DATASHEET

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

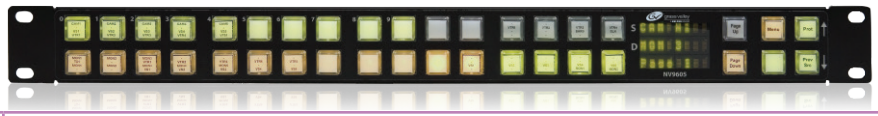
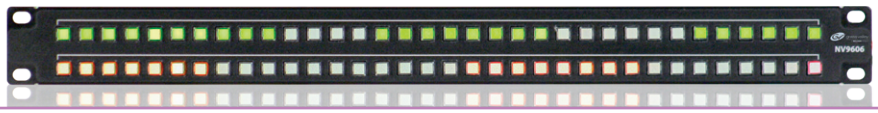
- Wide range of highly adapted panels adapting to operator's workflow:
  - Relegendable LCD panels
  - Multidestination panels
  - Multimode button per source panels
  - Destination/source (XY) panels
  - Production truck control panels
  - Client/server panels with fast access to thousands of I/Os
- 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, multidestination 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, multidestination 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, multidestination 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, multidestination 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
		
NV9649 / NV9648	2 RU/half-rack wide client/ multimode router control panel – and – 2 RU/half-rack wide server/ multimode router control panel **For use with:** • GV Orbit • NV9000 • GV Convergent	**Physical:** • 2 RU height/half-rack multimode panels • Shallow-depth package • Multicolor high-density LCD display buttons • LED displays reporting router crosspoint statuses and preset settings • NV9649: Quick navigation via rotary knob • NV9648: 8 input and 4 output utility GPIs built-in, ideal for joystick override applications • Available rackmount kit support **Functional:** • Server/client architecture, one server panel can program quick routes for up to 10 client panels • Client-server, XY multidestination and multimode operation, panels can emulate other popular Grass Valley router control panels in standalone applications • 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 • Server panel features rotary encoder/push selector for fast scrolling of categories **Best use:** • Ideal for replacing legacy Grass Valley Encore UCP and CLNT panels in modern architectures • Large TV stations with thousands of sources and destinations • Production control room
		

Panel name	Short description	Detailed description
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 multidestination 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
		
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 multidestination 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
		

Panel name	Short description	Detailed description
NV9603A	1 RU X-Y control panel **For use with:** • GV Orbit • NV9000 • GV Convergent	**Physical:** • 1 RU panel • Shallow-depth package • 32 keycap buttons • 3 line LED for current source, preset source and destination status **Functional:** • XY, multidestination and multimode operation • Breakaway switching, quick source preset and scrolling • Configurable function buttons for breakaway switching, quick source, level mapping, salvos and scrolling • Double map source or destinations **Best use:** • Post production • Trucks
		
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, multidestination 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
		
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
		

Panel name	Short description	Detailed description
NV9601	XY/multidestination panel **For use with:** • GV Orbit • NV9000 • GV Convergent	**Physical:** • 2 RU panel • 46 keycap buttons • Large VFD display reporting router crosspoint statuses and preset settings **Functional:** • XY and multidestination operation • Breakaway switching, quick source preset and scrolling • 36 configurable function buttons for breakaway switching, quick source, salvos and scrolling • 221 programmable levels with direct access to 8 and others via paging navigation **Best use:** • Post production • Production control rooms
		
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

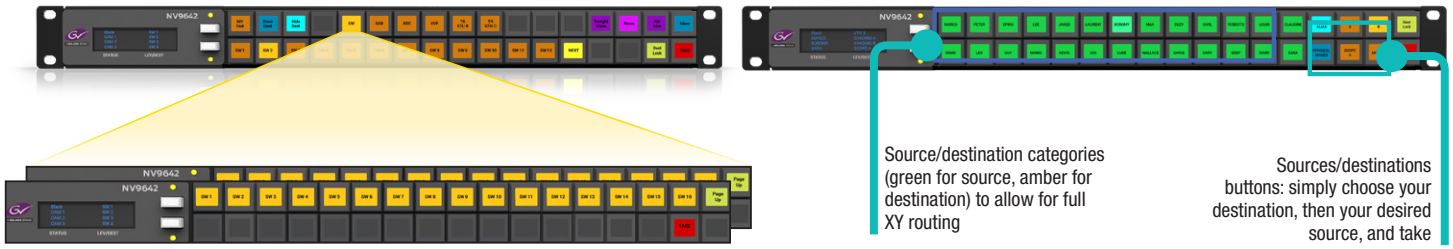
Wide selection of software panels

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 relegendable 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 relegendable router control panels

The NV relegendable 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.



Tight integration with Kaleido multiviewers

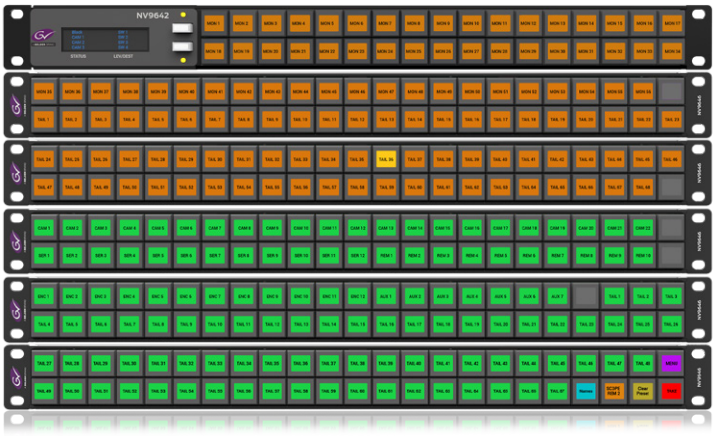
Panels can be used to control other devices in your facility. It integrates very well with the Kaleido multiviewer. In the example below, the panel is configured with function buttons to show and hide destination labels on each window of the multiviewer and simplifies the selection of destination for monitor wall source assignments. Also, some other buttons can recall multiviewer layouts and control countdown timers.

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.

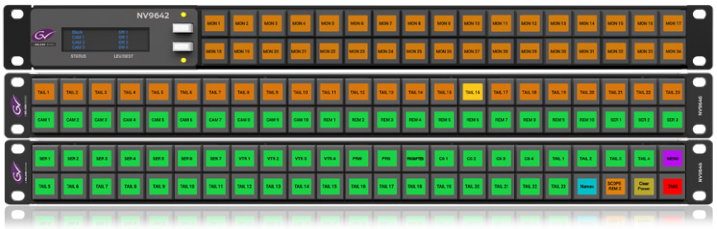
Stackable Panels (NV9000 only)

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.

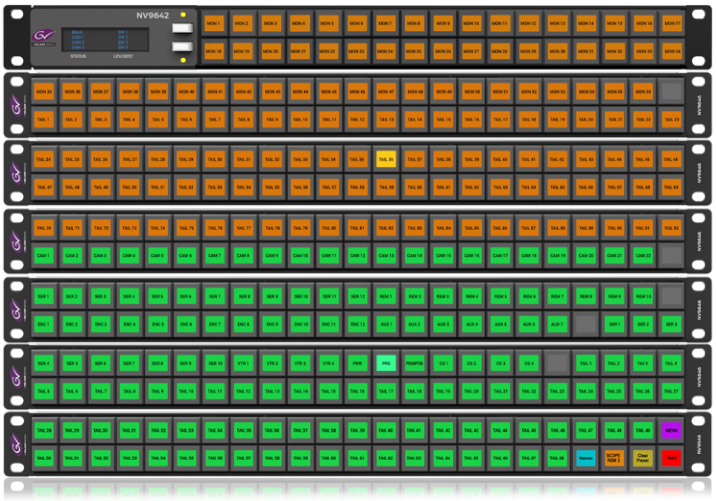


264 relegendable panel with readout display

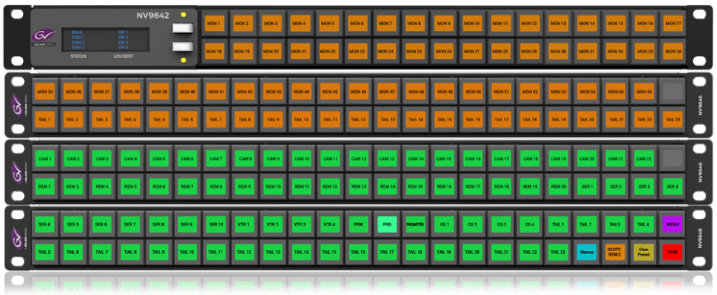
80 relegendable panel with readout display



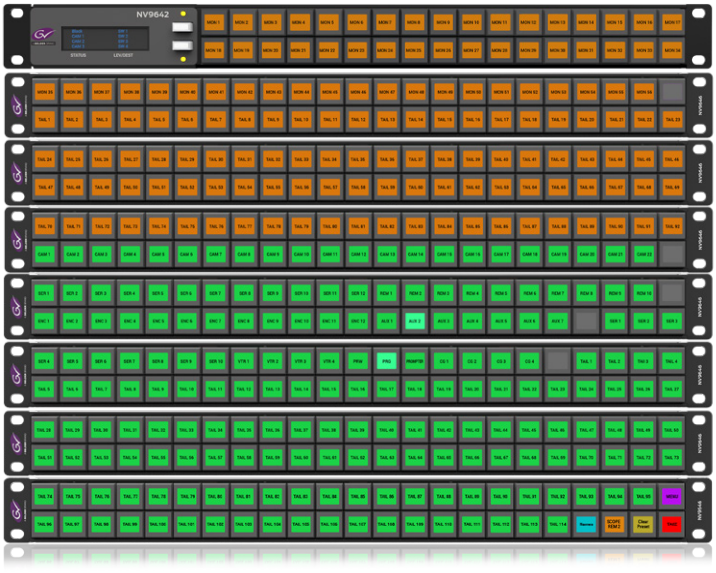
126 relegendable panel with readout display



310 relegendable panel with readout display



172 relegendable panel with readout display



356 relegendable panel with readout display

218 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 multidestination 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	
NV9648	2 – 1/2w	27 high-density LCD	LED (3)	Yes	Multidestination XY Client		Best (sources)	Best	
NV9649	2 – 1/2w	28 high-density LCD	LED (4)	Yes	Multidestination XY Server		Best (sources)	Best	
NV9601	2	46 keycap	VFD display	N/A	Fully configurable	Best	Good	Best	
NV9603B	1	34 keycap	LED (3)	N/A	Limited XY				
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 2 RU half-rack server/multifunction panel
NV9648 2 RU half-rack client/multifunction 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

NV9601 2 RU XY/multidestination control panel
NV9603A 1 RU XY control panel
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)