### Taurus UCX Features

- Full HDMI 2.0 compatibility allowing 4K 60Hz 4:4:4 video
- USB-C connectivity which enables charging up to 2 x 60W, for laptops, tablets and phones
- USB 3.1 connectivity and host switching among 4 sources
- Simplified and automated room utility control
- Enhanced Ethernet Security Features



#### Share & Simplify

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.



#### Switch & Utilise

Take advantage of all the built-in assets of the room from the webcam to microphones and speaker systems. Easy host switching allows you to utilize all USB peripherals with the device and the video conference platform of your choice.



#### 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 Taurus UCX brings a plethora of great features and state-of-the-art capabilities to not only meet, but exceed even the highest expectations.

AV AWARDS 2022  
**WINNER**

Collaboration Technology  
of the Year





# TAURUS UCX

## Advanced Security Features

Our developers work around the clock to ensure our technologies and devices are being constantly enhanced and improved to allow our user to bring out the most of their Lightware products.

Meetings and collaborations are now more secure than ever before thanks to a range of security features.



### Network Authentication

In order to limit the user access for the HTTP/HTTPS server services, username and password request can be set.



### HTTPS & WSS Encryption

Requests and responses can be transferred via HTTPS (port no. 443). HTTPS protocol encrypts clear text, so it becomes incomprehensible for a third-party.



### Ethernet Security Features

Port-based VLAN setting which allows the user to decide which networks the USB-C ports are connected to, and thus which networks the connected devices can use.

This way the connected devices can be separated from the corporate network, increasing network security.

We have classified three options of the application, which are the following:

- Transparent: this is the default mode, with a network openly used by Taurus UCX and the BYOD devices.
- Separated BYOD: the network provided for the BYOD devices is separated from the control network.
- Dedicated: each connected BYOD device receives an independent network.

Anything can either be set through the Lightware Device Controller (LDC), LW3 or the REST API interface. Thanks to this feature, we can assure you, that no other parties can access to your network, who should not be. It was one of the key requirements from our customers, and we are more than happy to finally release it. Hope you find it useful during your work.



THE POWER OF  
**USB-C**  
Collaboration • Control • Connectivity  
Convenience • Charging





## 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 put of their virtual or in-person meetings all over the world.

First Integrated in  
**Taurus UCX** and **MMX2** Devices.



## Configuration Flexibility

LARA creates 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



# LARA IS FOR



## System Integrators

Feel in control of your meeting room automation process



## Corporates

Make the most out of your corporate meetings



## Education

Provide seamless learning and teaching experience



### Open Approach

- Control both Lightware and 3<sup>rd</sup> party devices and access remote services over the network
- Reuse generic pre-written modules for the most common protocols



### 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 External Controller

- Integrated in Lightware products
- No need for purchasing an extra controller box
- Updates come seamlessly with firmware upgrade



### Efficiency

- Control devices from a single touchscreen
- Focus fully on your in-person or hybrid meetings and let LARA set up the technical space for you by the time the meeting or class starts. You can also count on LARA's room management functionalities during and after using the room so meeting participants don't have to manage the practicalities of the meeting space



### Environment

- Optimize costs and reduce environmental impact by not having to add an additional controller unit
- Support the environment by setting LARA to manage automated auditorium, study and meeting room switch-off

# Traditional AV Solutions

## 18 Gbps Matrix Switchers with HDMI, DisplayPort or Mixed I/O Configurations

The MX2 matrix switchers come in all shapes and sizes, ranging from 4x4 to a whopping 48x48 cross point size, with or without analog audio ports, and most are also available with redundant power sources, paired with rugged power connectors and reinforced control ports. All models feature a front panel, color LCD screen with great visibility, and a jog-dial, multi-function button, enabling the users to manage most device features and services directly.

# MX2



**MX2M 4K Hybrid Modular Matrix** is Lightware's revolutionary solution allowing AV professionals across various environments to freely customize the device to make a perfect fit for their project's requirements and budget.

# Multimedia Matrix Switchers

# MMX

The MMX product line which has been popular since their market release among our customers, as these devices provide a great mix of services with basically all the features that you may need for a small-mid size collaboration and conference room environments.



### Advanced Control Pack V3

Add a Lightware device with Event Manager to your Cisco Telepresence kit to get local and remote multiport inputs and room automation control, and manage everything from the system's native touch panel. We provide full support for the integration into target Cisco Systems.

## MX Modular Matrix Series

The MX series matrix routers are the highest performance, modular expandable DVI and HDMI compliant switchers, available in five different frame sizes.

The built-in sophisticated software and hardware features make these routers the most flexible integrated solution for AV professionals and high-end home theatre applications.



## Signal Extenders Lossless Transmission Solutions



**TPS Extenders** - Lightware TPS extenders include HDBaseT™ integration with additional Lightware technology enhancements. Standalone twisted pair extender interfaces are fully compatible with our TPS Matrix Boards and other TPS products.



# Coming Soon Products 2023



## TAURUS UCX-4x3-HC40

Universal Matrix Switcher with HDMI 2.0 and USB-C Connectivity

Universal matrix switcher that exploits the USB-C connectivity for a simplified transmission of 4K video, audio, control signals and power providing meeting participants with easy host switching, utilizing data speeds of up to 5 Gbps under the USB 3.1 Gen1 providing video resolution capabilities up to 4K@60Hz at 4:4:4 as well as comprehensive and secure Ethernet features.



## DA4-HDMI20-C

HDMI Distribution Amplifier with down-scaling and HDCP 2.3 Support

DA4-HDMI20-C is a distribution amplifier with built-in EDID Management and Pixel Accurate Reclocking, supporting DVI, HDMI 1.4, and HDMI 2.0 signals with or without HDCP encryption. The output signal is reclocked and stabilized to remove jitter caused by long cables or poor quality sources.



## HDMI-TPN-TX107 & HDMI-TPN-RX107

SDVoE Compatible HDMI 2.0 Extender

The HDMI-TPN-TX107 and HDMI-TPN-RX107 transmitter and receiver devices with SDVoE technology are Lightware's newest development allowing users to extend HDMI 2.0 signals up to 4K60 4:4:4 video resolution from a single source to multiple destinations through 10G Ethernet networks.





**Contact us!**