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Driving Knowledge Creation

vSolution MATRIX: Networked AV solutions for active learning classrooms & training rooms

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Flexible active learning with Cynap Pro & Cynap Core Pro

vSolution MATRIX is an AV over IP collaboration solution which uses multiple Cynap Pro / Cynap Core Pro devices to stream video and audio between multiple screens using network infrastructure.

A single feature pack-enabled Cynap Pro unit, designated as the 'main' system in the room, is connected to multiple workstations with either a Cynap Pro or a Cynap Core Pro system installed, creating a system suitable for active learning classrooms, training rooms, and courtrooms of all sizes, and for other applications where multiple display screens are deployed to leverage collaborative learning and working.
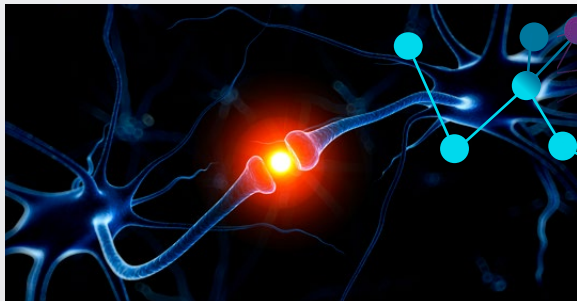
Just like in the human brain where synapses are essential for quick processing and transmission of information, Cynap Pro and Cynap Core Pro are unique, powerful, and flexible systems, providing instant access to information of all types from any source.

vSolution
MATRIX
Networked AV solutions

> " We decided to use vSolution MATRIX because of its flexibility and ease of use. We found that the mirroring capability of other solutions was not as good, and that was a key component for us. The attention to detail that WolfVision have put in gave us a lot of confidence in the product. This room effectively gives us 16 breakout rooms and a lecture theatre all in one space!"

Wayne Buttigieg

Head of Infrastructure and Media Services
London Business School

++ Video ++

London Business School

# Networked AV solution using Cynap Pro & Cynap Core Pro

Stream video & audio between multiple screens using network infrastructure

Ideal for classrooms, training rooms, collaboration spaces, courtrooms etc.

Simple drag & drop interface with flexible setup & control options

No additional encoding/ decoding hardware required – scalable, cost effective solution

Configuration example

Cynap Pro

HDMI

USB

Cat6 LAN

Cat6 LAN

1GB Ethernet Switch IGMP v.2
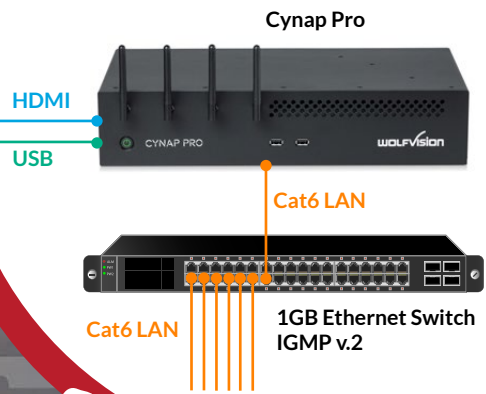
Cat6 LAN

HDMI

USB

Cynap Core Pro

Flexible working & learning

Simple drag & drop of multiple screens

A simple drag and drop user control interface enables content to be moved effortlessly between different screens. The 'Room View' is used to control pushing and pulling of content between displays, and flexible settings enable up to 40 workstations to be configured using either names, numbers or colours, exactly matching the actual layout of individual learning spaces.

Multi-functional workspaces

Individual and multiple workstations can operate independently of the main central station, enabling room usage to be maximised. Workstations can be used separately for breakout groups, or for small groups working independently during times when the entire room is not being used. If enabled, Groupwork Mode also enables direct station-to-station streaming of content.

## Reduced hardware, complexity & costs

When streaming content between multiple screens, all processing is performed by the Cynap Pro and Cynap Core Pro systems, eliminating the need for additional encoding/decoding hardware, and helping to reduce the overall complexity of the installed system.

Connecting stations using Coaching Mode
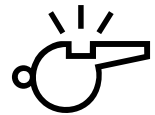
Coaching Mode enables a teacher or trainer to connect two separate stations directly without sharing content onto the main display screen in the room. All content including any annotations etc. are displayed on both the connected screens.


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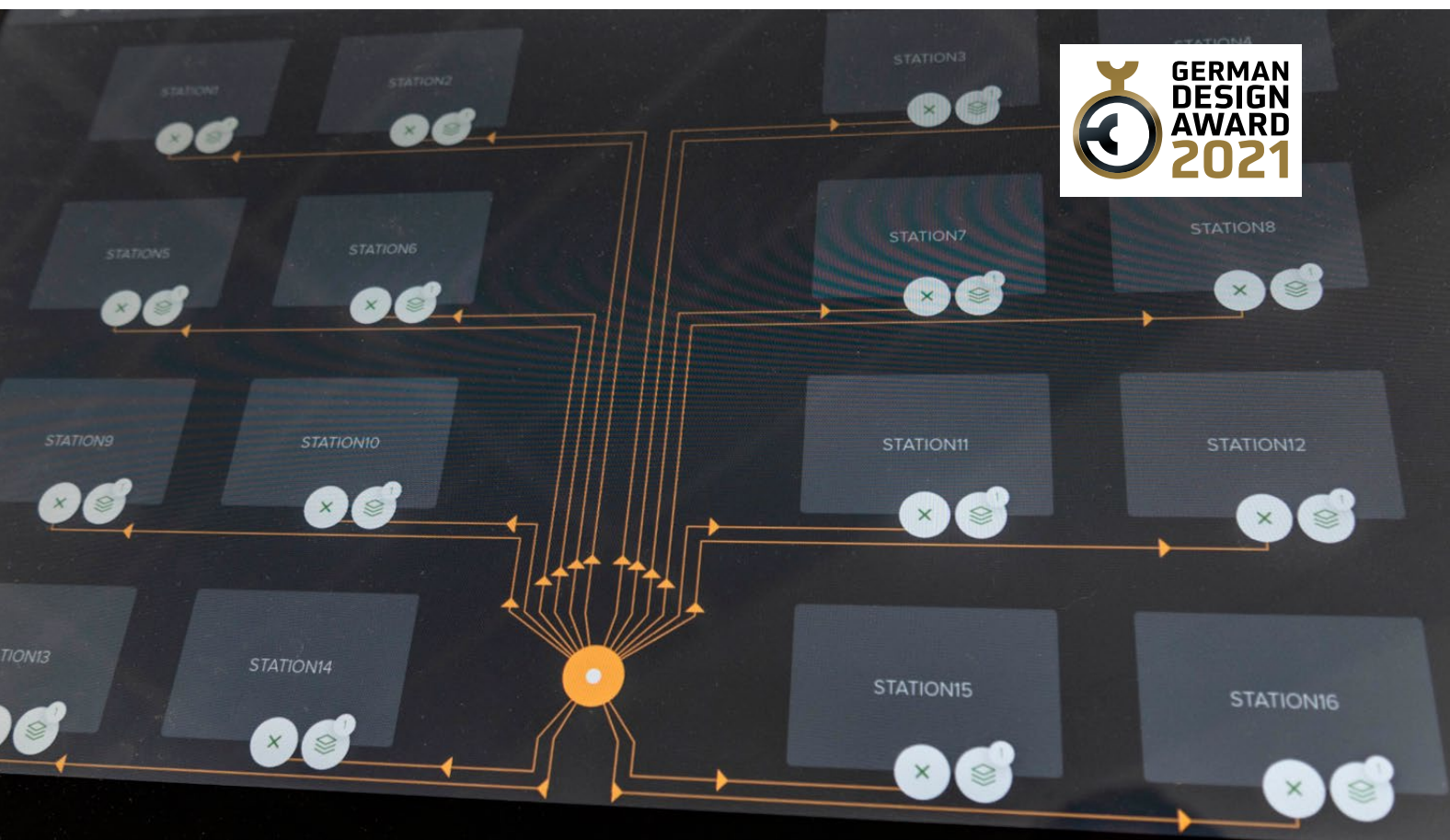
System advantages

Multiple room layout templates

For installations using multiple room layouts, up to 5 Room View templates can be configured and stored for use when required. Up to 5 pre-defined groups can also be set up to suit environments where content needs to be pushed to specific groups of display screens.

Easy remote administration
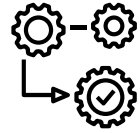
Multiple Cynap Pro / Cynap Core Pro components of the vSolution MATRIX system are easily set up, managed and updated remotely using our free-of-charge vSolution Link Pro software.

App-free, dongle-free working & learning

Competitor solutions require the use of apps, dongles, and additional software. Only WolfVision offers a true app-free, dongle-free, hassle-free learning environment, providing a consistent user experience for all participants.

Professional advice, proven technology

With hundreds of successful vSolution MATRIX active learning classroom installations already, you can be confident in receiving expert advice, service, and support for your chosen solution from our experienced, professional, worldwide team.

## Free firmware updates, no hidden costs!

When installing up to 40 workstations, it's a key benefit that WolfVision does not charge subscription fees or apply per workstation recurring licensing costs. All firmware updates are free of charge, maximising your ROI and helping to futureproof your system.

Files at your fingertips

We know that no two learning spaces are ever the same – and that's why our MATRIX solution lets you fetch your files from cloud, network, USB or other sources, and share them with the workstations easily – for maximum flexibility in the classroom!

Implementation advantages
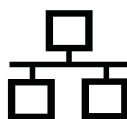
The ability to configure three separate networks (ie. BYOD WiFi, control and admin, and internet service) offers significant advantages when planning your classroom or training room setup.

Enterprise level security

Built on a secure, unmodifiable Linux platform with 100% data encryption, and user-configurable security features, enables vSolution MATRIX to satisfy the security requirements of every organisation.

vSolution Cynap™ Pro: At the centre of modern learning spaces

A powerful all-in-one wireless presentation and collaboration system featuring a media player, web conferencing, recording and streaming, BYOD wireless screen sharing, and annotation functionality, acts as a centrepiece of classrooms and training rooms. This is the 'main station' of our vSolution MATRIX collaboration solution.

4K ULTRA HD

Video recording / Lecture capture agent

Full HD local video recording captures all types of content materials, making flexible recording of multi-source, multimedia educational content easier than ever before. The lecture capture integration enables Cynap to also act as a capture agent for Panopto and other compatible video management platforms.

Panopto

Webcasting: Efficient knowledge sharing

Content can be streamed for live or on-demand viewing to Wowza, YouTube, and Facebook Live. Students or work colleagues on the same network as the presenter can also receive and record a stream to their mobile devices using our vSolution App.

Send files easily to multiple stations

Share your files easily from the cloud, network drives or mobile devices. Simply drag and drop to the required workstations – you can even configure files to open automatically on receipt.

Integrated Microsoft 365 interface

Access popular Microsoft 365 apps directly, including Microsoft Teams (active Microsoft 365 account required). Files are easy to open, work on collaboratively, and share with teammates.

Cynap Core Pro: Workstation essentials for active learning

Cynap Core Pro provides the core essential features you need for effective collaboration, and wireless presentation. Installed on each workstation (higher spec Cynap Pro systems can also be used) this key component of our vSolution MATRIX active learning classroom collaboration solution ensures an outstanding wireless working environment for all students.

App-free, dongle-free screen sharing!

Connect and share your screen using the wireless technology that's built into your own mobile device. Our wireless BYOD solution suits all iOS, iPadOS, Android, Chrome OS, Windows and Mac devices – with full support for AirPlay, Chromecast, and Miracast screen mirroring.

Built-in multi-platform web conferencing!

Support for Zoom, Microsoft Teams and WebRTC video meetings means it's possible to start an instant meeting or join a scheduled Zoom meeting directly from within both Cynap Pro and Cynap Core Pro.

Group annotation on a single document

It's easy to create extra content material using our digital whiteboard and annotation functionality. Students and teachers can also work together on a single document or other piece of content if required.

Display & share your files easily

Share your data on-screen easily from cloud, network drives or mobile devices – even your laptop is no longer essential – just bring your content on a USB stick, or download it directly from the cloud!

Cynap systems specifications

Features	Cynap Pro ("Main Station")	Cynap Core Pro
Operating system	Linux	Linux
Output resolution	2160p60, 2160p30, 1080p60	2160p30, 1080p60/30, 720p
Supported devices for wireless mirroring (up to 4K depending on device)	iOS, iPadOS, Android, Windows, macOS, Chrome OS	iOS, iPadOS, Android, Windows, macOS, Chrome OS
Supported mirroring protocols	AirPlay, Miracast, Chromecast, vSolution Cast	AirPlay, Miracast (Peer-to-Peer and MICE), Chromecast, vSolution Cast
vSolution MATRIX/ Networked AV	Yes (main station via optional feature pack, or client)	Yes, client station (streaming over IP / AV network)
Media Player: Supported image file formats	GIF, JPEG, BMP, PNG	GIF, JPEG, BMP, PNG
Media Player: Supported document file formats	PDF, Word, PowerPoint, Excel, Text, HTML	PDF, Word, PowerPoint, Excel, Text, HTML
Media Player: Supported video file formats	AVI, WMV, MOV, MP4, DivX, MKV, M4V, OGV	AVI, WMV, MOV, MP4, DivX, MKV, M4V, OGV
Media Player: Supported audio file formats	MP3, WMA, MKA, OGA, OGG	MP3, WMA, MKA, OGA, OGG
Touchback functionality	Yes, for Windows devices (Miracast & vSolution Cast)	Yes, for Windows devices (Miracast & vSolution Cast)
Max. number of on-screen windows	4	4
Dual screen function	Yes (Mirroring, Content, and Moderator Modes)	-
Local streaming	Yes (Unicast/ Multicast), RTP, RTSP	-
Webcasting (Wowza, YouTube, Facebook etc.)	Yes	Yes, via optional Feature Pack
Local video recording	**Yes, selectable up to 1080pFHD, 30fps, .mp4 file format**	Yes, via optional Feature Pack
Capture Agent for Panopto, and other compatible video management platforms	Yes	Yes, via optional Feature Pack
Cloud services	Yes, Google Drive, Dropbox, Box, Jianguoyun, OneDrive, WebDAV	Yes, Google Drive, Dropbox, Box, Jianguoyun, OneDrive, WebDAV
Microsoft 365 integration	Yes (Active Microsoft 365 account required)	Yes (Active Microsoft 365 account required)
Access to network drives	Yes	Yes
Whiteboard and annotation	Yes	Yes
Protected/Open presentation modes	Yes	Yes
Web conferencing support	Zoom, Microsoft Teams, WebRTC	Zoom, Microsoft Teams, WebRTC
Customizable background image	Yes	Yes
vSolution Link Pro remote administration software	Yes (included for Windows 10, Windows Server (2012R2, 2016), Windows Web Server, macOS)	Yes (included for Windows 10, Windows Server (2012R2, 2016), Windows Web Server, macOS)
Encrypt and save personal user settings	Yes, save onto USB stick	Yes, save onto USB stick
Integrated web browser	Yes, with customisable homepage, bookmarks and screensaver	Yes, with customisable homepage, bookmarks and screensaver
Video input	HDMI x2 (HDMI with HDCP 1.4), (additional optional HDMI In x1 via third party USB framegrabber)	HDMI x1, (additional optional HDMI In x1 via third party USB framegrabber)
HDBaseT 1.0 input	Optional x1 (can be used only when HDMI input 2 is not in use)	-
Video output	HDMI x2 (can be used only HDMI with HDCP 1.4), HDMI Out x1 for control monitor (future use)	HDMI x1
HDBaseT 1.0 output	Optional x1 (only when HDMI output 1 is not in use)	-
Audio	Line In / Line Out (unbalanced 3.5mm), HDMI, USB	Line in / Line out (unbalanced, 3.5mm), HDMI, USB
USB ports	Rear USB 3.0 x4, front USB 2.0 x2	Rear USB 3.0 x4, Front USB 2.0 x1
LAN ports	Yes, 2x 1GigE	Yes 2x 1GigE
Bluetooth device discovery	Yes	Yes (device discovery for environments where Bonjour/mDNS is disabled)
WLAN standards (Wi-Fi 5)	2.4 and 5 GHz	2.4 and 5 GHz
Network protocols	TCP/IP, FTP, HTTP, HTTPS, SNTP/NTP, SSL, SSH, UDP, LDAP, LDAPS	TCP/IP, FTP, HTTP, HTTPS, SNTP/NTP, SSL, SSH, UDP, LDAP, LDAPS
IP configuration	DHCP, Static (IP address, Subnet mask, Default gateway, DNS server), Proxy, Interface priority	DHCP, Static (IP address, Subnet mask, Default gateway, DNS server), Proxy, Interface priority
Security authentication for LAN	IEEE 802.1X	IEEE 802.1X
Security encryption for wireless WLAN	WEP, WPA2, WPA2 Enterprise or IEEE 802.1X	WEP, WPA2, WPA2 Enterprise or IEEE 802.1X
RMS protection	Yes, password	Yes, password
External controlling	Remote control, web interface, Visualizer, multi-touch display, room control system, keyboard/mouse, device status display	Web interface, Visualizer, multi-touch display, room control system, keyboard/mouse, optional remote control
Dimensions (L x W x H)	428 x 218.7 x 88.2mm (16.85 x 8.6 x 3.47") / 4.5kg (9.9lb)	203 x 196 x 67mm (7.99 x 7.71 x 2.63")
Power consumption	Max. 105W	Max. 80W
Weight	4500g (9.9lb)	1840g (4.05lb)
Optional accessories	19" rack unit mounting, under desk mount, HDBaseT-TX module	Optional remote control, 19" rackmount, VESA mount (75mm /100mm)
Included accessories	Power cable, 4x antennas, rackmount/table mount kit, remote control on request	Power supply, 4x wifi antennas
Limited warranty	3 years (optional extension to 5 years)/EU/Austria	3 years (optional extension to 5 years)

vSolution MATRIX specifications

Features

Description	Feature pack option. Activate on a single Cynap Pro system to enable network AV functionality between multiple Cynap Pro and Cynap Core Pro systems
Number of Cynap Pro systems requiring vSolution MATRIX Feature Pack	1
Maximum number of Cynap Pro / Cynap Core Pro stations in room	40
Additional encoders / decoders required	No
Touchscreen compatibility	Yes
Maximum stream resolution	1080p30
Annotation (Collaboration Mode)	All connected stations can annotate on a single document. Content is moderated, and annotations from specific stations can be shown or hidden as required.
Control options	Browser-based control with user-defined Room View layout
Customisable Room View layout	Yes, drag & drop configurator with user-defined stations labelled using names, numbers or colours
Room View Templates	Yes, up to 5 templates can be saved for installations using multiple room layouts
Define groups for screen content sharing	Yes, content sharing to groups from main screen possible for up to 5 pre-defined groups
Station Power On / Power Off feature	Yes
Show Screen / Show All Screens feature	Yes, status of currently displayed content on a specific screen or all screens can be checked via the Room View
Sharing content between multiple screens	Yes, push from the main station to a single client station or to all stations. Pull content from single stations to the main screen
Groupwork Mode	Enables individual stations to be used independently, without requiring the operation of the main station. Up to 4 workstations can share content between themselves.
Coaching Mode	If activated, instructors can use the Room View to drag and drop content from one station directly to another, without needing to pull the content onto the screen of the Main Cynap.
Encrypted file sharing from main station to client stations	Yes, either to a single station or to all stations. Receipt of files is notified by a pop-up. Alternatively the Auto Open File option can be enabled in the settings
Network requirements	1 Gigabit Ethernet
IP Multicast Group Address range	224.3.0.0 to 224.3.0.10
Switch requirement	1 Gigabit Ethernet, Layer 2 or Layer 3 with enabled IGMP snooping
Streaming	H.264
Audio	Audio can be activated on the student stations.
Management tools, remote setup, update and management	vSolution Link Pro software (for Windows 10, Windows Server 2012 R2 & 2016, Windows Web Server, macOS) provides admin support including centralised firmware upgrades, checking the state of a Cynap and Wake-on-LAN. A settings profile can be created and distributed to multiple Cynap systems.
Security authentication for LAN	IEEE 802.1X
Encryption of all wireless content (WLAN)	WEP, WPA2, WPA2 Enterprise or IEEE 802.1X
Cynap Pure Receiver option	Optional add-on units can receive a stream from Cynap Pro, enabling multiple additional screens to be added. Also enables extension to additional rooms. A user controlling the session can allow annotations to be made using the Pure Receiver if required.

Please refer to Cynap Pro & Cynap Core Pro specifications for individual Cynap Pro/Cynap Core Pro system capabilities   *Design and specifications subject to change!*

Find out more about WolfVision solutions!

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Please contact a WolfVision representative for more information, and experience the powerful performance, versatility, and usability of our unique, flexible systems and solutions for enhancing communication, collaboration, and knowledge sharing across all environments.

Your WolfVision Partner:

More information:

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