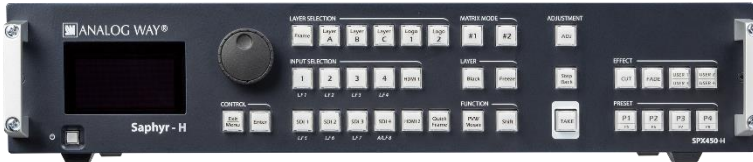# Saphyr - H
Ref. SPX450-H

ANALOG WAY ®
Pioneer in Analog, Leader in Digital

Ten-input hi-resolution mixer & seamless switcher with four HDBaseT™ inputs and two mirrored HDMI / HDBaseT™ outputs

HDBT™

Flexibility and Versatile Connectivity

The **Saphyr - H** is a powerful multi-layer hi-resolution mixer and seamless presentation switcher featuring 10 seamless inputs and 16 input connectors (four HDMI, two DVI, four 3G-SDI, four HDBaseT™ and two universal analog). The **Saphyr - H** offers two outputs with mirrored HDMI and HDBaseT™ connectors that can be configured either as Preview & Program or as two independent program outputs (native matrix mode). It also supports advanced audio inputs and outputs functionalities and includes 3G-SDI and analog outputs useable as video output or Program clone.
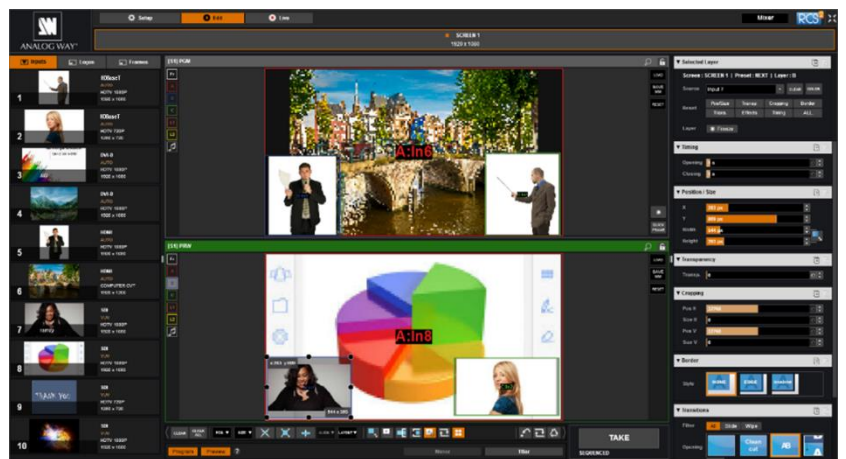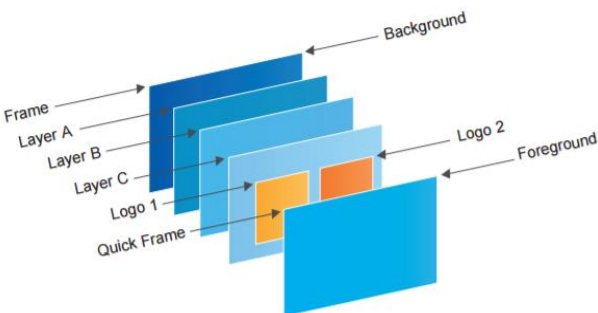
Quality without Compromise

Based on the extremely reliable and cost-effective MIDRA™ platform, the **Saphyr - H** offers ultra-low latency image processing, uncompromising video quality, true seamless switching, custom output formats and advanced video effects for elegant AV presentations, which makes it an ideal solution for live events, fixed installations, houses of worship and educational facilities.

Simplified Integration with direct HDBaseT™ Compatibility

The **Saphyr - H** has been designed using HDBaseT™ Alliance specifications, ensuring interoperability with other HDBaseT™ certified products. It features four HDBaseT™ inputs with embedded audio, Ethernet and PoE+ support for 2 of them. The **Saphyr - H** also includes two HDBaseT™ outputs that can deliver digital video and embedded audio, with Ethernet pass through plus bidirectional RS‑232 and IR signals up to 492 feet (150 meters) over a shielded CAT 5e/6 cable directly to HDBaseT™ enabled displays. This allows reducing installation cost and even greater flexibility for your integration requirements.

Powerful and Flexible Control Options

The **Saphyr - H** has been designed to be entirely operated from the easy-to-use front panel. Each MIDRA™ model can also be easily controlled using the intuitive drag & drop user software interface: the **RCS²**. The **Saphyr - H** offers IP (Ethernet) control via a standard TCP/IP socket connection and an RS-232 serial interface supported by all major third-party control systems. Additionally, the **Saphyr - H** can be controlled by a comprehensive range of remote control panel options such as the **RK-350** keypad or the **Shot Box²**.

Saphyr - H at a glance

- ▶ Based on the Midra™ platform
- ▶ 2 operating modes: Seamless Mixer & Native Matrix
- ▶ Heavy-duty design for incredible reliability
- ▶ High quality, ultra-low latency video processing
- ▶ Four HDBaseT™ inputs and two HDBaseT™ outputs
- ▶ Advanced audio management
- ▶ User-friendly and intuitive graphic interface

	QuickMatriX - H	Pulse² - H	SmartMatriX² - H	Saphyr - H
Operating modes	1	2	1	2
Inputs (HDBaseT™)	8 (2)	8 (2)	10 (4)	10 (4)
Outputs (HDBaseT™)	2 (2)	2 (2)	2 (2)	2 (2)
Video Output	1	1	1	1
Transitions & Effects	+	+	++	+
Live Layers (up to)	1 + 1 keyed	2	2	3

KEY FEATURES

MIDRA™ platform: uncompromised processing and manufacturing quality

2 operating modes: Seamless Mixer and Native Matrix

10 seamless inputs
Capability to switch between any input plugs (16 input plugs available)

2 outputs: Program/Output#1 and Preview/Output#2

Video output: Digital SD/HD TV (3G-SDI) and Analog SD TV (CVBS, YPbPr)

HDBaseT™ plugs:
- 4 inputs with support of video, embedded audio and Ethernet pass-through, among which 2 have PoE+ functionalities (48V; 30W)
- 2 outputs with support of video, embedded audio, Ethernet, bidirectional RS232 and IR
- Point-to-point transmission up to 492ft (150m) with unshielded CAT 5e/6 cables with foil shielding twisted pair (ISO/IEC 11801 U/FTP)
- HDMI and HDBaseT™ outputs can output simultaneously

High performance video processing:
- Very fast seamless switching
- Ultra-low latency processing
- Chroma/Luma Key and Titling
- Custom output formats
- Advanced de-interlacing processing
- New freeze features (input/layer/screen)
- Ability to modify the Program in real time without using the Preview

Advanced Audio Management:
- Embed/De-Embed audio on all plugs
- Breakaway Audio mode
- Top Layer mode
- Balanced Stereo audio on all outputs
- Fast Routing mode
- Delay compensation (up to 80ms or auto)

Enhanced Layer Processing:
- Up to 2 layers on Still Background
- Live layers fully resizable
- Pan & Zoom resizing up to 1000%
- Border & Shadow
- Direct Swap & Split functions
- Transitions: Fade, Cut, Wipe, Slide
- Open/Close animation
- Dynamic layers (Moving from A to B) with Flying, Zooming or Cropping functions

Quick Frame mode: Instantly display a stored frame above all layers

Internal test patterns: Select between 9 available test patterns

EDID Management: Management on 6 inputs; Ability to read & display outputs EDIDs

HDCP Compliant: Enable/Disable the HDCP (*if the display is not compliant, the output image could be disabled*)

Memories:
- 8 Memory Presets per output and up to 64 via RCS[2]
- 8 Full frames   - 8 logo Memories (including one animated Logo)

RCS[2]: Remote Control Software for Windows and Mac

Dimension (in Rack Units - RU)
▶ 2RU

Dimensions (without rack ears and rear rack mount)
▶ W 17.28'' x H 3.46'' x D 17.71''
▶ L 439.5 mm x H 88 mm x P 450 mm

Dimensions (with handles)
▶ W 19'' x H 3.46'' x D 18.70''
▶ L 482.1 mm x H 88 mm x P 475 mm

Weight without accessories
▶ 7.5 kg / 16.31 lbs

Shipping weight accessories included
▶ 10.5 kg / 23.15 lbs

Operating conditions
▶ Temperature: 0 to 40°C (32 to 104°F)
▶ Humidity: 10% to 80%, non-condensing

Thermal dissipation
▶ 546 BTU/hr

Noise (@1,6m height @25°C)
▶ Front: 41 DBa@1m
▶ Rear: 41 Dba@1m

Warranty
3-year warranty on parts and labor back to factory

Power Supply
▶ 100-240 VAC 50/60Hz 3.2A
▶ Fuse cartridge F4AH 250VAC 5x20mm
▶ Max consumption: 155 W (with 2x24 W PoE)

Safety Compliance
▶ IEC/UL/EN 60950-1, CSA22.2#60950-1, ETL Listed (US & Canada)

Supplied with
▶ 1 x Power supply cord
▶ 1 x Pair of front handles + screws
▶ 1 x Ethernet cross cable (for device control)
▶ 8 x MCO 5 pin connectors
▶ 1 x Quick Start Guide including safety instructions*

ⓘ Specifications subject to change without prior notice

INPUTS

10 seamless inputs, 16 total input plugs

2 x DVI-D up to 2048x1152@60Hz

4 x HDMI up to 2048x1152@60Hz

2 x Universal Analog up to 2048x1152@60Hz

4 x 3G/HD/SD-SDI up to 2K@60Hz

4 x HDBaseT™ (2 with PoE+) up to 2048x1152@60Hz

OUTPUTS

2 outputs with 2 plugs per output

2 x HDMI up to 2048x1152@60Hz

2 x HDBaseT™ up to 2048x1152@60Hz

1 x 3G-SDI up to 2K@60Hz, useable as video output or program clone

4 x BNC for Analog SD TV (CVBS, YPbPR) up to 625/576i

AUDIO

5-pin MCO connectors: 4 for analog audio inputs and 2 for analog audio outputs

4 RCA connectors: 2 for S/PDIF audio inputs and 2 for S/PDIF audio outputs

Input:

DVI (as HDMI) / HDMI / SDI Audio de-embedded

4 x Audio stereo Analog (Balanced/Unbalanced)

2 x S/PDIF (AES-3id compatible)

Output:

HDMI / SDI Audio embedded

2 x Audio stereo Analog (Balanced/Unbalanced)

2 x S/PDIF (AES-3id compatible)

STANDARDS

SMPTE: ST 259:2008, ST 260:1999, ST 274:2008, ST 292-1:2012, ST 296:2012, ST 424:2012, ST 428-19:2010

VESA: GTF1.1, CVT 1.1, DMT1.0 rev.12

OPERATING MODES

Mixer mode:

Seamless switching with full preview with 1 layer

Up to 2 Layers on Live Background

Up to 3 Layers on Still Background

Matrix mode:

Seamless switching

1 Title on Live Background on each output

1 Layer on Live or Still Background on each output

CONTROL

Full-featured Front Panel

RCS[2]: Remote Control Software with intuitive GUI

RK-350: Remote Keypad

SB80-2: Shot Box[2]

AMX/Crestron drivers

OTHER FEATURES

DB9: RS232 for remote control

RJ45: Ethernet connection

*All technical specifications and videos are available on
www.analogway.com*

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