

25th ANNIVERSARY visual engineering **LIGHTWARE**



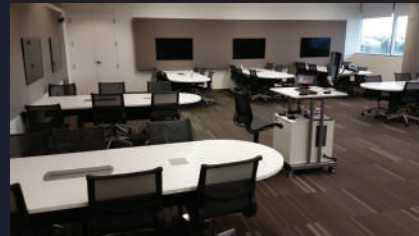
EDUCATION

Building Advanced
Learning Environments

AUDITORIUMS



ACTIVE LEARNING SPACE



HYBRID CLASSROOM



DIVISIBLE ROOM





LIGHTWARE VISUAL ENGINEERING: BUILDING ADVANCED LEARNING ENVIRONMENTS

Lightware Visual Engineering has been developing and supplying professional AV products for 25 years in the heart of Europe. Since 1998 Lightware has designed, developed and delivered technologies to tackle the challenges AV professionals face in the fast-paced world of digital integration.

Lightware focuses on customer needs and delivers solutions that exceed expectations with an uncompromising level of customer service and support.



30+ countries



25 years of experience



350+ employees

Training millennials, providing hybrid and distance learning, while being sustainable and efficient, are the challenges of today's education. All these tasks embrace AV technologies massively. The IT teams are set to secure smart future-proof professional AV solutions for their schools.

With Lightware, education customers will enjoy full support on their path to creating learning environments that will attend to each of their needs.



WE SUPPLY

Best in the industry **AV signal management solutions that ensure the ultimate USB-C connectivity** for in-person, distance, and hybrid education; all of them massively involving unified communication and collaboration.

With our **matrix switchers**, we accept, process and distribute every source applicable in education.

Our **AV-over-IP extenders are available for either 1Gbps or 10Gbps networks** delivering resolutions up to **uncompressed 4K60Hz** over fiber at distances the learning environment requires.

WE PROVIDE

Solutions to secure **seamless room automation and management. With LARA and Event Manager** firmware available in our connectivity products, instructors will start their lessons instantaneously.

Every piece of equipment and room facilities will be managed and controlled seamlessly, intuitively, and predictably, - all with Lightware doing the job invisibly in the background.

WE OFFER

LEAD: The Lightware Education Audiovisual Developer Program that offers exclusive features and benefits for schools, offering consultancy and project design assistance, proof-of-concept tests and demonstrations, training for technical staff, comprehensive technical support, and extended warranty services.

We will ensure that your school will have the best and most reliable bespoke solution and will **LEAD you into the future of learning spaces** with all the expertise and confidence that we have gained over 25 years of manufacturing AV products and solutions!

LIGHTWARE CONNECTS

USB-C CONNECTIVITY FOR GROUP STUDY SPACES, CLASSROOMS
OF GENERAL PURPOSE, DISTANCE, AND HYBRID LEARNING

Seamless USB-C connectivity is a milestone in today’s learning environment that involves plenty of multimedia sources and terminal equipment, such as laptops and media players, USB cameras, document cameras, speakerphones, etc. They are indispensable elements of teaching today.

With BYOD (bring your own device) and BYOM (bring your own meeting), having firmly established as a standard for training digitally native millennials, USB-C’s role has only dramatically increased.

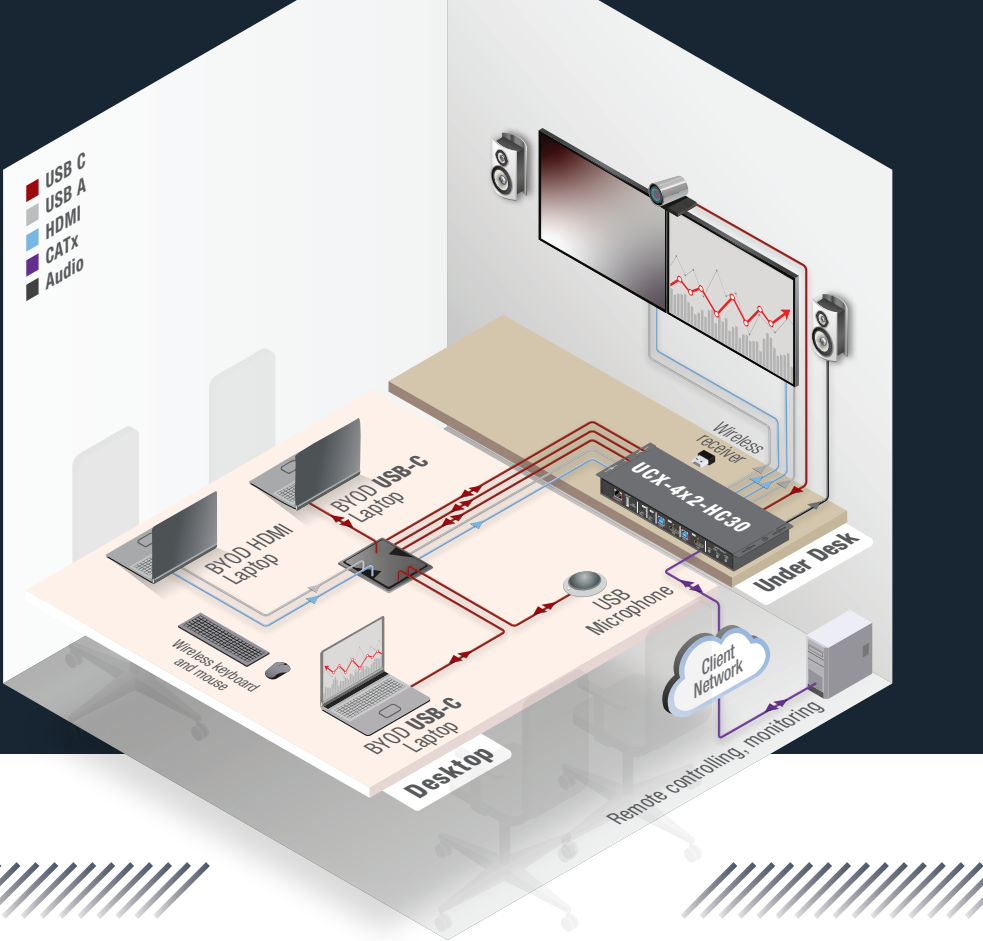
With TAURUS UCX, Lightware’s flagship USB-C connection platform, instructors are spared of any technical issues that such heavily wired spaces are likely to hold for them. TAURUS UCX provides literally seamless connectivity which removes every frustration and barrier that teachers habitually have while using multimedia and peripheral equipment. With this unrivaled unique AV-industry device in the heart of the group study rooms, general purpose classrooms, distance and hybrid learning sites, teachers are enabled to effectively engage and collaborate with their students, while students are given instruments they are best used to, which contributes to the quality of their learning and retaining information.

In schools, AV engineers are always on alert and ready to support in case of any technical problems, still, with this universal matrix switcher, their job has become tremendously easier.



Group Study Room Built on TAURUS UCX

The Group Study Room is expected to host up to 4 people offering USB-C connectivity features. The room has 1-2 4K displays. Students can use their gadgets (phones, tablets, laptops) in BYOD and BYOM modes and share room peripherals (USB camera, microphone, interactive screen, keyboard & mouse). The solution offers USB host switching, matrix/mirror capabilities. The universal switcher features 2-4 video inputs (HDMI & USB-C); audio is available via the display and/or soundbar; cabling is up to 5 meters.



Group study rooms, distance, and hybrid learning spaces will go further leveraging the benefits that wireless presentation and collaboration tools hold when integrated with the TAURUS UCX universal switcher:

- With TAURUS UCX, any **laptop can benefit from sharing USB peripherals** (USB cameras, speakers, or speakerphones, keyboard and mouse).
- It is TAURUS UCX, that will give the presenter (teacher or student) piece of mind when sharing their content since their **BYOM laptop will stay charged over USB 3.1 with 60W of power.**
- TAURUS UCX via the USB-C connection will **provide access to the local network**, if required. The instructors will be able to share the content they need ad hoc.
- Hosting up to 4 BYOM devices simultaneously, TAURUS UCX will **output up to two sources on two separate displays.**
- TAURUS UCX enables **switching from wired to wireless conferencing solutions to take advantage of the USB peripherals in the room** via USB host switching and provide BYOM in a cable free option.

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



USB-C EXTENSION IS HERE



Future-proof Your Meeting Room with Taurus UCX

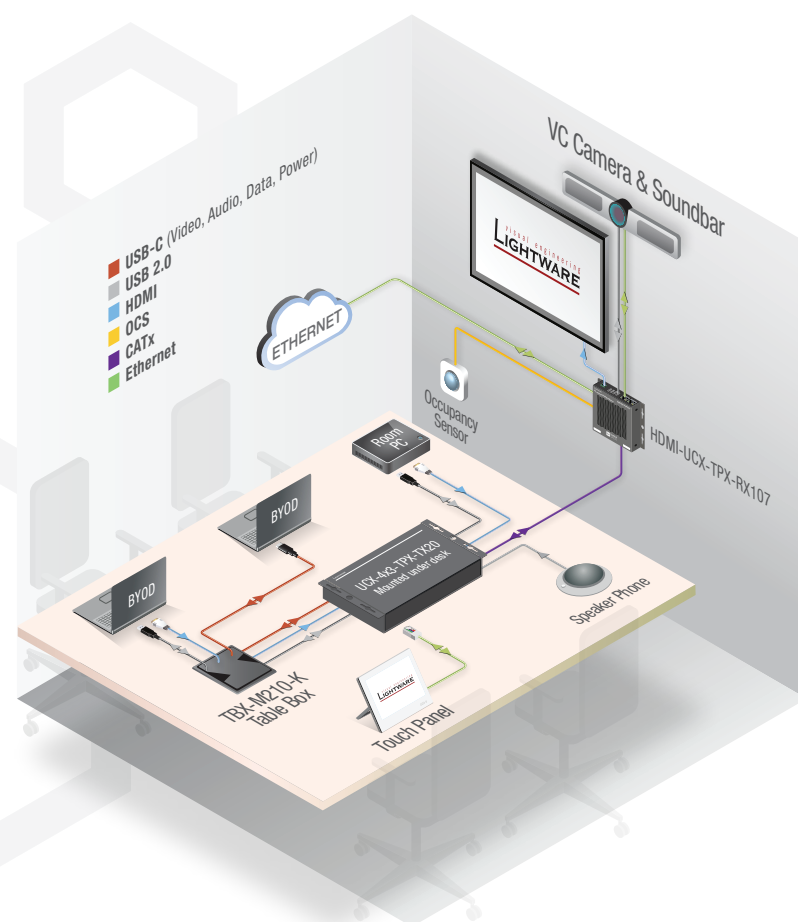


Transmitter:
UCX-4x3-TPX-TX20

Receiver:
HDMI-UCX-TPX-RX107

Features

- **Single CAT** connectivity **up to 100m**, with **Power delivery** from TX to RX, Video, USB2.0, Ethernet, OCS and Serial
- **USB-C** input connectivity for 4K Video, Audio, Data, and Power
- Multiple **USB 2.0** connectivity for **any type of USB devices**
- Independent **USB Host switching** layer for multiple USB hosts, **up to 8 devices**
- **Charging via USB-C** up to 100W + 60W
- **Multiple Ethernet network configurations**
- SSH, SSL, HTTPS for **IT security**
- **Occupancy sensor (OCS)** connection at the RX device (with 24V power supply), GPIO control ports at TX device
- **Welcome Screen** for custom corporate logo and on-screen display warning messages
- **CEC** at the HDMI outputs
- **Audio** de-embedding
- Room device control via **Ethernet** (TCP/IP) or **Serial** (2x at TX device, 1x at RX device)
- Supports uncompressed **HDMI 4K** signal formats (4K UHD @60Hz RGB 4:4:4, up to 18 Gbps, 600 MHz pixel clock)
- Supporting **Lightware Advanced Room Automation (LARA)**

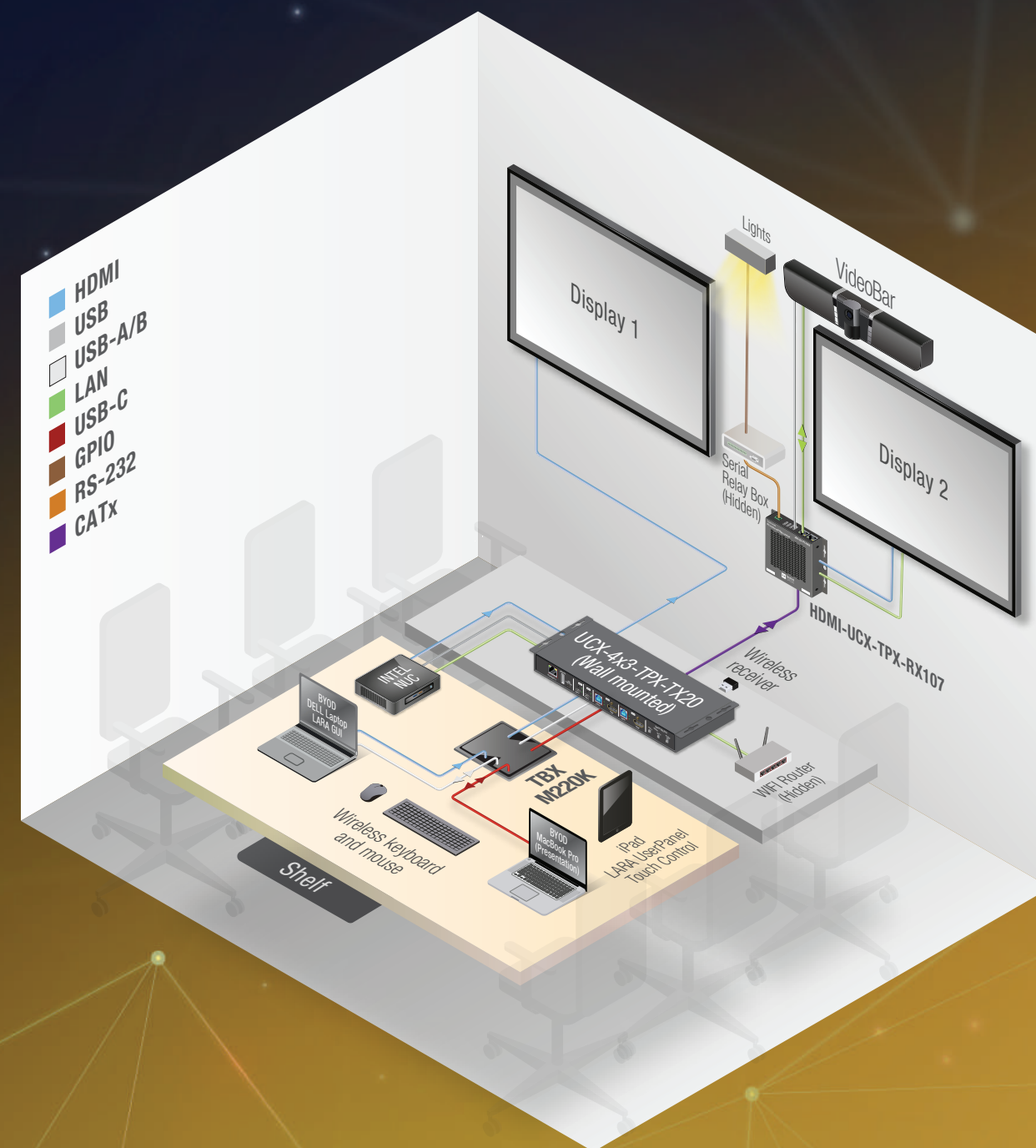


Conference room example

Conference rooms require simple connections in multiple locations, simple controls, and simple functionality. The Taurus UCX-4x3-TPX-TX20 connects to the HDMI-UCX-TPX-RX107 using a single category cable for connectivity. The optional touch panel and occupancy sensor to provide room automation and simple controls. The Taurus TPX point to point extension provides the latest HDMI 2.0 with 4K60 4:4:4 transport as well as full USB 2.0, 480Mbps, peripheral connectivity at both ends.

Using LARA, when someone walks into the room the occupancy sensor will turn on the display and greet the meeting participant with a custom welcome screen. When any of the 4 inputs detect a signal, the signal is automatically routed to the UCX-RX, the input source becomes the USB host and the USB camera and speakerphone are connected.

When no signal is detected, the system has been set up to automatically turn off the display after 15 minutes using LARA. After the room has been vacant for 15 minutes based on the occupancy sensor reporting to LARA the room can be shut down.



Lightware Maximizes Space Use



Schools use divisible classrooms to optimize the use of space and assets as well as improving students' learning experiences.

Divisible rooms leverage the benefits of Lightware's matrix switching with SDVoE extension and robust USB-C connectivity to maximize the use and flexibility of educational spaces.

With Lightware's AV technology deployed in divisible classrooms, instructors enjoy seamless connectivity with enhanced presentation experiences in fully automated learning spaces without user interaction, while students stay engaged and motivated for learning.

4-Room-Divisible Space Example

4 standard classrooms can be merged into either 2 larger classrooms, 1 giant classroom, or operate as autonomous learning spaces. Each room features a display, Lightware's universal switcher **UCX-2x1-HC30** with HDMI and USB-C connectivity, **HDMI-TPX-TX106** and **HDMI-TPX-RX106** point-to-point extenders, and **USB room peripherals**.

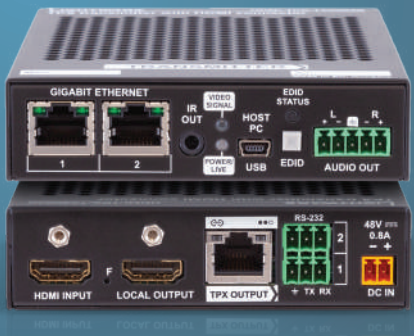
The UCX switcher functions in auto-switching mode in each room. Wall contact sensors connected to the primary UCX automatically detect when rooms are combined or divided.

The matrix switcher **MX2-4x4-HDMI20-CA** handles the signal routing(s) according to the rooms' configurations. Signals are switched to one or multiple screens based on the wall configuration automatically and the "Power-ON" commands are sent to the displays.

Users only need to plug in their devices to either the USB-C or HDMI connection and open or close a wall. Beyond that, the functionality of LARA firmware in UCX switchers allows programming and preconfiguring that eliminate any mistakes through accidental BYOD or room PC connection to the room UCX switchers. For example, if all four rooms are combined, the walls are all open, the input of the UCX switcher in room A will be routed to all four rooms, and any additional signals on any input of the other three UCX switchers will not trigger any output or command.

When the presentations are over, the room displays will be turned off automatically based on the time in the LARA firmware.

With CEC and RS-232 capabilities available in Lightware devices, this solution is applicable to any projector or display. Matrix switching with signal distribution allows projects to include any number of classrooms that make up divisible learning spaces.



Extend Signals Like Never Before

Lightware's 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



Ethernet
Control AV equipment through Gigabit Ethernet, RS-232 or CEC



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.

MX2

For large conference rooms and divisible learning spaces that combine multiple varied sources and outputs, Lightware offers a rich assortment of **standalone matrix switchers of MX2 Series**. These matrices provide uncompromised full **4K60Hz 4:4:4 resolution capability**.

MX2 Series are available from 4x4 up to 48x48 crosspoint sizes. Their main features and characteristics are:

- **Zero latency**
- Support of **HDR, Dolby Vision, 3D**
- Compliance with **HDCP 2.2 and HDCP 1.4**
- **High bitrate audio support**, including Dolby Atmos, TrueHD, DTS-HD
- **Full end-to-end DisplayPort** options
- Control available via **Ethernet, RS-232, and USB-ports**
- **Versatility of models** featuring rich options of compatibility, connectivity, and functionality

The strategic benefits of MX2 matrix switchers make them the best choice for AV professionals and allow them to build bespoke future-proofed AV projects.



MX2

Active Learning Room

The pedagogy of teaching continues to evolve. Active Learning Classrooms have become common in universities of all sizes. These rooms include cutting-edge technology and are student-focused. Typically, the room design includes an instructor lectern in the center of the room with student collaboration tables around the instructor.

In this active learning room, each **student table has a USB-C and HDMI connection for a laptop using the DCX-2x1-HC20** and connects to an **HDMI-TPN-TX107 for AV-over-IP matrix switching and extension for collaboration capable of resolutions up to 4K60 4:4:4**. Each student table has a dedicated display where the **HDMI-TPN-RX107** connects to the same AV-over-IP network and displays the image from the TPN-TX.

The instructor's lectern in the center of the room is also connected to a DCX-2x1 with a TPN-TX, and the instructor can choose to display on the large classroom display to share with the whole class, and/or to all the screens on the student tables. The instructor can also choose to display the image from any student table to any or all displays in the room as well. **The matrix video solution is enabled by Lightware TPN technology powered by SDVoE.**

The flexibility of AV-over-IP allows the technology to be connected to the tables, and the tables can be moved around the room to create larger collaboration groups as needed, all that is required to share any laptop is a network connection to the AV-over-IP network switch.



The SDVoE-compatible extenders of Lightware's new TPN family are the perfect answer for the high-quality 4K60 transmission needs, supporting a valuable set of the functionality, among which are

- Extend HDMI 2.0 signals from a single source to multiple destinations through 10G Ethernet networks.
- Capable of handling various connectivity standards, including a 1G user Ethernet channel over the 10G link, as well as command injection into IR and RS-232.
- The additional Gigabit Ethernet port allows users to connect an additional device to the network directly through the TPN extender. Useful for controlling external devices like projectors and displays.
- HDCP 2.3 and basic EDID management functionality are also among the features offered by these devices.
- When using direct connection in point-to-point mode, both the transmitter and receiver are compatible with Lightware's TPX family of products.



The DCX-2x1-HC10 matrix switcher is designed for simple and easy classroom and auditorium use.

- 2x1 Matrix video switch supporting video resolutions up to 4K@60Hz 4:4:4
- USB-C input supports 4K video and provides up to 60W of power for the connected device
- The HDMI and USB-C inputs can be auto-switched or controlled using Lightware's OpenAPI
- Analog audio de-embedding
- Secure Ethernet connection

AV-Over-IP system for Gigabit Ethernet Networks



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.

Built-in USB 2.0 ports

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

Advanced EDID Management

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

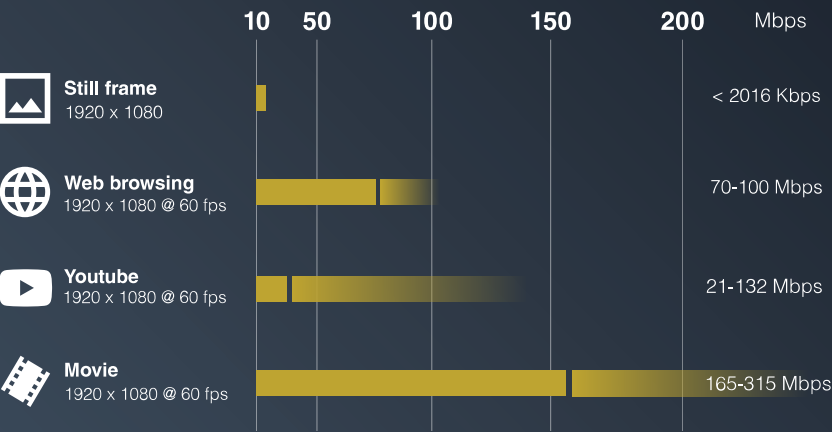
HDCP Compliant

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.

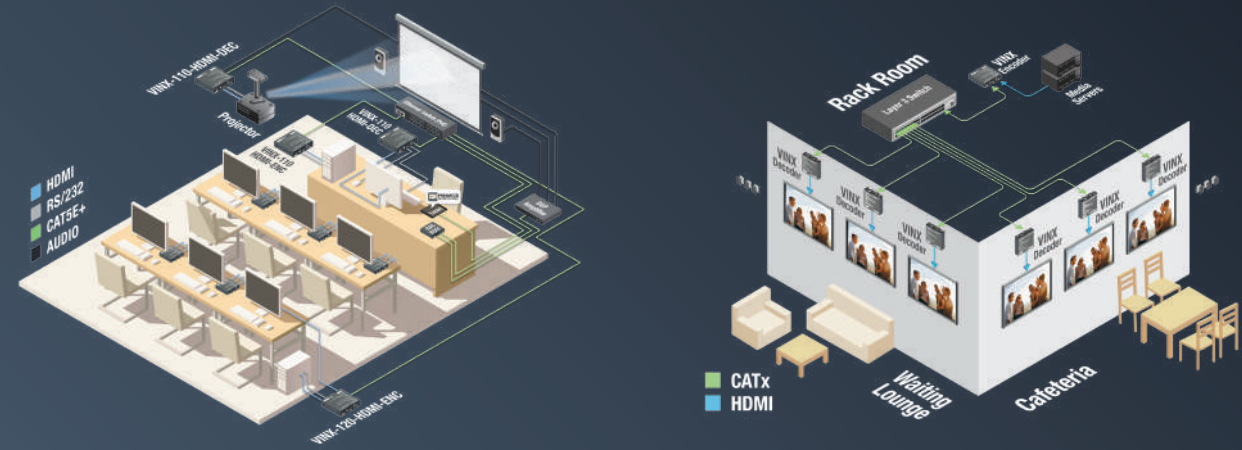


Smart Bandwidth Management

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**.



LIGHTWARE EXTENDS

AV-OVER-IP TECHNOLOGY CARRIES MULTIMEDIA ACROSS ACTIVE LEARNING SPACES, COMPUTER AND SCIENCE LABS, LARGE SCHOOL VENUES, CAMPUS DIGITAL SIGNAGE, AND OTHER LEARNING ENVIRONMENTS.

AV-over-IP, being widely acknowledged as the best industrial method of multimedia signal delivery, is the optimum option for education. Driven by our customers' needs, **we offer transceivers for both, 1Gbps and 10Gbps Ethernet networks**.

Our **VINX and UBEX product families** provide audio-video signal transportation in applications where scalability, flexibility, and rapid deployment are required.



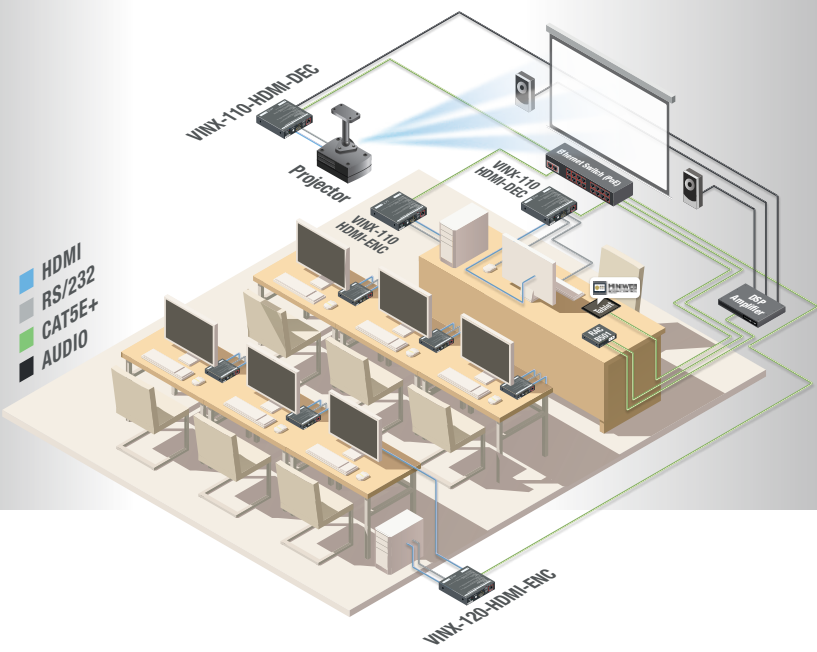
VINX offer extension from point-to-point architecture up to literally unlimited end-points

VINX's EDID functionality secures seamless handshaking for multiple displays on the network

VINX's built-in USB 2.0 ports support KVM functionality and deliver USB mass storage

For environments operating in **1Gbps networks**, **VINX extenders** are the most efficient and potent choice, featuring **Smart Bandwidth Management** that optimizes streaming and compression to match the transferred media; they are capable of **scaling video up to 4K30**. VINX is also ideal for building video walls in school assembly halls and **delivering information across campus digital signage solutions**.

For schools operating on powerful **10Gbps networks**, Lightware offers the **UBEX fiber-optical scaling system**, capable of delivering **uncompressed 4k60Hz 4:4:4 with close to zero latency** and providing maximum signal fidelity over distances beyond 100m. Medical theaters, sports arenas, broadcast control rooms, conference and concert halls will unlock all the benefits of the UBEX multi-streaming on 10Gbps Ethernet network with **dual 10Gbps fiber links**.



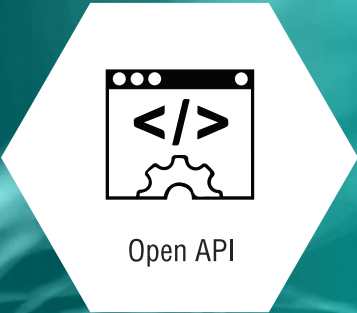
The computer lab with full AV over IP KVM sharing capabilities. In this setting, any computer can be shown on any screen in the room, anyone can be given KVM control of any computer. Instructors can share any computer with the main room display, or multiple computers with multiple displays if there is more than one display in the classroom. Each student location has both an encoder and a decoder in this example. The encoder sends the output to the network. The decoder will receive the local computer or any other computer in the room. The instructor would have the ability to turn off all student displays, or send all student displays the same image.

Building-wide sharing of sources, show anything anywhere in the building simultaneously. The drawing shows network topology with rooms as endpoints with decoders connected to displays, and computers connected to encoders.

LIGHTWARE INTEGRATES

OPEN API FEATURES TO BUILD IDEAL LEARNING SPACES

With the **open API available** in Lightware devices, school AV-IT teams and system integrators can enjoy great freedom in creating efficient learning spaces.












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 diagnostic and troubleshooting purposes.**

Lightware has a proven track record of seamlessly and effectively working with third-party systems to create powerful solutions for education and unlock each benefit that the AV technology holds for learning environments across school campuses

Lightware's open API enables any third-party IT or AV management and monitoring system to integrate Lightware products seamlessly into their platforms.

The open API enables any third-party control system to fully control Lightware products.

The third-party API integration brings peace of mind to every party involved: while users can feel comfortable with the in-room GUI's, IT teams and integrators stay confident with Lightware inside the system.

Building	Room	IP Adress	Name	Serial Number	FW Package	HW Ver.	Health	Temperature
A1	Meeting Room 1	 172.24.5.11	MMX4x2-HDMI	00004429	1.6.4b2 r89	V11_AAA0	N/A	54 C
A1	Meeting Room 2	 172.24.5.17	VINX-120-HDMI-ENC	E00010	v3.5.1b1 r1	N/A	N/A	N/A
A1	Meeting Room 3	 172.24.5.18	VINX-110-HDMI-DEC	E80002	v3.5.1b1 r1	N/A	N/A	N/A
A1	Meeting Room 4	 172.24.5.19	UMX-TPS-TX140-Plus	00006074	1.5.1b2 r69	V11_GAX0	N/A	35 C
A1	Control Room 1	 172.24.5.23	MMX8x4-HT400MC	00005555	1.4.3b1 r2	V10_BAA0	N/A	53 C
B1	Meeting Room 11	 172.24.5.25	UMX-HDMI-140-Plus	00005023	1.3.1b2 r55	V11_CAA0	N/A	29 C
B1	Meeting Room 12	 172.24.5.26	HDMI-TPS-RX110AY-Plus	CA309359	1.5.0b3 r65	V13_JAA0	N/A	36 C
B1	Meeting Room 13	 172.24.5.27	SW4-TPS-TX240-Plus	00006334	1.3.6b2 r54	V12_KAA0	N/A	42 C
B1	Control Room 2	 172.24.5.29	MMX8x8-HDMI-4K-A	00005487	1.4.3b1 r2	V10_BAA0	N/A	51 C

LIGHTWARE ALLIANCES

Cisco Solutions Plus Partner - dual screen classroom solution

As a Cisco Solutions Plus partner, Lightware can provide a flexible, consistent, and seamless user experience across classroom types, with hybrid and distance learning spaces inclusive.

Lightware has simplified the process of expanding, extending, and controlling Cisco Webex Room devices by offering a pre-configured appliance for classrooms.



With Lightware, learning space users can:

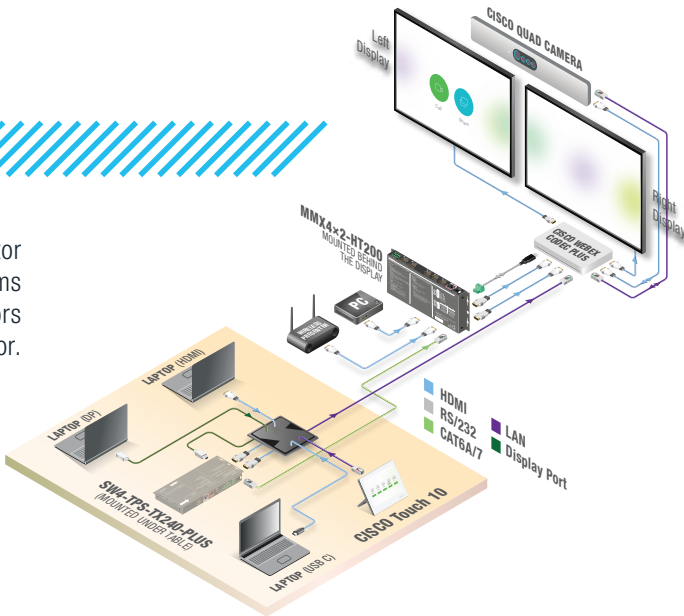
- **expand the number of inputs** (dedicated room PC, laptop connections, media players)
- **expand the system outputs** (including large LED/LCD/projection front wall screens and a display of the instructor's digital lectern),
- **extend the connectivity** over longer distances avoiding HDMI-technology limitations,
- and **empower the user to natively control** the entire solution **via the Cisco Touch10 and Webex Room Navigator.**

Lightware adds intuitive controls to the Cisco Touch10 and Webex Room Navigator and enables a consistent user experience to deliver dynamic controls in the same way in every classroom sparing the instructor's technology frustrations and contributing to the effectiveness of learning.

Lightware and Cisco have created configured packages designed for small to large meeting spaces and learning environments. <https://lightware.com/cisco> Additionally, Lightware has created bring-your-own-device (BYOD) packages to add camera sharing capabilities.

Cisco Room Configuration Wizard

The school's AV-IT engineers can use Lightware's configurator software that simplifies classroom customization for many rooms at scale, while providing a consistent workflow for instructors and students via Cisco Touch10 and Webex Room Navigator. <https://lightware.com/cisco/room-configurator>



Monitoring

By extending its robust open API under the Utelligence Program for AV/UC Device Standardization introduced by Utelogy Corporation, a provider of control, monitoring, and analytics software for workplace management, **Lightware can leverage the powerful Utelogy software** tools for remote monitoring and management of the AV devices, including TAURUS UCX Series, USB peripheral switching products, as well as Cisco switching solutions, and our 1Gb AV-over-IP VINX Series. Jointly, Utelogy and Lightware offer the following benefits to users:

- Monitoring, management, and control of Lightware’s TAURUS UCX via Utelogy tool
- Proactive alerting and monitoring of TAURUS UCX and connected peripherals
- Integration with overnight room readiness and scheduled testing via U-Automate to ensure a first-class experience within the conference room or auditorium, reduced downtime and time to lecture start, power savings, and sustainability

Jointly, Utelogy and Lightware provide schools with a comprehensive overview and control of their entire campus devices.



Lightware is a member of the QSC Q-SYS Technology Partner Program. The goal of the Program is to build an ecosystem where various vendors’ products could be integrated into a working solution. Under its wings, we provide a tested and proven plugin for the most popular Lightware matrix switchers. With the help of this plugin, customers will be able to add Lightware switchers to their system designs, control the switchers from QSC Q-SYS Core devices and get those connected to QREM monitoring solution.



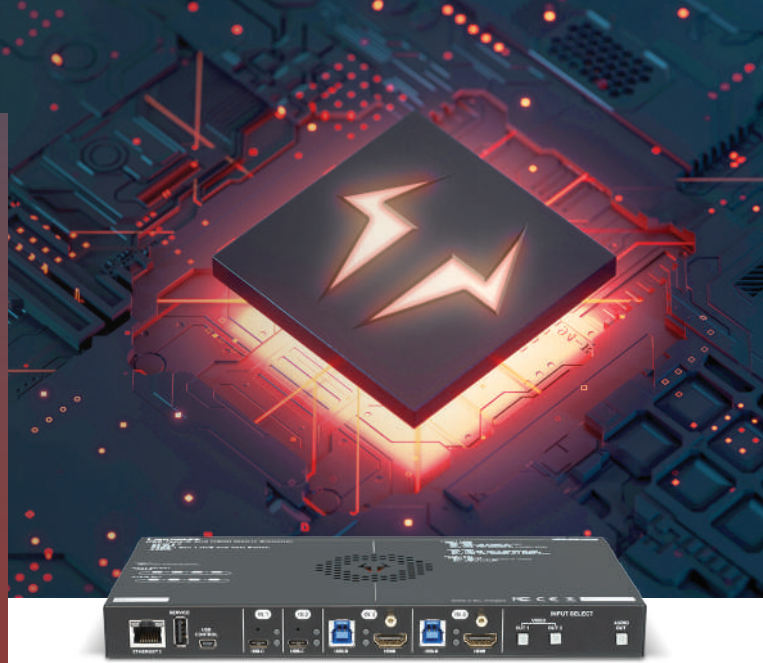
With TAD’s monitor technology that offers a tailored approach to device monitoring, and Lightware’s open API products’ approach, we offer powerful and informative bespoke solutions with perfect visibility into asset management, network monitoring, automated ticking, and data warehouses all-in-one program.



With TAURUS UCX, Lightware’s flagman USB-C connection platform, instructors are spared of any technical issues that such heavily wired spaces are likely to hold for them.

TAURUS UCX being in the heart of the group study rooms, general purpose classroom, distance and hybrid learning sites, enables teachers to effectively engage with their students, whilst students are given learning instruments they are best used to.

One device. Limitless collaboration. Taurus UCX.



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) ensures synchronization of 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 POWER OF USB-C
Collaboration • Control • Connectivity
Convenience • Charging

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 CONTROLS

LARA PROVIDES A SEAMLESS LEARNING AND TEACHING EXPERIENCE

With LARA (Lightware Advanced Room Automation) available in TAURUS UCX /MMX2 teachers can expand their control and management of room assets and benefit from room automation.



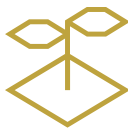
LARA will contribute to



Classroom work efficiency
by enabling control over the assets from a single touchscreen; LARA eliminates multiple device controls. Enables professors to focus on imparting knowledge to students while LARA sets up the technical space for them.



Effective group work and exam support by making in-person, distance, and hybrid work sessions and exams a seamless experience for students. LARA ensures that devices in the learning space are ready to use by the start of the session and manages the after-session behavior.



Environment protection
by setting LARA to manage automated room shut-down. Schools will optimize costs and reduce their environmental footprint by reducing control units in each classroom.



LIGHTWARE CONTROLS

ROOM AUTOMATION PANELS WITH EVENT MANAGER CONTROL AND ADMINSTRATE LEARNING SPACES OF GENERAL PURPOSE CLASSROOMS, COMPUTER AND SCIENCE LABS

With room automation panels (RAP), Lightware maximizes the use of group study rooms and general purpose classrooms, facilitates their operation on-site and allows centralized monitoring and administration. The solution can operate independently with or without the central BMS (Building Management System) system.



Lightware RAP is a combination of a processor and a keypad, in one form factor. The RAP embraces the following features:

Room Automation Panel: RAP-B511



- Built-in room control **Event Manager** application
- **11 backlit programmable buttons and a light management rotary dial**
- Real-time clock with **network time protocol** for scheduling events (like room-launching prior to the class and the like)
- **GPIO** for the occupancy sensor, motorized screens, or shades control
- **2 Ethernet connections** for receiving/sending PoE remote power
- **1xRS-232** for peripheral device control

The RAP-B511 panel allows for control and communication with third-party classroom devices featuring an open API. It is also a user interface. Apart from the keys, the processor can accept commands delivered by smartphones or tablets using TCP/IP.

The RAP family features a web server that allows operations from mobile devices through a browser. Passwords and user validation are local administration functions that enable launching scenarios and provide access to the local Wi-Fi network.

The RAP-B511 controller allows for remote access. In the case of any technical issues in the classroom, remote assistance can be provided without sending a person across campus to the room. All features of the RAP-B511 are accessible over the network. A remote technician can confirm the signal presence/absence, and even "push" buttons to select devices.

Armed with functionality, the instructor is free from distractions when lecturing, while the school administration maintains efficiency by having an optimum AV-IT crew, and AV-IT engineers are satisfied being able to deliver technical support within minutes, rather than hours or days.

LIGHTWARE DEVELOPS

LIGHTWARE EDUCATION AUDIOVISUAL DEVELOPER (LEAD) PROGRAM

visual engineering
LIGHTWARE

**EDUCATION
AUDIOVISUAL
DEVELOPER**

1.

LEAD Extended Warranty

LEAD members with a technology refresh program agreement enjoy the full Lightware warranty throughout the entire agreement. Lightware makes it easy for peace of mind with every technology covered under warranty while upgrades continue during the refresh cycle.

4.

Training

For you to get the most out of our technology and ensure a seamless education process, we offer comprehensive in-person and on-line training for your organization's AV-IT personnel.

5.

Advanced Technical Support

Receive market-leading support service with our dedicated local Lightware support team, we will assist you via email, phone, or on-site visit.

2.

Demonstration Products

Lightware makes it easy to test the latest technology with demonstration equipment available for LEAD partners. Demonstrations are available with your local Lightware salesperson or integration partner.

3.

System Design Documentation - POC Assistance

We will invest into on-site consultation and bespoke design of your project with further proof-of-concept testing and review by our AV integration team. Lightware will provide you with documentation customized to your solution.

GRANT program

Specially for schools, colleges, and universities, we are offering a unique opportunity to apply for a technology grant to assist with the acquisition of Lightware technology for your classroom and its further evaluation for your campus technology refresh program.

With the grant program, we strive to promote advanced AV technology and make it accessible for more classrooms worldwide. The Lightware Grant Program offers proof of concept testing in your school's setting. **Contact us: grant.program@lightware.com**

6.

Developer Engagement

Meet with our product developers, share your future needs and learn about our future product developments. We at Lightware develop products driven by our customers' requirements.

7.

Case Study Project Recognition

Make your technological advance a case worth studying and obtain multiple reviews in leading education and AV media.

Learn more: www.lightware.com/lead

Lightware Taurus UCX Enables Seamless Collaboration Connectivity for Emory University School of Medicine

Emory University School of Medicine standardizes Lightware Taurus UCX for unified connectivity on mobile professional AV carts

Nestled within the main Emory University campus in Atlanta, **Emory University School of Medicine** is home to more than 400 future health professionals. **The school is ranked among the top institutions for biomedical education, clinical care and research in the USA. They offer clinical training to residents and fellows in the simulation labs and patient-care clinics.**

Covid-19 required the School of Medicine to rethink active collaboration. Due to restrictions surrounding the pandemic, they had to distance themselves socially. The areas were limited to 8 people in a 30-foot-square-foot area. It required the school to utilize spaces that were not traditionally used as gathering spaces but were large enough to socially distance.

"We started utilizing the atriums of buildings because it provided ample space," explained Jon Hamilton, audiovisual manager for Emory University. "There's no technology in these spaces – They were never designed to be collaboration spaces, but rather traditional atriums. The atriums are covered in wood paneling that can't be retrofitted to add technology, so we were required to design a mobile solution."

Hamilton added, **"We wanted to build something that could be wheeled into any space across the campus and could be operational within 10 minutes.** No matter the setting, we required a solution that was plug-and-play."

The faculty at the School of Medicine are both doctors and professors. They do not have time to learn how to operate the technology. **The focus must be on medical education rather than learning how to operate the technology.** The team at the school had to provide a solution that was simple to use yet provided flexible features.



"We selected the products for the mobile professional AV cart to create a powerful user experience," noted Hamilton. **"We integrated a display, but we needed to select something practical.** For connectivity, we decided on a dedicated computer that **enabled users to run a Zoom meeting seamlessly.** We recognize the **growing need for bring your own meeting (BYOM) functionality.** While we considered a standard USB cable, it would require users to select the appropriate hardware from the computer. **We wanted to utilize USB-C to streamline the connectivity once users plug in their device."**

Hamilton added, "At the time, **Lightware was the only company offering a USB-C switcher.** I first heard about their technology during LAVNCH WEEK. One product that struck my attention and pinned my interest was the Taurus UCX. We wanted USB-C because it makes everything native to a device. **It truly catered to a seamless end user experience."**

Lightware has introduced a revolutionary unified communications connectivity solution that bridges

the gap between BYOM applications and USB-C devices. The Taurus UCX is a universal matrix switcher that enables users to easily share their content, switch hosts and control their meeting room easily and intuitively.

"Lightware solved a problem that I didn't know I had before I had it," said Hamilton. "I solve end users' problems, and I like it when other people do that for me. Most importantly, the end user does not know about the technology behind the experience, but it all works the same, no matter what they're connecting. So much so, they're just assuming that every system performs this way."

Lightware's Taurus UCX is designed to tackle meeting room and collaboration environment challenges. **The device offers USB-C connectivity for simplified audio, video, power and control signal handling via one cable.**

WE ARE GREEN FOR THE SAKE OF THE GLOBE’S SUSTAINABLE FUTURE

Lightware is committed to managing all operations and services in an environmentally responsible manner and employing methods and policies to contribute to **environmental sustainability**.

We aim at **preventing and minimizing pollution from manufacturing, packaging, and daily operation** and constantly review our activities and **set goals to reduce** our impact on the environment. We pay attention to monitoring, evaluating, and refining our energy consumption and waste management.

Employees are encouraged to minimize paper waste: where possible, all administrative **documents are emailed rather than printed & posted**, incoming faxes are diverted to email while unavoidable paper waste is recycled. When it is absolutely necessary to print, **we use recycled paper in the printers** and copiers and print in eco mode to save ink and energy. Empty print cartridges and toners are collected, treated and when possible, recycled by a contracted service.

In developing our products, we take sustainability very seriously. **We design, develop, and assemble Lightware prototypes in Budapest and so reduce our carbon footprint on transportations.**

We consciously do not overdesign our products and so **reduce colorful but chemical painting**. Neither do we practice garish and heavy design of our packaging.

We strive to make our packaging smart using every inch of the inner space of each cardboard, packing up crates, and containers effectively. We always use **recycled paper for the packaging** and have minimum plastic inside.

We have **consciously reduced accessories to accompany master products** to reduce the amount of wiring that is likely to be excessive and so wasted away.

Our offices incorporate energy-efficient lighting systems and our air-conditioning infrastructure is regularly maintained by professional technicians. When a lighting tube or bulb goes out, we always change it to an LED-based solution.



We participate regularly in Corporate Social Responsibility (CSR) events and actions. Besides ad hoc events, the Lightware team cleans a designated area of trash in the city on the annual ‘Clean-Up Day’, under the Let’s Clean Up Europe initiative. ewwr.eu/take-part/#LCUE



We also pay attention to **keeping our own minds conditioned to ‘green mentality’** and have placed posters and stickers everywhere in the Lightware office to remind everyone to think and act green whenever possible.



We would also like to highlight that **data and charging cable for Taurus UCX is made of 35% biodegradable materials**, and USB 2.0 type-C connectors are 90% biodegradable. **This eco-friendly cable for charging and data transfer is a product created to respect the environment.**



Operationally, the **latest Taurus UCX firmware enables users to optimize the use of resources such as heat and power by configuring settings** that, in particular, automatically turn the light and the devices off when people leave the meeting room.

Your Suppliers

Where possible, **outgoing deliveries are consolidated to save fuel**. Packaging methods and materials are reviewed periodically, and where possible, replaced with environmentally friendly alternatives. We **exclusively use environment-friendly, biodegradable cleaning materials and detergents**. We support the use of electric cars (we have an EV charger) and travel by bike.

We introduced selective waste management to collect metal, paper, and plastics for recycling. European Union (EU) regulations are designed to minimize the volume of electrical and electronic equipment waste disposal and current regulations require producers of electronic equipment to collect, reuse, recycle and appropriately treat such waste material for which Lightware employs a specialized subcontractor.



Contact us!

education@lightware.com

www.lightware.com/markets/education