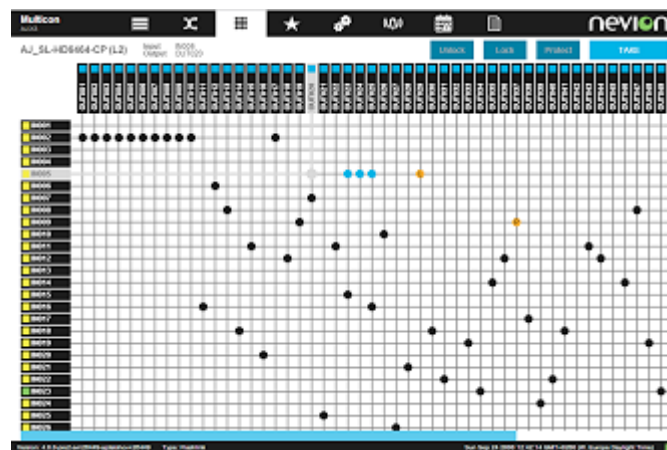


## Flashlink VikinX

MULTICON 4

## Element Manager



**The Multicon product provides fully integrated state-of-the-art element management and system control capabilities for Flashlink and VikinX systems.**

**Multicon supports a wide range of applications ranging from optical network monitoring and configuration to controlling live media networking.**

The Multicon product provides element management and system control capabilities for Flashlink and VikinX systems. The software may be licensed to support different applications and is available in different product packages to support the main applications.

Multicon includes interfaces for web-based monitoring and control, hardware and software control panels, automation systems and SNMP-based network management systems. The software also supports control of third-party devices using industry standard protocols.

The Multicon software is running on a dedicated hardware card that may be installed in Flashlink, Flashcase, N-BOX or VikinX Modular frames. Multicon is typically installed in an N-BOX to support Flashlink Compact and Sublime devices.

### Applications

- Optical network monitoring and configuration
- Router control for studio and outside broadcast
- Pre-programmed production setups
- Live media networking control
- Automation system support

### Key features

- User-friendly web GUI for monitoring, configuration and control of Flashlink and VikinX
- Support for up to 80 Flashlink cards
  - Status information and card configuration
  - Hot-swap of cards
  - Remote firmware upgrade
- Support for VikinX Sublime, Compact and Modular
  - Level control, virtual routing and salvos
  - System with multiple controllers
- Integration with hardware and software control panels
- Alarm management and forwarding
- SNMP support for monitoring and configuration
- Third-party router integration (Leitch, GVG and Pro-bel)

## Element Management

Multicon is an essential part of any Flashlink system that requires monitoring and configuration from a remote location, either via the built-in Web-based interface or the industry standard SNMP protocol. The operator may access status information per card, perform card configuration and manage alarms for the entire Flashlink system. Relevant alarms are configurable for the web and SNMP interfaces.

Most Flashlink cards offer dynamically updated schematics that shows how signals are routed through the card. The configuration pages are organized into functional blocks that are similar for different cards types making it easier to manage different card types and introducing new. Automatic configuration of Flashlink cards are supported during hot-swap and firmware may be upgraded remotely for supported cards.

## System Control

Multicon can be used as the system controller for VikinX Sublime, Modular and legacy Compact routers. Multiple controllers may be combined into a system for redundancy purposes and to access resources spread across controllers from common control panels.

Multicon supports level, virtual tables and salvos resources for VikinX router control. These resources are accessible from hardware or software control panels connected to any of the controllers in a system or from external systems like automation.

## Virtual Router

The virtual router feature allows the operator to create virtual routing tables that includes multiple level resources. This offers the flexibility to control multiple resources in one operation. A typical example is to control video, audio and data levels simultaneously, but the feature is extremely flexible and may be used for a variety of purposes.

## Third-party

Multicon uses software plug-ins to control third-party equipment and comes with options for Leitch, Pro-bel, GVG/Thomson protocols via IP or serial connectivity. These protocols are also supported for integration with external control systems like automation.



## Parameter Control

The system also allows parameters that are not directly connected with routing resources to be accessed from control panels. This feature is typically used to control Flashlink signal processing cards from control panels and to add such parameters to pre-defined salvos for different production setups. One example of parameters is aspect ratio settings for a down-converter card.

## Salvo Support

The salvo feature allows multiple VikinX router crosspoints and Flashlink parameters to be activated by a single command. Multicon can also create a new salvo by taking a snapshot of the current configuration. This enables the operator to define preset configurations that can be quickly activated.

Position	Card	Type	Status	Acknowledge
FEED 1	UDC-HD-18A204	Electrical input	Alarm	Acknowledge
FEED 1	UDC-HD-18A204	Audio demb. ch 1-4	Alarm	Acknowledge
FEED 1	UDC-HD-18A204	Audio demb. ch 5-8	Alarm	Acknowledge
FEED 1	UDC-HD-18A204	Audio demb. ch 9-12	Alarm	Acknowledge
FEED 1	UDC-HD-18A204	Audio demb. ch 13-16	Alarm	Acknowledge
FEED 1	UDC-HD-18A204	Sync source	Alarm	Acknowledge
Rack 0, card 4	ACP-32HD	Input 1	Acknowledge	Acknowledge
Rack 0, card 4	ACP-32HD	Input 2	Acknowledge	Acknowledge
Rack 0, card 4	ACP-32HD	Ado 1	Acknowledge	Acknowledge
Rack 0, card 4	ACP-32HD	Ado 2	Acknowledge	Acknowledge
Rack 0, card 4	ACP-32HD	Main Input	Alarm	Acknowledge
Rack 0, card 4	ACP-32HD	Reduction in 1	Alarm	Acknowledge
Rack 0, card 4	ACP-32HD	Reduction in 2	Alarm	Acknowledge
Rack 0, card 4	ACP-32HD	Reduction in 3	Alarm	Acknowledge
Rack 0, card 4	ACP-32HD	Reduction in 4	Alarm	Acknowledge
Rack 0, card 5	FRS-4D-CHD	Electrical input 1	Redundant	Acknowledge
Rack 0, card 5	FRS-4D-CHD	Electrical input 2	Redundant	Acknowledge
Rack 0, card 5	FRS-4D-CHD	Video in	Redundant	Acknowledge
Rack 0, card 5	FRS-4D-CHD	Audio demb. ch 1-4	Alarm	Acknowledge
Rack 0, card 5	FRS-4D-CHD	Audio demb. ch 5-8	Alarm	Acknowledge

## Web Control

Multicon now supports web control for levels, virtual routers and salvos. This feature is introduced in release 4.0 and enables the operator to control these resources directly from the web interface. List and matrix views are provided with the ability to directly edit names and descriptions and lock or protect outputs. The web control feature is well suited as replacement for a master control panel or for post-production environments.

### List View

#	Name	Description	Preference	#	Name	Description	Input	Preference	Lock state
1	I001		Missing	1	O001		My I001	Missing	Unlock
2	I002		Missing	2	O002		My I001	Missing	Unlock
3	I003		Missing	3	O003		My I001	Missing	Lock
4	I004		Missing	4	O004		My I001	Missing	Lock
5	I005		Missing	5	O005		My I001	Missing	Lock
6	I006		Missing	6	O006		My I001	Missing	Lock
7	I007		Missing	7	O007		My I001	Missing	Unlock
8	I008		Missing	8	O008		My I001	Missing	Unlock
9	I009		Missing	9	O009		My I001	Missing	Protected
10	I010		Missing	10	O010		My I001	Missing	Protected
11	I011		Missing	11	O011		My I001	Missing	Unlock
12	I012		Missing	12	O012		My I001	Missing	Unlock
13	I013		Missing	13	O013		My I001	Missing	Unlock
14	I014		Missing	14	O014		My I001	Missing	Unlock
15	I015		Missing	15	O015		My I001	Missing	Unlock
16	I016		Missing	16	O016		My I001	Missing	Unlock
17	I017		Missing	17	O017		My I001	Missing	Unlock
18	I018		Missing	18	O018		My I001	Missing	Unlock
19	I019		Missing	19	O019		My I001	Missing	Unlock
20	I020		Missing	20	O020		My I001	Missing	Unlock
21	I021		Missing	21	O021		My I001	Missing	Unlock
22	I022		Missing	22	O022		My I001	Missing	Unlock

### Matrix View

### Web-based Configuration

Multicon 4 also supports configuration of Sublime only systems from the web interface. Previously the Nevision Configurator tool was always required for initial configuration, but this is now only required for more advanced configurations. This possibility allows customers to get started in a matter of minutes.

## Specifications

### Protocols

Northbound (host)	MRP (IP), NCB Compact (serial), NCB Sublime (serial), SNMP v1/3 (IP), GVG/Thomson Native (IP and serial), Leitch PassThru (IP and serial), Pro-bel SW-P-02 (serial), Triton (serial)
Southbound (client)	MRP (IP), NCB Compact (serial), NCB Sublime (serial), GVG/Thomson Native (IP and serial), Leitch PassThru (IP and serial), Pro-bel SW-P-02 (serial), Triton (serial)

### Physical

Ethernet	10/100-BaseTX (RJ-45 connector)
Serial	2 x RS-232 or RS-422 (DB-9 connector) 1 x RS-422 (RJ-45 connector)
Storage	4GB Compact Flash
GPIO	5 (RJ-45 connector) Open collector 30V 0.5A tolerant
Operating temperature	-10°C to +55°C
Relative humidity	< 95% (non condensing)

### Performance

Flashlink	Up to 80 cards per controller
VikinX	Up to 32 routers and control panels per controller (8 when used in combination with Flashlink)
Web Clients	Up to 16 per controller (8 when used in combination with Flashlink)
Levels	Up to 200 in a system
Crosspoints	Up to 5000 in a system
Virtual routers	Up to 10 with less than 256 crosspoints in a system
Salvos	Up to 100 with less than 256 settings in a system

### Order Options

MULTICON GYDA	Product for Flashlink 80 card support
MULTICON GYDA-ONE	Product for Flashlink 10 card support
MULTICON VX-SLC	Product for Sublime support
MULTICON VX-MOD	Product for VikinX Modular support
MULTICON N-BOX	Product for Sublime support with N-BOX
MULTICON N-BOX+	Product for Sublime support with N-BOX (sold only with Sublime routers)
MULTICON OPT-GYDA	Option for Flashlink 80 card support
MULTICON OPT-GYDA-ONE	Option for Flashlink 10 card support
MULTICON OPT-VX-SLC	Option for Sublime support
MULTICON OPT-VX-MOD	Option for Sublime support
MULTICON OPT-PROBEL	Option for Pro-bel SW-P-02 protocol support
MULTICON OPT-GVG	Option for GVG/Thomson Native protocol support
MULTICON OPT-LEITCH	Option for Leitch PassThru protocol support
MULTICON OPT-WC	Option for Web Control support
MULTICON UPG-GYDA-SC	Upgrade from GYDA-SC
MULTICON UPG-SYSCON	Upgrade from SYSCON
MULTICON UPG-ETHCON	Upgrade from ETHCON

# Management Systems



**Nevion offers a range of management systems for broadcasters, telcos, cable, DTT and satellite operators providing an end-to-end service oriented perspective on the operation of the infrastructure.**

Our management offering includes element management solutions for broadcast environments to put you in control of your video transport, routing, signal processing and distribution infrastructure. This includes an integrated control system for Flashlink and VikinX installations, providing control panel access to routing and signal processing resources, and Web based access for equipment monitoring and configuration.

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