eSATURNUS
Better Healthcare through Smart Innovation

NUCLeUS™

HD VIDEO RECEIVER

Dual View Receiver (NUC-SINK-041)
Receive one or two video-over-IP streams, and display them in original quality on screen.

Quad View Receiver (NUC-SINK-044)
Receive up to four video-over-IP streams, and display them in original quality on screen.

Digital by Design
Consolidation on IP. Digital screen control; video and screen settings, input selection and standby/wake up.

Future proof & scalable
Support multiple video standards. Reconfigurable and upgradeable. Multi vendor support (screen control), cabling independent of video format or number of sources (video over IP).

User feedback
The receiver indicates additional information on a surgical display, such as recording status.

Ordering information

Product reference:

NUC-SINK-041, NUC-SINK-044

Hardware component for a NUCLeUS™ operating room.

Receive NUCLeUS™ video streams and show them in original quality and without latency on an HD (surgical) display.

See Anything, Anywhere

NUCLeUS™ receivers are one of the cornerstones of the Digital operating room solution.

This unit receives HD video streams, delivered over the IP network directly by NUCLeUS™ transmitters or via distributed processing services on NUCLeUS™ compute servers. The streams are decoded and can be displayed in different layouts.

The Dual-View Receiver (NUC-SINK-041) displays in full-screen or in a picture-in-picture layout. It is typically used for boom-mounted surgical displays, where the receiver is invisibly mounted between the boom and the display.

The Quad-View Receiver (NUC-SINK-044) offers HD quad-view functionality. The quad-view can be configured symmetrically or asymmetrically. The NUC-SINK-044 is often used as an overview screen, built into the operating room wall.

The images are composed in the receiver and are transported to the display using a single DVI cable.

Simplified cabling

NUCLeUS™ receivers read any NUCLeUS™ video stream from industry standard computer networks over CAT5E (or higher) network cable. This offers format independence, cost-effective image distribution, clean and reliable cable management, and simplified installation and maintenance.

![eSATURNUS - Better Healthcare through Smart Innovation]

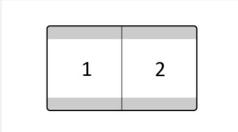## Display options for Dual View Receiver

Full screen
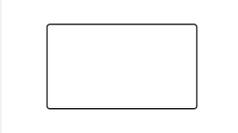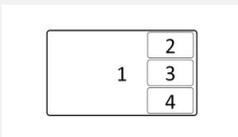
Picture-in-picture (PIP)
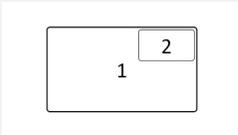
Picture-and-picture (PAP), side-by-side
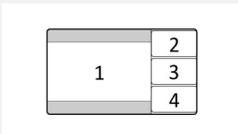
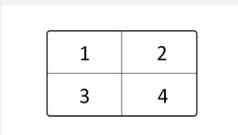## Display options for Quad View Receiver

Full screen + 3 PIPs on top

Full screen + 3 Picture-and picture (PAP)

Quad view

Using network protocols for video offers the advantage of standardized control, flexible video transport and centralized power distribution. Power-over-ethernet (PoE+) is enabled on the NUCLeUS™ receivers and makes the cable management even more easy.

Flexible control

Surgical displays are controlled from the NUCLeUS™ touch panel.

▪ The switch panel of NUCLeUS™|OR enables users to set and rapidly alter source selection.

▪ Save power and avoid screen burn without effort: when no sources are selected, the display panels are automatically put in stand-by mode.

Primary cabling

Additionally to the NUCLeUS™ video over IP transmission, a video signal can be fed over an additional video cable to the display. For instance the 3G-SDI consolidated signal from a NUCLeUS™ transmitter. This cable is used as a safety measure and guarantees 100% on the functionality.

User feedback

The digital operating room by NUCLeUS™ gives user feedback on the different nodes of the system. On the video receivers, there is operational feedback and feedback for the medical user.
The power LED and status LED indicate respectively whether the receiver has power and if it is working properly. Status LEDs show blinking patterns, indicating the loss of network or the lack of IP-address. Medical technicians can easily diagnose the problem.

Receivers can show additional information on the (surgical) display. Useful information for clinical end-users are recording or broadcasting indicators. Multiple languages are supported, so any surgeon knows what kind of action is ongoing on his images.

NUCLeUS™ Receivers - 1406

Technical specifications

Video Specifications

Inputs	Up to 2 NUCLeUS™ HD video streams (NUC-SINK-041) Up to 4 NUCLeUS™ HD video streams (NUC-SINK-044)
Outputs	Up to Full HD @ 60 fps

Connectivity

USB	4 x USB A (for maintenance and future features)
Control & Data	1 x RJ-45 Gigabit Ethernet (in use) 1 x RJ-45 100-BaseT (future-use)
Video connectors (out)	DVI-D
Power	Barrel plug, 2.5mm x 5.5mm, center plus / PoE+ Medical grade power supply is included
Display Control	RS-232 serial control for controlling & configuring the connected display*

*Serial control is only supported on selected surgical display models from NDSSI, Steris, Sony and Barco.

Power Requirements

Power consumption	Max. 20W
Input	DC 12V - 24V- 1.7A / PoE+ (can be used simultaneously)

General Specifications

Mounting	Display boom with dual VESA 100mm mounting bracket
Weight	1200 g
Dimensions (WxHxD)	190 mm x 34 mm x 152 mm
Cooling	Passive, noiseless cooling (fanless)
Certifications	IEC 60601-1 ; IEC 60601-1-2 ; CE

Options	NUC-SINK-041	NUC-SINK-044
Full-screen	☑	☑
Picture-in-picture (2)	☑	☑
Quad-view (4)		☑

Accessories	Order code	
Cover for video connectors	GEN-AC-COV1	