



VikinX Sublime X²

SLX2-3GHD3232-CP

Redundant multi-function compact router

Nevion's innovative Sublime X2 is a router that punches above its weight. With its management, cross point and power redundancy, it features the reliability of large modular routers. A multi-core signal processing farm makes it a hybrid router. Its compact form factor makes it ideal for applications where size really matters. And its clever design, brings cost savings to its users.

SLX2-3GHD3232-CP is an ultra thin 32x32 router in 2RU supporting redundant cross-point, redundant controller and a quad-core processing module. Each processing core supports clean switching and audio embedding/de-embedding making it well suited for OB and play out applications. The signal processor also offers future proofing by enabling feature upgrades through a software based processing platform.

The SLX2-3GHD3232-CP features a routing level for the de-embedded and embedded audio. An optional AES extension, providing 32 AES I/O ports and scaling the routing level to a 64x64 AES router, makes the router the ideal choice for in-studio routing.

The embedded system controllers provide a powerful web interface for control and management, SNMP support and support for multiple control panels enabling multi user control. Support for external router and 3rd party interfaces makes Sublime X2 central to any routing system.

Applications

- Outside broadcast
- Studio infrastructure
- Signal processing
- Contribution routing
- Play-out routing

Key features

- 32x32 3G/HD/SD-SDI router in 2RU
- 32 configurable AES I/O ports
- DVB-ASI compliant
- Redundant replaceable cross point module
- Redundant replaceable controllers
- Redundant power
- Redundant Ethernet connection
- Multi-core video and audio processing including – clean switch, audio embedding and AES routing
- Web interface and SNMP for control and monitoring
- Support for all Nevision control panels on IP
- Extensive 3rd party protocol support including – Leitch pass-thru, Triton, Pro-Bel, GVG native

Product description

The Sublime X2 SLX2-3GHD3232-CP is a video router whose capabilities can be expanded through add-on boards and software licenses.

Base unit

The base unit is a 32x32 3G-SDI compatible video router with a touch sensitive control panel and a display in front. It is compliant with DVB-ASI as well as AES-3id. The unit also includes a system controller that can be replaced from the front. The system controller provides the unit with an IP connection and a serial port connection.

Redundant cross point

A replaceable redundant cross point can be added as an option to the router. This cross point acts as the main cross point, leaving the other cross point in a cold running sleep mode. In case of a cross point failure, the router is switched to its back-up cross point. The main cross point can be replaced during a service window while the router is powered off. The cross point board is reached from the front of the router.

Redundant controller

The router can be expanded with an additional redundant controller, that is replaceable. This controller gives a second IP connection enabling management network redundancy. It also provides a second serial port, that can be set up independently to the other serial port.

System control

The unit holds a system controller that provides web interface and SNMP support, and allows control from external Nevision control panels via IP connection. The controller supports functions known from Multicon system controller including levels, virtual router, categories, salvos and mnemonics. The controller provides a serial connection that allows control of one Flashlink frame, or connections to other serial protocols.

Web interface

The unit provides web interface for levels, virtual router and salvos control, as well as in-depth monitoring and configuration of the physical parameters of the router. List and matrix views are provided with the ability to directly edit names and description and lock or protect outputs making the web control well suited as master control panel.

List View

Inputs				Outputs			
#	Name	Description	Presence	#	Name	Description	Lock state
1	CAM1	HD-CAM	Unknown	1	MON1	CAM1	Unknown
2	CAM2	SD-CAM	Unknown	2	MON2	CAM2	Unknown
3	CAM3	remote 1	Unknown	3	MON3	CAM3	Unknown
4	CAM4	remote 2	Unknown	4	MON4	CAM4	Unknown
5	POST PRO		Unknown	5	POST PRO	POST PRO	Protect
6	EDITING		Unknown	6	AUDIO MIX	EDITING	Protect
7	VISION MIX1		Unknown	7	REG1	VISION MIX1	Protect
8	VISION MIX2		Unknown	8	REG2	VISION MIX2	Protect
9	IN09		Unknown	9	MW CH1	IN09	Unknown
10	IN10		Unknown	10	MW CH2	IN10	Unknown
11	IN11		Unknown	11	MW CH3	IN11	Unknown
12	IN12		Unknown	12	MW CH4	CAM3	Unknown
13	IN13		Unknown	13	MW CH5	CAM2	Unknown
14	IN14		Unknown	14	MW CH6	IN030	Unknown
15	IN15		Unknown	15	MW CH7	IN15	Unknown
16	IN16		Unknown	16	MW CH8	EDITING	Unknown
17	IN17		Unknown	17	HD PROG	IN11	Lock
18	IN18		Unknown	18	SD PROG	IN12	Lock
19	IN19		Unknown	19	OUT019	IN009	Unknown

Configuration View

Position	Type	Alarms
IN	INPUTS	
OUT	OUTPUTS	
PROC1	PROCESSING CORE 1	
PROC2	PROCESSING CORE 2	
PROC3	PROCESSING CORE 3	
PROC4	PROCESSING CORE 4	
AMTX	AUDIO MATRIX	
CP	CONTROL PANEL	
MC1	MULTICON 1	
PSU1	EXT POWER	
PSU2	EXT POWER	

Electrical Input	Status	Signal
Electrical Input 1	Normal	Signal detected
Electrical Input 2	Normal	Signal detected
Electrical Input 3	Normal	Signal detected
Electrical Input 4	Normal	Signal detected
Electrical Input 5	Normal	Signal detected
Electrical Input 6	Normal	Signal detected
Electrical Input 7	Normal	Signal detected
Electrical Input 8	Normal	Signal detected
Electrical Input 9	Normal	Signal detected
Electrical Input 10	Normal	Signal detected
Electrical Input 11	Normal	Loss of signal
Electrical Input 12	Normal	Loss of signal
Electrical Input 13	Normal	Loss of signal
Electrical Input 14	Normal	Loss of signal
Electrical Input 15	Normal	Loss of signal
Electrical Input 16	Normal	Loss of signal
Electrical Input 17	Normal	Loss of signal
Electrical Input 18	Normal	Loss of signal
Electrical Input 19	Normal	Loss of signal
Electrical Input 20	Normal	Loss of signal
Electrical Input 21	Normal	Loss of signal

System controller expansions

Licensing enables control of other routers and devices as well as providing northbound and southbound interfaces for a variety of 3rd party protocols, both IP based and serial based. The list of protocols include Leitch, GVG/Thompson and Pro-Bel as well as SDK interface for other plug-in developments.

Video and audio processing

The router expansion also includes a quad-core signal processor with an AES interface board providing 32 direction configured AES ports. Each processing core can access any video input and output, and are featured with a clean-switch function and audio embedder/ de-embedder function. The audio from the embedders/ de-embedders as well as the AES interface board are entering an audio matrix, giving the router an audio router function presented as an audio level. Development will continue to bring forward new functions to the processing module. These functions will be available through software licensing.

General

Power 12VDC	60W max, typical 25W (basic configuration)
Control and monitoring	SNMP, web interface, front control panel with display
Temperature range	0 to +40C

Supported standards

SD-SDI, 270Mbps	SMPTE259M
HD-SDI, 1485Mbps	SMPTE292M
3G-SDI, 2970Mbps	SMPTE424, SMPTE425A, SMPTE425B
DVB-ASI	EN50083-9
AES	AES3-1996
Video switch point	SMPTE-RP168
Black burst and Trilevel	SMPTE170m, ITU-R BT.1700, ITU-R BT.709-5

Electrical video inputs

No of inputs	32
Connector	HD-BNC or DIN1.0/2.3
Impedance	75 Ohm
Return loss	>15dB (5MHz - 1.5GHz) >10dB (1.5MHz - 2.97GHz)
Cable equalization	Automatic >120m 3G-SDI with Belden 1694A typical >180m HD-SDI with Belden 1694A typical >400m SD-SDI with Belden 8281 typical

Electrical video outputs

No of inputs	32
Connector	HD-BNC or DIN1.0/2.3
Impedance	75 Ohm
Return loss	>15dB (5MHz - 1.5GHz) >10dB (1.5MHz - 2.97GHz)
Signal level	800mVp-p +/-10%
Signal polarity	Non-inverting

AES I/O ports (optional)

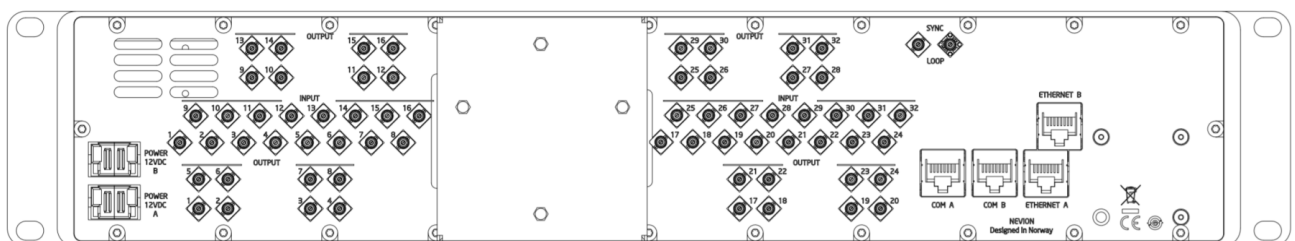
No of ports	32, direction configured through web interface
Connector	25pin SUB-D female
Impedance	110 Ohm transformer balanced
Audio data rate	24 bit 48kHz synchronous to sync input

Sync input

No of inputs	1 + passive loop
Connector	HD-BNC or DIN1.0/2.3
Impedance	75 Ohm
Return loss	>35dB @ <10MHz >30dB @ <30MHz

Processing (Optional)

No of processing cores	4
Core functions	Clean-switch ensuring error free outputs Embedding/De-embedding of up to 8 channels Audio router level



SLX2-3GHD3232-CP Backplane



Ordering options

SLX2-3GHD3232-CP-DIN

2RU 32x32 3G-SDI compatible compact router with DIN I/O connectors, built-in controller with WEB interface, SNMP support and support for Nevia control panels. The router also features options for redundant controller, redundant cross point and audio/video processing modules. Single PSU included.

SLX2-3GHD3232-CP-HDBNC

2RU 32x32 3G-SDI compatible compact router with HD-BNC connectors, built-in controller with WEB interface, SNMP support and support for Nevia control panels. The router also features options for redundant controller, redundant cross point and audio/video processing modules. Single PSU included.

SLX2-HW-RX32

Hardware option for redundant cross point to 32x32 Sublime X2 routers.

SLX2-HW-VPROC4

Hardware option for quad core processing board to Sublime X2 routers. HW only, processing features licensed separately.

SLX2-HW-AVPROC4

Hardware option for quad core processing board with 32 balanced AES I/O ports to Sublime X2 routers. HW only, processing features licensed separately.

SLX2-HW-RC

Hardware option for redundant controller to Sublime X2.

SLX2-PWR-80

80W power supply for the following Sublime X2 routers: SLX2-3GHD3232-CP-DIN, SLX2-3GHD3232-CP-HDBNC, SLX2-3GHD6464-CP-DIN, SLX2-3GHD6464-CP-HDBNC

SLX2-SW-4K-ROUTE

Software option enabling quad stream 4K routing thru an additional video level in the router. Both quad stream and single stream routings can be done simultaneously. The software is applicable for both 32x32 and 64x64 Sublime X2 routers.

SLX2-SW-ADD4PROC

Software license expanding a Sublime X2 processing module with 4 processing cores. Requires SLX2-HW-PROC4 or SLX2-HW-AVPROC4

SLX2-SW-3PP

Software option for third-party protocols; Leitch Pass-through, Probel SW-P-02 and GVG Native. SLX2-SW-VX-WCTRL required.

SLX2-SW-CQ1

Software license for single clean-switch core. The license provides one channel of error-free switching of line synchronous 3G/HD/SD-SDI. SLX2 HW VPROC# or SLX2 HW AVPROC# required. License key locked to physical MAC address.

SLX2-SW-EMB1

Software license for single embedder core for Sublime X2. This license enables one 3G/HD/SD-SDI channel of de-embedding and embedding of 8 AES channels. SLX2-HW-VPROC# or SLX2-HW-AVPROC# required. License key locked to physical MAC address.

SLX2-SW-VX-WCTRL

Software license that enables the built-in controller to see other routers, and share its configuration with external Multicon system controllers. License key locked to physical MAC address.

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With its management, cross point and power redundancy, it features the reliability of large modular routers. A multi-core signal processing farm makes it a hybrid router. Its compact form factor makes it ideal for applications where size really matters. And its clever design, brings cost savings to its users.

SLX2-3GHD6464-CP is an ultra thin 64x64 router in 3RU supporting redundant cross-point, redundant controller and a quad-core processing module. Each processing core supports clean switching and audio embedding/de-embedding making it well suited for OB and play out applications. The signal processor also offers future proofing by enabling feature upgrades through a software based processing platform.

The SLX2-3GHD6464-CP features a routing level for the de-embedded and embedded audio. An optional AES extension, providing 32 AES I/O ports and scaling the routing level to a 64x64 AES router, makes the router the ideal choice for in-studio routing.

The embedded system controllers provide a powerful web interface for control and management, SNMP support and support for multiple control panels enabling multi user control. Support for external router and 3rd party interfaces makes Sublime X2 central to any routing system.

Applications

- Outside broadcast
- Studio infrastructure
- Signal processing
- Contribution routing
- Play-out routing

Key features

- 64x64 3G/HD/SD-SDI router in 3RU
- 32 configurable AES I/O ports
- DVB-ASI compliant
- Redundant replaceable cross point module
- Redundant replaceable controllers
- Redundant power
- Redundant Ethernet connection
- Multi-core video and audio processing including – clean switch, audio embedding and AES routing
- Web interface and SNMP for control and monitoring
- Support for all Nevision control panels on IP
- Extensive 3rd party protocol support including – Leitch pass-thru, Triton, Pro-Bel, GVG native

Product description

The Sublime X2 SLX2-3GHD6464-CP is a video router whose capabilities can be expanded through add-on boards and software licenses.

Base unit

The base unit is a 64x64 3G-SDI compatible video router with a touch sensitive control panel and a display in front. It is compliant with DVB-ASI as well as AES-3id. The unit also includes a system controller that can be replaced from the front. The system controller provides the unit with an IP connection and a serial port connection.

Redundant cross point

A replaceable redundant cross point can be added as an option to the router. This cross point acts as the main cross point, leaving the other cross point in a cold running sleep mode. In case of a cross point failure, the router is switched to its back-up cross point. The main cross point can be replaced during a service window while the router is powered off. The cross point board is reached from the front of the router.

Redundant controller

The router can be expanded with an additional redundant controller, that is replaceable. This controller gives a second IP connection enabling management network redundancy. It also provides a second serial port, that can be set up independently to the other serial port.

System control

The unit holds a system controller that provides web interface and SNMP support, and allows control from external Nevision control panels via IP connection. The controller supports functions known from Multicon system controller including levels, virtual router, categories, salvos and mnemonics. The controller provides a serial connection that allows control of one Flashlink frame, or connections to other serial protocols.

Web interface

The unit provides web interface for levels, virtual router and salvos control, as well as in-depth monitoring and configuration of the physical parameters of the router. List and matrix views are provided with the ability to directly edit names and description and lock or protect outputs making the web control well suited as master control panel.

List View

Inputs				Outputs					
#	Name	Description	Presence	#	Name	Description	Input	Presence	Lock state
1	CAM1	HD-CAM	Unknown	1	MON1		CAM1	Unknown	Unlocked
2	CAM2	SD-CAM	Unknown	2	MON2		CAM2	Unknown	Unlocked
3	CAM3	remote 1	Unknown	3	MON3		CAM3	Unknown	Unlocked
4	CAM4	remote 2	Unknown	4	MON4		CAM4	Unknown	Unlocked
5	POST PRO		Unknown	5	POST PRO		POST PRO	Unknown	Protected
6	EDITING		Unknown	6	AUDIO MIX		EDITING	Unknown	Protected
7	VISION MIX1		Unknown	7	REG1		VISION MIX1	Unknown	Protected
8	VISION MIX2		Unknown	8	REG2		VISION MIX2	Unknown	Protected
9	IN009		Unknown	9	MW CH1		IN009	Unknown	Unlocked
10	IN010		Unknown	10	MW CH2		IN011	Unknown	Unlocked
11	IN011		Unknown	11	MW CH3		IN012	Unknown	Unlocked
12	IN012		Unknown	12	MW CH4		CAM3	Unknown	Unlocked
13	IN013		Unknown	13	MW CH5		CAM2	Unknown	Unlocked
14	IN014		Unknown	14	MW CH6		IN030	Unknown	Unlocked
15	IN015		Unknown	15	MW CH7		IN015	Unknown	Unlocked
16	IN016		Unknown	16	MW CH8		EDITING	Unknown	Unlocked
17	IN017		Unknown	17	HD PROG		IN011	Unknown	Locked
18	IN018		Unknown	18	SD PROG		IN012	Unknown	Locked
19	IN019		Unknown	19	OUT019		IN009	Unknown	Unlocked

Configuration View

Position	Type	Alarms
IN	INPUTS	
OUT	OUTPUTS	
PROC1	PROCESSING CORE 1	
PROC2	PROCESSING CORE 2	
PROC3	PROCESSING CORE 3	
PROC4	PROCESSING CORE 4	
AMTX	AUDIO MATRIX	
CP	CONTROL PANEL	
MC1	MULTICON 1	
PSU1	EXT POWER	
PSU2	EXT POWER	

Electrical Input	Status	Alarm
Electrical Input 1	Normal	Signal detected
Electrical Input 2	Normal	Signal detected
Electrical Input 3	Normal	Signal detected
Electrical Input 4	Normal	Signal detected
Electrical Input 5	Normal	Signal detected
Electrical Input 6	Normal	Signal detected
Electrical Input 7	Normal	Signal detected
Electrical Input 8	Normal	Signal detected
Electrical Input 9	Normal	Signal detected
Electrical Input 10	Normal	Signal detected
Electrical Input 11	Normal	Loss of signal
Electrical Input 12	Normal	Loss of signal
Electrical Input 13	Normal	Signal detected
Electrical Input 14	Normal	Loss of signal
Electrical Input 15	Normal	Loss of signal
Electrical Input 16	Normal	Loss of signal
Electrical Input 17	Normal	Loss of signal
Electrical Input 18	Normal	Loss of signal
Electrical Input 19	Normal	Loss of signal
Electrical Input 20	Normal	Loss of signal
Electrical Input 21	Normal	Loss of signal

System controller expansions

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Video and audio processing

The router expansion also includes a quad-core signal processor with an AES interface board providing 32 direction configured AES ports. Each processing core can access any video input and output, and are featured with a clean-switch function and audio embedder/ de-embedder function. The audio from the embedders/ de-embedders as well as the AES interface board are entering an audio matrix, giving the router an audio router function presented as an audio level. Development will continue to bring forward new functions to the processing module. These functions will be available through software licensing.

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Temperature range	0 to +40°C

Supported standards

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HD-SDI, 1485Mbps	SMPT292M
3G-SDI, 2970Mbps	SMPT424, SMPT425A, SMPT425B
DVB-ASI	EN50083-9
AES	AES3-1996
Video switch point	SMPT-RP168
Black burst and Trilevel	SMPT170m, ITU-R BT.1700, ITU-R BT.709-5

Electrical video inputs

No of inputs	64
Connector	HD-BNC or DIN1.0/2.3
Impedance	75 Ohm
Return loss	>15dB (5MHz - 1.5GHz) >10dB (1.5MHz - 2.97GHz)
Cable equalization	Automatic >120m 3G-SDI with Belden 1694A typical >180m HD-SDI with Belden 1694A typical >400m SD-SDI with Belden 8281 typical

Electrical video outputs

No of inputs	64
Connector	HD-BNC or DIN1.0/2.3
Impedance	75 Ohm
Return loss	>15dB (5MHz - 1.5GHz) >10dB (1.5MHz - 2.97GHz)
Signal level	800mVp-p +/-10%
Signal polarity	Non-inverting

AES I/O ports (optional)

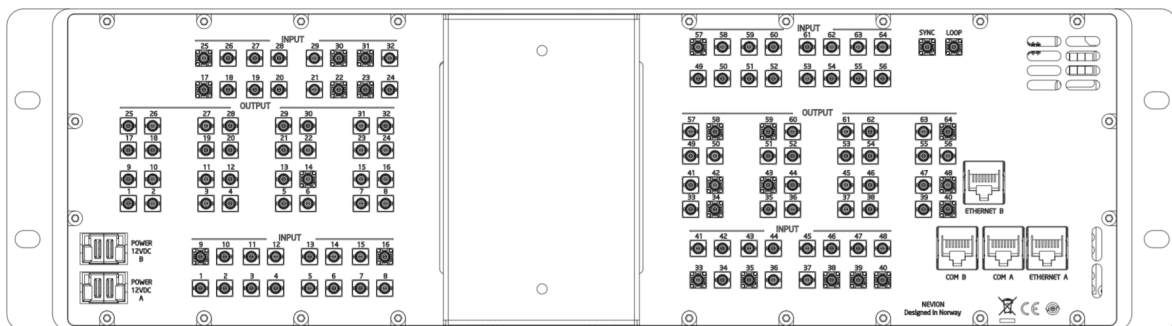
No of ports	32, direction configured through web interface
Connector	25pin SUB-D female
Impedance	110 Ohm transformer balanced
Audio data rate	24 bit 48kHz synchronous to sync input

Sync input

No of inputs	1 + passive loop
Connector	HD-BNC or DIN1.0/2.3
Impedance	75 Ohm
Return loss	>35dB @ <10MHz >30dB @ <30MHz

Processing (Optional)

No of processing cores	8
Core functions	Clean-switch ensuring error free outputs Embedding/De-embedding of up to 8 channels Audio router level



SLX2-3GHD6464 backplane



Ordering options

SLX2-3GHD6464-CP-DIN

3RU 64x64 3G-SDI compatible compact router with DIN1.0/23 connectors, built-in controller with WEB interface, SNMP support and support for all Nevision control panels. The router also features option for redundant controller, redundant cross point and audio/video processing modules. Single PSU included.

SLX2-3GHD6464-CP-HDBNC

3RU 64x64 3G-SDI compatible compact router with HD-BNC connectors, built-in controller with WEB interface, SNMP support and support for all Nevision control panels. The router also features option for redundant controller, redundant cross point and audio/video processing modules. Single PSU included.

SLX2-HW-RX64

Hardware option for redundant cross point to 64x64 Sublime X2 routers.

SLX2-HW-VPROC4

Hardware option for quad core processing board to Sublime X2 routers. HW only, processing features licensed separately.

SLX2-HW-AVPROC4

Hardware option for quad core processing board with 32 balanced AES I/O ports to Sublime X2 routers. HW only, processing features licensed separately.

SLX2-HW-RC

Hardware option for redundant controller to Sublime X2.

SLX2-PWR-80

80W power supply for the following Sublime X2 routers: SLX2-3GHD3232-CP-DIN, SLX2-3GHD3232-CP-HDBNC, SLX2-3GHD6464-CP-DIN, SLX2-3GHD6464-CP-HDBNC

SLX2-SW-4K-ROUTE

Software option enabling quad stream 4K routing thru an additional video level in the router. Both quad stream and single stream routings can be done simultaneously. The software is applicable for both 32x32 and 64x64 Sublime X2 routers.

SLX2-SW-ADD4PROC

Software license expanding a Sublime X2 processing module with 4 processing cores. Requires SLX2-HW-PROC4 or SLX2-HW-AVPROC4

SLX2-SW-3PP

Software option for third-party protocols; Leitch Pass-through, Probel SW-P-02 and GVG Native. SLX2-SW-VX-WCTRL required.

SLX2-SW-CQ1

Software license for single clean-switch core. The license provides one channel of error-free switching of line synchronous 3G/HD/SD-SDI. SLX2 HW VPROC# or SLX2 HW AVPROC# required. License key locked to physical MAC address.

SLX2-SW-EMB1

Software license for single embedder core for Sublime X2. This license enables one 3G/HD/SD-SDI channel of de-embedding and embedding of 8 AES channels. SLX2-HW-VPROC# or SLX2-HW-AVPROC# required. License key locked to physical MAC address.

SLX2-SW-VX-WCTRL

Software license that enables the built-in controller to see other routers, and share its configuration with external Multicon system controllers. License key locked to physical MAC address.

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