

NV PANEL SERIES

Wide Range of Highly Adapted Panels for Superior Control



Audio/video routing innovations that simplify your workflows.

The NV panel series from Grass Valley® includes a wide range of highly adapted panels for superior control. The panel range includes informative and easy to use LCD relegendable panels, multidestination panels, multimode button per source panels and destination/source (XY) panels. The NV panel series is the most

comprehensive line of panels, meticulously designed to optimize various workflows for the fastest, error-free operations as well as accommodating tight budgets and restricted space requirements. Panels are for use with GV Orbit®, NV9000 router control system and legacy GV Convergent® deployments.

Note that not all panels work with all control systems. Compatibility is indicated alongside each panel type.

Key Features

- Wide range of highly adapted panels adapting to operator's workflow:
 - Relegendable LCD panels
 - Multidestination panels
 - Multimode button per source panels
 - Destination/source (XY) panels
 - Production truck control panels
 - Client/server panels with fast access to thousands of I/Os
- Flexible control capabilities optimizing operation efficiency:
 - Quick recall of panel configuration with page navigation
 - Configurable buttons to control multiviewer parameters
 - Multiple levels of text aliases
- Fast configuration of panels with individual function per button or global panel behavior function per panel
- Practical physical design:
 - Shallow depth panels
 - GPI I/Os ideal for joystick override control
- Simple automatic attribution of panel IP addresses

Panel name	Short description	Detailed description
NV9642	1 RU high-density 34 LCD button router control panel For use with: - GV Orbit - NV9000 - GV Convergent	Physical: 1 RU panel - Shallow-depth package 34 high-density multicolor LCD display buttons - VFD display reporting router crosspoint statuses and preset settings 8 input and 4 output utility GPIs built-in, ideal for joystick override applications Functional: - XY, multideestination and multimode operation - Breakaway switching, quick source, level mapping, salvos and scrolling - Button colors are user-definable and can display up to 3 rows of 8 characters - All buttons are fully programmable for different functions such as breakaway switching, quick source, level mapping, salvos and scrolling - Flexible panel navigation through the use of page layering process allowing fast access to buttons for sources, destinations and functions Best use: - Trucks - Production control room
		
NV9646	1 RU high-density 46 LCD button router control panel For use with: - GV Orbit - NV9000 - GV Convergent	Physical: 1 RU panel - Shallow-depth package 46 high-density multicolor LCD display buttons 8 input and 4 output utility GPIs built-in, ideal for joystick override applications Functional: - XY, multideestination and multimode operation - Breakaway switching, quick source, level mapping, salvos and scrolling - Button colors are user-definable and can display up to 3 rows of 8 characters - All buttons are fully programmable for different functions such as breakaway switching, quick source, level mapping, salvos and scrolling - Flexible panel navigation through the use of page layering process allowing fast access to buttons for sources, destinations and functions 10 LCD buttons can be used to simulate a VFD panel for router crosspoint statuses and preset settings Best use: - Trucks - Production control room
		

Panel name	Short description	Detailed description
NV9680	2 RU high-density 80 LCD button router control panel For use with: - GV Orbit - GV Convergent Note: Not compatible with NV9000	Physical: 2 RU panel - Shallow-depth package 80 high-density multicolor LCD display buttons 8 input and 4 output utility GPIs built-in, ideal for joystick override applications Functional: - Supported in GV Orbit and GV Convergent. Not supported in NV9000 - Breakaway switching, quick source, level mapping, salvos and scrolling - Button colors are user-definable and can display up to 3 rows of 8 characters - All buttons are fully programmable for different functions such as breakaway switching, quick source, level mapping, salvos and scrolling - Flexible panel navigation through the use of page layering process allowing fast access to buttons for sources, destinations and functions Best use: - OB trucks - Production control room - Post production
NV9680-K	2 RU high-density 80 LCD button panel For use with: NV9000 Note: Not compatible with GV Orbit or GV Convergent	Physical: 2 RU panel (stacked panels) - Shallow-depth package 80 high-density multicolor LCD display buttons - VFD display reporting router crosspoint statuses and preset settings 18 input and 8 output utility GPIs built-in, ideal for joystick override applications Functional: - XY, multideestination and multimode operation - Breakaway switching, quick source, level mapping, salvos and scrolling - Button colors are user-definable and can display up to 3 rows of 8 characters - All buttons are fully programmable for different functions such as breakaway switching, quick source, level mapping, salvos and scrolling - Flexible panel navigation through the use of page layering process allowing fast access to buttons for sources, destinations and functions Best use: - Trucks - Production control room



Panel name	Short description	Detailed description
NV9654	2 RU high-density 54 LCD button router control panel For use with: - GV Orbit - NV9000 - GV Convergent	Physical: 2 RU panel - Shallow-depth package 54 high-density multicolor LCD display buttons 8 input and 4 output utility GPIs built-in, ideal for joystick override applications Functional: - XY, multdestination and multimode operation - Breakaway switching, quick source, level mapping, salvos and scrolling - Button colors are user-definable and can display up to 3 rows of 8 characters - All buttons are fully programmable for different functions such as breakaway switching, quick source, level mapping, salvos and scrolling - Flexible panel navigation through the use of page layering process allowing fast access to buttons for sources, destinations and functions 15 LCD buttons can be used to simulate a VFD panel for router crosspoint statuses and preset settings Best use: - Production control room - Post production 
NV9641A	1 RU LCD control panel For use with: - GV Orbit - NV9000 - GV Convergent	Physical: 1 RU panel - Shallow-depth package less than 6.35 cm (2.5 in.) deep 16 multicolor LCD display buttons, 8 input and 4 output utility GPIs built-in, ideal for joystick override applications Functional: - XY and multdestination modes - Breakaway switching, quick source, level mapping, salvos and scrolling - Button colors are user-definable and can display up to 3 rows of 8 characters - All buttons are fully programmable for different functions such as breakaway switching, quick source, level mapping, salvos and scrolling - Flexible panel navigation through the use of page layering process allowing fast access to buttons for sources, destinations and functions Best use: - Production control room - Trucks 

Panel name	Short description	Detailed description
NV9640A	2 RU LCD X-Y control panel For use with: - GV Orbit - NV9000 - GV Convergent	Physical: 2 RU panel - Shallow-depth package less than 6.35 cm (2.5 in.) deep 30 multicolor LCD display buttons - VFD display reporting router crosspoint statuses and preset settings 8 input and 4 output utility GPIs built-in, ideal for joystick override applications Functional: - XY and multideestination modes - Breakaway switching, quick source, level mapping, salvos and scrolling - Button colors are user-definable and can display up to 3 rows of 8 characters - All buttons are fully programmable for different functions such as breakaway switching, quick source, level mapping, salvos and scrolling - Flexible panel navigation through the use of page layering process allowing fast access to buttons for sources, destinations and functions Best use: - Post production - Production control room 
NV9605	1 RU multimode paging shallow panel with 3-line display For use with: - GV Orbit - NV9000 - GV Convergent	Physical: 1 RU panel - Shallow-depth package less than 5.08 cm (2.0 in.) deep 38 keycap buttons 3 line LED for current source, preset source and destination status 8 input and 4 output utility GPIs built-in, ideal for joystick override applications Functional: - XY, multideestination or limited XY operation - Breakaway switching, quick source preset and scrolling 4 pages of configuration - Configurable function buttons for breakaway switching, quick source, level mapping, salvos and scrolling - Double map source or destinations Best use: - Production control rooms - Post production 

Panel name	Short description	Detailed description
NV9606	1 RU high-density button multifunction panel For use with: - GV Orbit - NV9000 - GV Convergent	Physical: 1 RU panel 68 buttons (2 rows of 34 buttons) 8 input and 4 output utility GPIs built-in, ideal for joystick override applications Functional: - Single destination or limited XY operation - Configurable function buttons for quick source, salvos and scrolling Best use: - Trucks - Post production
		
NV9616A	2 RU 16-position multidestination panel For use with: - GV Orbit - NV9000 - GV Convergent	Physical: 2 RU panel 16 LCD relegendable display buttons 24 configurable function buttons Functional: - XY operation - Supports viewing 16 destinations at a time, total of 8 pages - Breakaway switching, quick source and scrolling - Each re-legendable button displays current source, preset source and destination Best use: - Studio - Master control & playout
		

Graphical user interface control panels

Wide selection of software panels

The Grass Valley control system offers a wide selection of software panels that can be used on operator's desktop via a mouse and keyboard or touchscreen surface. These software panels perfectly mimic the hardware panel behaviors to preserve the same ingrained operator's workflow.

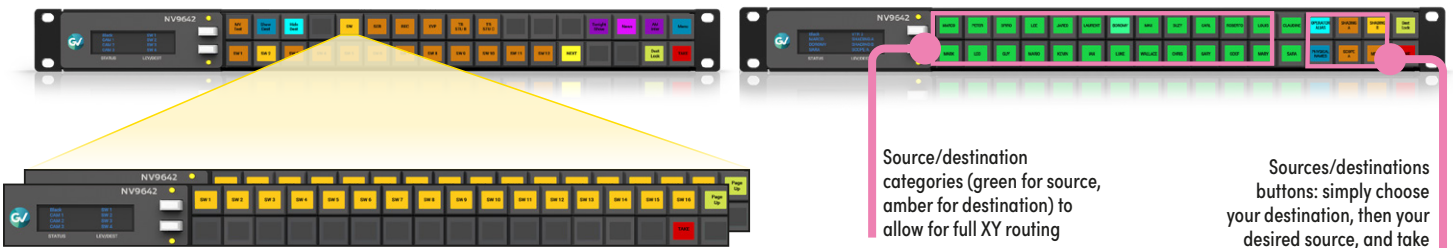
This allows operators to use dedicated space with physical panels or alternatively use their desktop PC surface when appropriate. All software panels can display labels and functions information in each button whether the panel template is LCD releigendable button panels or keycap button type panels. They

are platform agnostic and can be installed on any modern Windows or MacOS platform. Multiple instances of software panels can be used simultaneously on the same desktop. The software panels can be purchased by bundle of five panel license instances.

Convenient LCD releigendable router control panels

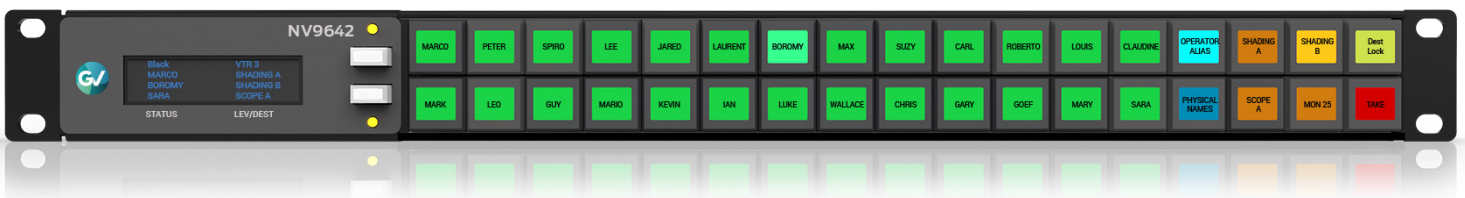
The NV releigendable panels feature a root structure that speeds navigation through a specific category. In this example, the button labelled "VTR" is a category button, and this quickly allows an operator to see all the sources that have been placed in the category "VTR." This "sub-menu" or "nesting" process can then be repeated to quickly "drill down" to any page of sources, destinations or functions in the panel's configuration.

The NV9642A panel is truly "multimode." It can be a traditional button per source, or a full XY panel that utilizes source and destination selection via categories. Both approaches can be configured on the panel at the same time.



Operator-friendly source and destination names

Panels can be set up to display alternative names called "aliases" identifying sources and destinations in a more intuitive way for operations. This is very practical in production events where cameramen are known by their names and not necessarily by a physical camera label.

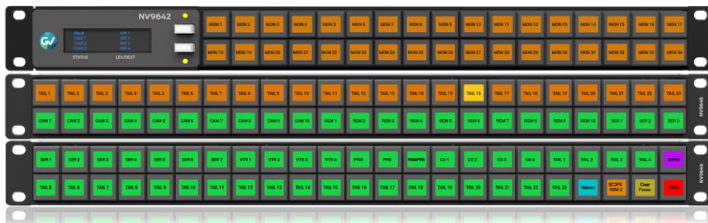


Stackable Panels (NV9000 only)

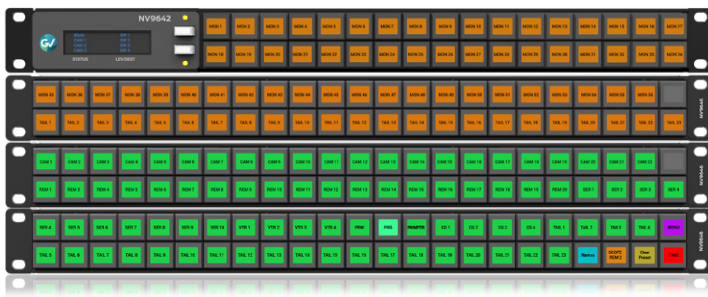
Another initiative to better address a specific application with specific workflows is to allow multiple high-density panels to operate together in a stacked mode. This is a core requirement for live operation in production vehicles. It allows direct access of many sources and destinations simultaneously on the panel surface, which streamlines the assignment's execution. The dense layout of the panels ensures maximum productivity in space-constrained environments. The NV9000 control system can currently support stacks composed of one NV9642 master panel and up to seven additional NV9646 panels for a total of 356 LCD buttons over an 8 RU space.



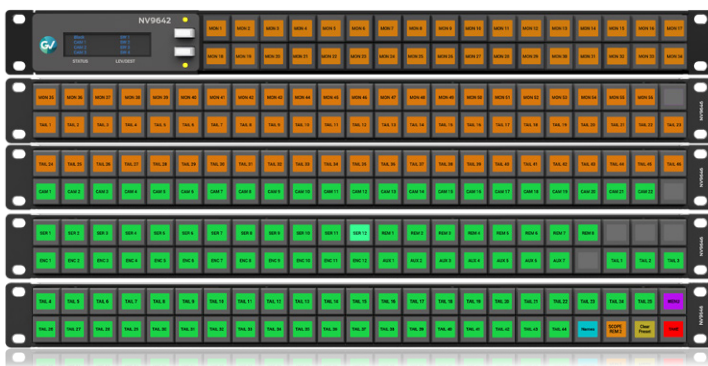
80 relegendable panel with readout display



126 relegendable panel with readout display



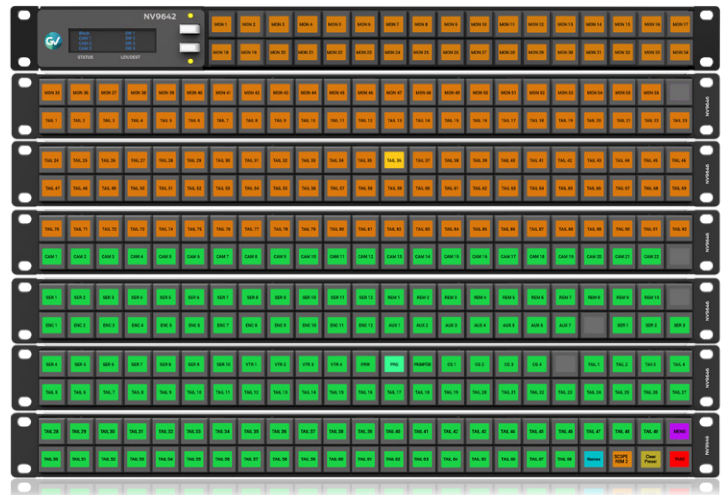
172 relegendable panel with readout display



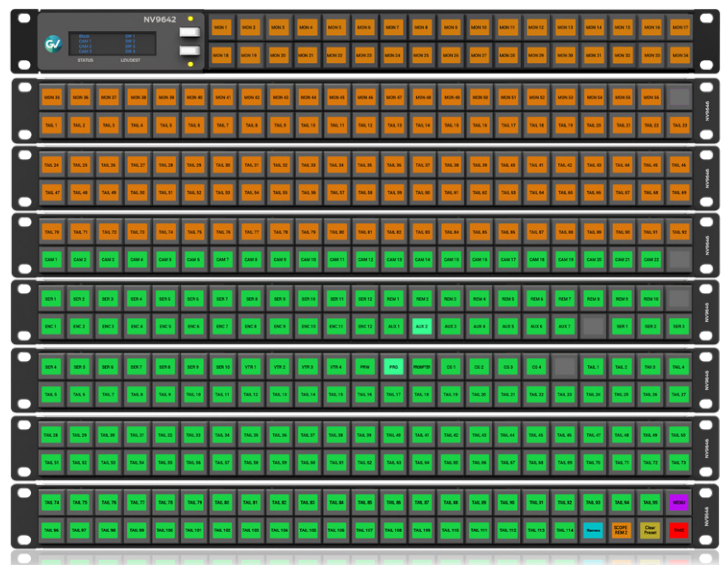
218 relegendable panel with readout display



264 relegendable panel with readout display



310 relegendable panel with readout display



356 relegendable panel with readout display

Panel comparison chart						Best panel use			
Panels	RU	Button types	Readout display	GPI 8 in + 4 out	Panel modes	Multilevel audio control	High count I/O access	Easy multi-destination access	Single destination
NV9642	1	34 high-density LCD	VFD display	Yes	Fully configurable	Good	Best	Good	
NV9646	1	46 high-density LCD	Using 10 LCD buttons	Yes	Fully configurable	Good	Best	Good	
NV9680	2	80 high-density LCD	N/A	Yes	Fully configurable	Best	Best	Best	
NV9680-K	2	80 high-density LCD	VFD display	Yes	Fully configurable	Good	Best	Good	
NV9654	2	54 high-density LCD	Using 15 LCD buttons	Yes	Fully configurable	Good	Best	Good	
NV9641A	1	16 LCD	N/A	Yes	Fully configurable				Best
NV9640A	2	30 LCD	VFD display	Yes	Fully configurable	Best	Good	Best	
NV9605	1	38 keycap	LED (3)	Yes	Multidestination Limited XY				Best
NV9606	1	68 keycap	N/A	Yes	Single destination Limited XY				Best
NV9616A	1	16 high-density LCD	N/A	Yes	Multidestination XY Mode			Best	

Ordering

LCD Relegendable Panels

NV9640A

2 RU LCD XY control panel

NV9641A

1 RU LCD control panel

NV9642

1 RU XY/multidestination panel

NV9646

1 RU high-density 46 LCD button router control panel

NV9654

2 RU high-density LCD panel

NV9649-48-RMK

NV9649/NV9648 rack mount kit

NV9680

2 RU high-density 80 LCD button router control panel

NV9680-K

2 RU high-density 80 LCD button panel

Keycap Button Panels

NV9605

1 RU multimode paging shallow panel w/3 displays

NV9606

1 RU multimode, maximum button density panel

NV9616A

2 RU 16 position multidestination panel

Software Panels

EC9790

Router control GUI software panels (5 client license)

This product may be protected by one or more patents. For further information, please visit: www.grassvalley.com/patents

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