

Bently Nevada 147663-01

COMPLETE PRODUCT INFORMATION

01 / PRODUCT AND OPERATOR ROLE

Bently Nevada 147663-01 is the 3500/94 VGA Display I/O module. It provides the rear-rack VGA display output and RS232 touchscreen-data interface used with the associated 3500/94 display system.

3500/94 hardware identity

Product	147663-01 rear I/O module
Display generation	3500/94 VGA Display
Associated main module	145988-01
External interfaces	VGA output and RS232 touch input

Display connection path

Rack 3500/94 main module	Rear I/O 147663-01 VGA + RS232	Operator Supported touchscreen display
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Rack-side operator display

Provide the VGA and touch-data connections for a supported display viewing a 3500 rack.

Event and alarm review

Support local access to system event lists, alarm event lists and quick views of channels in alarm.

Machine-train views

Connect the display used for locally configured screens such as 1X, gap and machine-train groupings.

Shared multi-rack display

Participate in an optional display-router installation that selects one of up to four racks.

Important Notice

Confirm the legacy 3500/94 generation and supported touchscreen interface before replacement. Cable reach, display power and optional router or KVM requirements describe the complete installation and are not independent electrical ratings of the I/O module.

System operator views

The 3500/94 can display System Event and Alarm Event lists, module and channel data, a 3300-style rack view, API 670 rack views and a quick view of channels in alarm. Nine custom screens can group data such as 1X measurements, gap values or machine-train channels. The Main Menu is accessed from the touchscreen.

Configuration ownership

Display type and language are selected using 3500 Rack Configuration Software. Other display data and the nine custom screens are configured locally. The supported display types use different touchscreen controllers, so a generic VGA picture alone does not establish touchscreen compatibility.

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I/O and host data

System	3500/94 VGA Display
I/O Module Part	147663-01
Associated Main Module	145988-01
VGA Output	Analog red, green, blue and synchronization signals
RS232 Input	Touch controller data
I/O Rack Position	One full-height rear slot
Host Main-Module Position	One full-height front slot
Host Custom Screens	9
Host Display Data	System events, alarm events and module/channel data
Display Configuration	3500 Rack Configuration Software

Listed software baseline

Host Firmware Minimum	Revision P
Rack Configuration Minimum	Version 4.8
Operator Display Minimum	Version 2.21
Data Acquisition Minimum	Version 1.22

Electrical boundary

The I/O, main module, external display, router and KVM extender are separate components. Apply ratings only to the named component.

External display power

The external display needs its own supply. Check its exact execution and mounting requirements.

Explore related monitoring products

Bently Nevada 3500/93 135785-02	Related monitoring product; verify system and function
Bently Nevada 3500/32 125712-01	Related monitoring product; verify system and function

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- 01. Verify 147663-01 and the 3500/94 main-module generation before replacement; do not apply 3500/94M I/O specifications.
- 02. Keep VGA video and RS232 touch connections identified separately; a visible picture does not prove touch communication.
- 03. Match the supported display type and touchscreen controller in Rack Configuration Software before testing operation.
- 04. Provide the external display with its required separate power supply; do not treat the I/O module as display power.
- 05. Prefer a display location within 25 ft for image quality; the standard system reach is up to 10 m (33 ft).
- 06. If using a display router, keep it within 6 m (20 ft) of each rack and confirm the selected rack before operator actions.
- 07. Use the optional KVM extender only under its indoor and non-hazardous-area restrictions; assess long-run noise and image degradation.
- 08. After restoration, test video, touch response, rack identity and alarm/event navigation through the site commissioning procedure.

Standard reach and preferred placement

The standard installation can place the display up to 10 m (33 ft) from the rack. For best image quality, the manufacturer recommends staying within 25 ft because the video driver is optimized for that range. The recommended distance and maximum standard reach are different constraints and should remain distinct in the installation record.

Optional multi-rack selection

The optional display router connects as many as four racks to a shared display. The operator views one selected rack at a time; rack address and alarm status remain visible at the upper right. Keep the router within 6 m (20 ft) of every connected rack and verify the selected rack before navigating or interpreting its data.

KVM extension boundary

A KVM extender can increase display separation to 305 m (1000 ft), but picture quality degrades and the longer path is more susceptible to noise. Use it only when standard cabling is inadequate. The extender is for indoor use and is not rated for potentially hazardous areas; it is not Class I Division 2 or NEMA 4X equipment.

Optional extender cable lengths

148350-0250	CAT5 PVC cable, 250 ft
148350-0500	CAT5 PVC cable, 500 ft
148350-1000	CAT5 PVC cable, 1000 ft

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04 / VIDEO AND DISPLAY QUESTIONS

Which interfaces are provided by 147663-01?

The I/O module outputs VGA analog red, green, blue and synchronization signals and receives touchscreen-controller data through RS232.

Does 147663-01 belong to the 3500/94M display generation?

No. 147663-01 is listed for the 3500/94 VGA Display. Confirm the complete display generation before selecting an I/O replacement.

Why can a display connected to 147663-01 show an image but ignore touch input?

Video and touch data use separate VGA and RS232 paths. As field checks, inspect the serial connection and confirm the configured display type and touchscreen controller.

How far can the display be placed from the rack using 147663-01?

The standard display system supports up to 10 m (33 ft). A location within 25 ft is recommended for best image quality; exceeding that recommended distance can degrade the picture.

Associated accessories

148637-01	VGA display cable, 20 ft
148638-01	Serial touchscreen cable, 25 ft
149356-01	Display router box
103M7873-01	KVM extender kit

Explore related monitoring products

Bently Nevada 3500/22M 138607-01

Related monitoring product; verify system and function

Bently Nevada 3500/50E

Related monitoring product; verify system and function

Field work scope

Identify which local operator views will be unavailable during service and arrange the site work boundary before disconnecting the display path. Record module, display and cable identities. Follow the installed rack procedure for handling and replacement; do not infer permission to interrupt machinery protection from this display-interface guide.

Display acceptance checks

Image	Readable stable picture at actual cable reach
Touch	Expected response across required controls
Routing	Intended rack selected and identified

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Does 147663-01 power the external display?

The external display requires a separate power supply. Use the selected display requirements when planning that supply.

How does a display router change an installation using 147663-01?

The optional router connects up to four racks to one display, with one rack displayed at a time. Locate the router within 6 m (20 ft) of each rack and verify the selected rack identity.

What software baseline applies to a 3500/94 system containing 147663-01?

The listed minimums are 3500/94 firmware Revision P, Rack Configuration version 4.8, Operator Display version 2.21 and Data Acquisition version 1.22.

Can a KVM extender be added to the display path of 147663-01 for a hazardous-area installation?

The optional KVM extender is for indoor use and is not rated for potentially hazardous areas. Although it can extend the path up to 305 m (1000 ft), picture quality and noise susceptibility must also be assessed.

Explore related monitoring products

Bently Nevada 3500/20

Related monitoring product; verify system and function

Bently Nevada 3500/40M

Related monitoring product; verify system and function

Service record

Keep the main-module and I/O part numbers together with the display type, touchscreen selection and cable route. Record router connections separately when one display serves several racks.

Operator handover

Before releasing the display for use, review the intended alarm/event views and custom screens with the installed configuration. A readable picture and a working touch interface must both be checked.

Recommendation scope

The links identify other Bently Nevada monitoring products for independent review. They do not establish compatibility, substitution or a shared display-generation interface.

Manufacturer reference

3500/94 VGA Display, Datasheet 148635 Rev. V: system architecture and screens pp. 1-2; VGA, RS232 and rack interfaces p. 3; software, distance and KVM constraints p. 5; 147663-01 and associated parts p. 6.

Manufacturer-authored document obtained from a mirror. Field checks in this guide supplement the installed user guide 148636 and site procedure.

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