1 Product overview

Nevion are proud to present the 2nd generation of the compact small and medium routing switcher family, Sublime. With Sublime, Nevion now provide a stable and proven product line including the most complete signal format and size offering available.

With the new ultra slim, multi format and flexible product range, Sublime fulfills the most demanding requirements from the professional broadcast market.

This User Manual presents the features, installation and operation procedures of the Analog Video routers of the Sublime range.

- Router range from 8x8 to 128x128
- Software based Configurator for easy system set-up
- TCP/IP, RS-232 and NCB Control (RJ-45)
- Programmable multi- single- and dual bus control panels
- Ultra Slim frame depth
- Low Power, high reliability design
- Redundant power supply system with front indicators
- Interoperability with existing VikinX routers
- Future proof and flexible product range

VikinX Sublime provides many of the powerful control features that drove the VikinX Modular range to success. VikinX Sublime is ideal for general purpose facilities, on-air routing, mobile outside broadcast applications and sophisticated A/V applications.

1.1 Product versions

The following versions of the VikinX Sublime Analog Video Routers are available:

Analog Video – 19” - 1RU, depth 5cm:

SL-V0808 / SL-V0808-CP	8x8 Analog Video Router (125MHz). Router partitioning, programmable X-Y control panel (on CP version)
SL-V1616 / SL-V1616-CP	16x16 Analog Video Router (125MHz). Router partitioning, programmable X-Y control panel (on CP version).
SL-V1602 / SL-V1602-CP	16x2 Analog Video Router (125MHz). Programmable Dual bus control panel (on CP version), Expandable to 64x2.

Analog Video – 19” - 2RU, depth 5cm:

SL-V3232 / SL-V3232-CP	32x32 Analog Video Router (125MHz). Router partitioning, programmable X-Y control panel (on CP version).

Analog Video – 19” - 4RU, depth 5cm:

SL-V6464 / SL-V6464-CP	64x64 Analog Video Router (125MHz). Router partitioning, programmable X-Y control panel (on CP version).

Available Control Panels – 19” – 1RU:

SL-16XY-CP	Multi bus X-Y 16x16 panel.
SL-8XY-CP	Multi bus X-Y 8x8 panel.
SL-16D-CP	Dual bus 16x2 panel.
SL-32S-CP	Single bus 32x1 panel.
SL-32S-CP-GPI	Single bus 32x1 panel with GPI / Joystick / Tally interface.
SL-16S-CP	Single bus 16x1 panel.
SL-16S-CP-GPI	Single bus 16x1 panel with GPI / Joystick / Tally interface.
SL-8S-CP	Single bus 8x1 panel.
SL-8S-CP-GPI	Single bus 8x1 panel with GPI / Joystick / Tally interface.

Available Control Panels – 19” – 2RU:

SL-32XY-CP	Multi bus X-Y 32x32 panel.
SL-64S-CP	Single bus 64x1 panel.
SL-64S-CP-GPI	Single bus 64x1 panel with GPI / Joystick / Tally interface.

Available Control Panels – 19” – 4RU:

SL-64XY-CP	Multi bus X-Y 64x64 panel.

2 Specifications

2.1 Mechanics

Dimensions:
- HxWxD = 44x483x50mm, (19”, 1RU);
- HxWxD = 88x483x50mm, (19”, 2RU);
- HxWxD = 176x483x50mm, (19”, 4RU).

Safety/Emission standards: Compliant with CE EN55103-1 and 2.

2.1.1 Weight and power consumption

Device	Weight, incl. 1x PSU	Current +15V	Current -15V	Power
SL-V6464	3.5 kg	1066 mA	90 mA	17 W
SL-V6464-CP	4.2 kg	400 mA	1000 mA	21 W
SL-V3232	1.9 kg	300 mA	490 mA	12 W
SL-V3232-CP	2.2 kg	800 mA	490 mA	19 W
SL-V1616	1.2 kg	280 mA	160 mA	7 W
SL-V1616-CP	1.4 kg	390 mA	160 mA	8 W
SL-V0808	1.2 kg	170 mA	80 mA	4 W
SL-V0808-CP	1.3 kg	300 mA	80 mA	6 W
SL-V1602	1.2 kg	270 mA	60 mA	5 W
SL-V1602-CP	1.3 kg	460 mA	59 mA	8 W

2.2 Power Supply

SL-PWR-40 40W Power Supply Unit for 8x8 – 32x32 versions.
SL-PWR-90 90W Power Supply Unit for 64x64 versions.
AC Supply voltage range: 100-240VAC, 50-60Hz,
Max 1.6A (SL-PWR-40) / Max 3A (SL-PWR-90).
AC Mains connector: IEC 320.
DC output:
- +15V, max. 2.2A / -15V, max 1.35A. Maximum 43W for 8x8 – 32x32 versions;
- +15V, max. 4A / -15V, max 2.5A. Maximum 90W for 64x64 versions.

DC connector: DE9, D-sub 9-pin male.
Status monitoring: Via LED in front of the router/CP.
Safety standards: Compliant with CE EN60950, UL-1950/CSA22.2.

2.3 Control

Standard Features:

Serial port: RS-232 for protocol conversion, to VikinX compact control protocol, or to third party protocols.
Connector: DE9, D-sub 9-pin female.
NCB ports: For integration with VikinX compact router configuration.
Connectors (2): RJ45 (1 In / 1 Out)
Ethernet port: 10/100BaseT Ethernet bus for external router control.
Connector: RJ45.
Synchronization:
- Analog Black&Burst, looped. Both PAL and NTSC supported.
- Tri-Level, Looped. For HD signal formats only.
- Distribution of synchronization signals between several routers.

Connector(s): BNC.

Optional Features:

Control Panel:	-	Optional, built-in control panel available.
	-	External control panels available.

2.4 Analog Video specifications

Supported formats:

Broadcast:	-	Composite Analog Video, PAL and NTSC.
	-	Composite Analog Video, SECAM,
	-	Analog RGB and
	-	Analog YCrCb.

Electrical signal specifications:

Frequency response:	-	100kHz – 5MHz: +0/-0.1dB
	-	100kHz – 30MHz: ±0.5dB
	-	0Hz – 125MHZ: +0.5/-3dB.
Return loss:	-	> 40dB @5.5MHz, 75 ohm BNC
	-	> 35dB @10MHz.
Output DC offset error:	< 15mV DC.	
Gain:	0dB ±0.1dB.	
Crosstalk:	< -60dB up to 5MHz.	
Differential gain:	-	< 0.1%, for routers up to 16x16;
	-	< 0.2%, for 32x32 and 64x64 routers.
Differential phase:	-	< 0.1º, for routers up to 16x16;
	-	< 0.2º, for 32x32 and 64x64 routers.
Bar tilt:	< 0.1%.	
Lum. Non-linearity:	-	< 0.1%, for routers up to 16x16;
	-	< 0.2%, for 32x32 and 64x64 routers.
Video S/N:	> 70dB, unweighted	
Max. signal level:	> 2Vpp.	
Delay difference, any input to one output:	< ±1nsec.	
Connector:	75 ohm BNC female.	
Impedance:	75 ohm nominal.	

Reference inputs:

Number of inputs:	1.
Connector:	75 ohm BNC female, loop-thru.
Return loss:	>40dB (100 kHz – 5 MHz); >35dB (5-10 MHz).
Signal format:	NTSC or PAL Black&Burst.
Signal level:	Nominal 1.0Vp-p.
Field selectivity:	Field 1.
Timing range:	- PAL: 30us ±5us after hsync in line 6 - NTSC: 30us ±5us after hsync in line 10.

2.5 Connection details

The Sublime routers have the following service connections on the rear of each product:

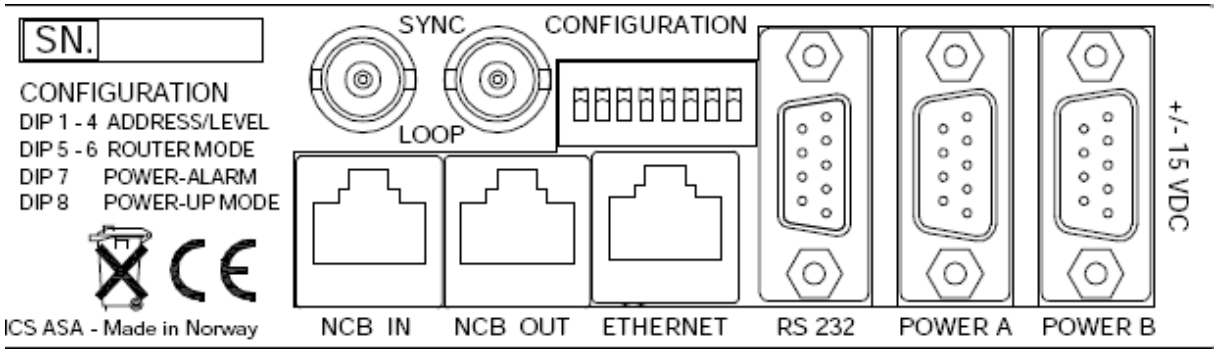

Figure 1: Sublime service connectors.

SYNC:	Synchronization signal (in). Black burst/composite/tri-level sync reference input with passive loop-through for vertical interval switching.
LOOP:	Synchronization signal (out). Loop-through of SYNC input.
NCB IN:	Network Control Bus Input. The protocol of this bus is described in a separate manual.
NCB OUT:	Network Control Bus Output.
ETHERNET:	10/100Base-T Ethernet bus for external router control.
RS 232:	RS-232 for external control protocols.
POWER A:	±15VDC power connector.
POWER B:	±15VDC power connector, redundant supply.
CONFIGURATION:	Configurations switch. See Chapter 3 for further descriptions.

2.5.1 Power Supply pin-out

The DE9 male sockets for the power connection on Sublime routers and Control Panels have the following pin-out;

Pin #	Description
1	GND
2	Not connected
3	Not connected
4	+15VDC
5	Not connected
6	Not connected
7	Not connected
8	-15VDC
9	Not connected