Manuals+ — User Manuals Simplified.

NATIONAL INSTRUMENTS HDD-8266 Analog Signal Generator Installation Guide

Contents

HDD-8266 Analog Signal Generator

Product Information: HDD-8266
Description and Features
The NI HDD-8266 is a hardware device designed for use in the x8 PXI Express Solution. It is a part of the NI HDD-8266 Series and offers various features to enhance your hardware setup.

What You Need to Get Started
Before setting up the NI HDD-8266, ensure that you have the following:

- The NI HDD-8266 device
- Chassis, modules, accessories, and cables specified in the installation instructions or specifications
- Suitably rated IP 54 minimum enclosure for hazardous locations, if applicable

Safety Information
It is important to follow the safety guidelines provided to ensure proper installation and usage of the hardware. Failure to do so may result in hazards or damage to the hardware.

Some key safety precautions include:

- Do not operate the hardware in a manner not specified in the user documentation.
- Do not substitute parts or modify the hardware except as described in the document.
- Ensure all covers and filler panels are installed during operation.
- Avoid operating the hardware in explosive atmospheres or areas with flammable gases or fumes, unless the hardware is UL (U.S.) or Ex (EU) Certified and marked for hazardous locations.

Product Usage Instructions
Hardware Installation for x8 PXI Express Solution To install the NI HDD-8266 in the x8 PXI Express Solution, please follow these steps:

1. Ensure that you have all the necessary components mentioned in the "What You Need to Get Started" section.

2. Refer to the installation instructions provided with the chassis, modules, accessories, and cables to properly connect and integrate the NI HDD-8266.

3. If applicable, ensure that the hardware is enclosed in a suitably rated IP 54 minimum enclosure for hazardous locations.

4. Once the hardware is properly installed, double-check all connections and make sure all covers and filler panels are securely in place.

After completing the hardware installation, you can proceed with the software setup and configuration as per the user documentation.

Safety Information

The following section contains important safety information that you must follow when installing and using the hardware.

Do not operate the hardware in a manner not specified in this document and in the user documentation. Misuse of the hardware can result in a hazard. You can compromise the safety protection if the hardware is damaged in any way. If the hardware is damaged, return it to National Instruments for repair.

Caution When this symbol is marked on a product, refer to the hardware documentation for information about precautions to take.

Electric Shock When this symbol is marked on a product, it denotes a warning advising you to take precautions to avoid electrical shock.

Hot Surface When this symbol is marked on a product, it denotes a component that may be hot. Touching this component may result in bodily injury.

Clean the hardware with a soft, nonmetallic brush. Make sure that the hardware is completely dry and free from contaminants before returning it to service.

Do not substitute parts or modify the hardware except as described in this document. Use the hardware only with the chassis, modules, accessories, and cables specified in the installation instructions or specifications. You must have all covers and filler panels installed during operation of the hardware.

Do not operate the hardware in an explosive atmosphere or where there may be flammable gases or fumes unless the hardware is UL (U.S.) or Ex (EU) Certified and marked for hazardous locations. The hardware must be in a suitably rated IP 54 minimum enclosure for hazardous locations. Refer to the hardware documentation for more information.

You must insulate signal connections for the maximum voltage for which the hardware is rated. Do not exceed the maximum ratings for the hardware. Do not install wiring while the hardware is live with electrical signals. Do not remove or add connector blocks when power is connected to the system. Avoid contact between your body and the connector pins when hot-swapping hardware. Remove power from signal lines before connecting them to or disconnecting them from the hardware. Operate the hardware only at or below Pollution Degree 2. Pollution is foreign matter in a solid, liquid, or gaseous state that can reduce dielectric strength or surface resistivity. The following is a description of pollution degrees:

- • Pollution Degree 1 means no pollution or only dry, nonconductive pollution occurs. The pollution has no influence. Typical level for sealed components or coated PCBs.

- • Pollution Degree 2 means that only nonconductive pollution occurs in most cases. Occasionally, however, a temporary conductivity caused by condensation must be expected. Typical level for most products.

- • Pollution Degree 3 means that conductive pollution occurs, or dry, nonconductive pollution occurs that becomes conductive due to condensation.

Operate the hardware at or below the measurement category1 marked on the hardware label. Measurement

circuits are subjected to working voltages2 and transient stresses (overvoltage) from the circuit to which they are connected during measurement or test. Measurement categories establish standard impulse withstand voltage levels that commonly occur in electrical distribution systems. The following is a description of measurement categories:

- • Measurement Categories CAT I and CAT O (Other) are equivalent and are for measurements performed on circuits not directly connected to the electrical distribution system referred to as MAINS3 voltage. This category is for measurements of voltages from specially protected secondary circuits. Such voltage measurements include signal levels, special hardware, limited-energy parts of hardware, circuits powered by regulated low-voltage sources, and electronics.
  • Measurement Category II is for measurements performed on circuits directly connected to MAINS. This category refers to local-level electrical distribution, such as that provided by a standard wall outlet (for example, 115 AC voltage for U.S. or 230 AC voltage for Europe). Examples of Measurement Category II are measurements performed on household appliances, portable tools, and similar hardware.
  • Measurement Category III is for measurements performed in the building installation at the distribution level. This category refers to measurements on hard-wired hardware such as hardware in fixed installations, distribution boards, and circuit breakers. Other examples are wiring, including cables, bus bars, junction boxes, switches, socket outlets in the fixed installation, and stationary motors with permanent connections to fixed installations.
  • Measurement Category IV is for measurements performed at the primary electrical supply installation typically outside buildings. Examples include electricity meters and measurements on primary overcurrent protection devices and on ripple control units.

To obtain the safety certification(s) for this product, visit ni.com/certification, search by model number or product line, and click the appropriate link in the Certification column.

1. 1 Measurement categories, also referred to as overvoltage or installation categories, are defined in electrical safety standards IEC 61010-1 and IEC 60664-1.
   2 Working voltage is the highest rms value of an AC or DC voltage that can occur across any particular insulation.
   3 MAINS is defined as a hazardous live electrical supply system that powers hardware. Suitably rated measuring circuits may be connected to the MAINS for measuring purposes.

Rack Mount Safety Information

Caution Due to the device weight, two people should work together to mount the device in a rack.
Caution Install the unit as low as possible in the rack to maintain a lower center of gravity and prevent the rack from tipping when moved.

Follow these safety guidelines when installing the device in a rack:

- • Elevated Operating Ambient—If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient temperature. Therefore, you should install the equipment in an environment compatible with the maximum ambient temperature (Tma) of 40 °C.
  • Reduced Air Flow—When installing the equipment in a rack or cabinet, do not compromise the amount of airflow required for safe operation of the equipment.

- Mechanical Loading—When mounting the equipment in the rack or cabinet, avoid uneven mechanical loading that could create a hazardous condition.
- Circuit Overloading—When connecting the equipment to the supply circuit, avoid overloading the circuits. Refer to equipment nameplate ratings to avoid damaging over current protection and supply wiring.
- Reliable Earthing—Maintain reliable earthing of rack-mounted equipment, especially when using supply connections other than direct connections to the branch circuit (for example, power strips).
- Redundant Power Supplies—Where redundant power supplies are provided with the equipment, connect each power supply to a separate circuit to optimize the equipment redundancy.
- Servicing—Prior to servicing the equipment, disconnect all power supplies.

Electromagnetic Compatibility Guidelines

This product was tested and complies with the regulatory requirements and limits for electromagnetic compatibility (EMC) stated in the product specifications. These requirements and limits provide reasonable protection against harmful interference when the product is operated in the intended operational electromagnetic environment. This product is intended for use in industrial locations. However, harmful interference may occur in some installations, when the product is connected to a peripheral device or test object, or if the product is used in residential or commercial are-as. To minimize interference with radio and television reception and prevent unacceptable performance degradation, install and use this product in strict accordance with the instructions in the product documentation.Furthermore, any modifications to the product not expressly approved by National Instruments could void your authority to operate it under your local regulatory rules.

Caution To ensure the specified EMC performance, operate this product only with shielded cables and accessories.

Introduction#

The NI HDD-8266 series are applications of cabled PCI Express technology. These products leverage commercially available enterprise class RAID controllers and hard drives.
About the NI HDD-8266 Series
Description and Features
The NI HDD-8266 is a 2U chassis specifically designed for streaming to and from disk applications by National Instruments. This chassis supports up to 24 enterprise class SATA or SAS hard drives controlled by a 24-port PCI Express RAID controller. This system is preconfigured as RAID 0; however, the system also is validated to perform well under RAID5 and RAID6. The RAID card also supports additional modes such as RAID 1, RAID 10, RAID 50, and JBOD, but NI has not specifically validated these RAID modes for performance. Refer to the included RAID controller user manual or guide for more information about these modes.
NI HDD-8266 x8 System
The RAID system consists of an NI PXIe-8384 in a PXI Express or CompactPCI Express chassis, connected to the NI HDD-8266. This system can use the full bandwidth of PCI Express x8 (Generation 2) technology. In order to achieve maximum throughput, the PXI Express host controller and the PXI Express chassis must support x8 PXI Express devices. The NI HDD-8266 will work with non-x8 PXI Express controllers and chassis, but at a reduced speed.

What You Need to Get Started
To set up and use your NI HDD-8266 for PXI Express, you need the following hardware and software to use with your PXI Express chassis and controller:

- Host: PXI Express controller and chassis
- RAID array: NI HDD-8266
- Host connection: NI PXIe-8384
- Cable: PCI Express x8

• Software: RAID drivers (on the included CD)

Unpacking
Your NI HDD-8266 system is preassembled and preconfigured for use. You need only to remove the NI HDD-8266 RAID storage chassis from the shipping box and assemble your system. There is no need to open your NI HDD-8266 chassis. The system is preconfigured and sealed.

Caution Your NI HDD-8266 system is sensitive to electrostatic damage (ESD). ESD can damage several components on the system.
Caution Never touch the exposed pins of connectors. Doing so may damage the device.

To avoid such damage in handling the device, take the following precautions:

- • Ground yourself using a grounding strap or by holding a grounded object.
  • Touch any antistatic packaging to a metal part of the chassis before removing the device from the package.

Hardware Installation and Use

This section explains how to install and use the NI HDD-8266 for PXI Express.
Hardware Installation for x8 PXI Express Solution
The following are general instructions for installing the NI HDD-8266 for PXI Express system. Consult your computer user manual or technical reference manual for specific instructions and warnings.

Installing an NI PXIe-8384
Complete the following steps to install the NI PXIe-8384 in your PXI Express or CompactPCI Express chassis:

1. 1. Power off your PXI Express or CompactPCI Express chassis, but leave it plugged in while installing the NI PXIe-8384. The power cord grounds the chassis and protects it from electrical damage while you install the module.
   2. Locate an available PXI Express or CompactPCI Express slot in the chassis. The
   NI PXIe-8384 must not be installed in the controller slot (slot 1 in a PXI Express chassis).
   Caution To protect both yourself and the chassis from electrical hazards, leave the chassis off until you finish installing the NI PXIe-8384.
2. 3. Remove or open any doors or covers blocking access to the slot where you intend to install the NI PXIe-8384.
   4. Touch the metal part of the case to discharge any static electricity that might be on your clothes or body.
   5. Make sure the injector/ejector handle is in its downward position. Be sure to remove all connector packaging and protective caps from retaining screws on the module. Align the NI PXIe-8384 with the card guides on the top and bottom of the system controller slot.Caution Do not raise the injector/ejector handle as you insert the NI PXIe-8384. It will not insert properly unless the handle is in its downward position so that it does not interfere with the injector/ejector rail on the chassis.
3. 6. Hold the handle as you slowly slide the module into the chassis until the handle catches on the injector/ejector rail.
   7. Raise the injector/ejector handle until the module firmly seats into the backplane receptacle connectors. The front panel of the NI PXIe-8384 should be even with the front panel of the chassis.
   8. Tighten the bracket-retaining screws on the top and bottom of the front panel to secure the NI PXIe-8384 to the chassis.

9. Replace or close any doors or covers to the chassis.

Cabling

Connect the cabled PCI Express x8 cable to both NI PXIe-8384 and the NI HDD-8266 chassis. The cables have no polarity, so you can connect either end to either the card or chassis.

Caution Do not remove the cable after the system is powered on. Doing so can hang or cause errors in applications communicating with devices. If a cable becomes unplugged, plug it back into the system. (You may need to restart your computer.)

Note For more information about cables, refer to the RAID Card Manufacturer section.

Powering Up the NI HDD-8266 for PXI Express System

Follow these steps to power up the NI HDD-8266 for PXI Express system:

1. 1. Turn on the NI HDD-8266 chassis. The power switch is on the power supply on the back of the chassis. The system should not power on when this switch is turned on. Turning this switch to the ON position enables the chassis to be powered on by the host controller when the host is powered on.

   2. Power-on the host. The NI HDD-8266 chassis now should turn on.

Powering Down the NI HDD-8266 for PXI Express System

Because operating systems and drivers commonly make the assumption that PCI devices are present in the system from power-up to power-down, it is important not to power off the NI HDD-8266 chassis independently. Powering off the NI HDD-8266 chassis while the host still is on can cause data loss, crashes, or hangs. When you shut down the host controller, the NI HDD-8266 is sent a signal over the cabled PCI Express link to shut down also.

Driver Installation

For driver installation information, consult the driver installation chapter of the included RAID controller user manual or guide.

If your CD does not include a Windows 7 driver, refer to the RAID card manufacturer website for updates.

Partitioning and Formatting

The Adaptec RAID card in the HDD-8266 is supported under multiple operating systems. Most common are Microsoft Windows 7, Windows 8 and Windows Server 2008 and 2012 (32- and 64-bit). Windows XP and Vista are not supported.

Instructions for Windows 7 Hosts

Complete the following steps when using a Windows 7 host:

1. 1. Open your disk management console by pressing <Windows-R>.

   2. Enter diskmgmt.msc and press <Enter>. The Initialize Disk window opens.

   3. Choose GPT and click OK. Your disk now shows up as unallocated in the Disk Management utility with a black bar across the top.

   4. Right-click on the unallocated disk.

   5. Select New Simple Volume to launch the New Simple Volume Wizard.

   6. In Specify Volume Size, the maximum volume size is chosen by default. Click Next.

   7. In Assign Drive Letter or Path, you may assign a drive letter to your new volume. Choose a drive letter and click Next.

   8. In Format Partition, change the Allocation Unit size to 64 KB, which improves performance in sequential read and write applications.

   9. Ensure that Perform a quick format is selected and click Next.

   10. Click Finish to exit the New Simple Volume Wizard.

Note Powering off the NI HDD-8266 chassis while the host still is on can cause data loss, crashes, or hangs. When you shut down your host computer, your
NI HDD-8266 turns off.

Virtual Disk Configuration
Reconfiguring the NI HDD-8266 Virtual Disk for PXI Express
Systems
The NI HDD-8266 systems are preconfigured in RAID0 for performance reasons. The systems are validated using RAID0 and RAID5. The RAID card supports additional RAID modes; however, NI has not specifically validated the performance of these additional RAID modes.

Caution Reconfiguring your RAID arrays erases all data on your system. Back up all data before reconfiguring.

There are two methods of reconfiguring the RAID arrays:

- • Shortly after powering on your host system, follow the onscreen directions for entering the option ROM configuration menu.
  • Install the RAID management software from within Windows. The RAID management utility is on the included CD or from the RAID controller manufacturer's Web site.
  • Refer to the included RAID controller user manual for more information about installing and using the management software.

To reconfigure your NI HDD-8266 from its default state of RAID0 to a fault-tolerant mode of RAID5, complete the following steps. These instructions use the maxView Storage Manager browser-based RAID management console. Refer to the included RAID controller user manual for more information about installing and using this software.

1. 1. Open the maxView Storage Manager.
   2. Enter the PXIe's Host User Name and Password.
   3. Select the desired Logical Device from Enterprise View.
   4. Select the Delete icon located at the top of the screen and confirm the selection.
   5. Select the desired controller and select the Create logical device icon at the top of the screen.
   6. Select Custom Mode and then Next.
   7. Select RAID 5 and Next.
   8. Manually select the drives that will be a part of the array and select Next.
   9. Make the following changes on the properties page:
   • Stripe Size (KB)—Largest Available
   • Write cache—Enabled (Write Back)
   • SkipInitialization—Checked
   • Power Management—Unchecked
2. 10. Select Next.
   11. Select Finish.

While using Write Back mode, the RAID card holds data in local memory that has not been written to disk. This can cause a loss of data if you have a sudden power failure during a write operation.
Follow the instructions in this guide under the Partitioning and Formatting section to configure your new virtual disk for use with your Windows operating system.
Factory Default Configuration

If you need to reset your NI HDD-8266 to factory default settings, complete the following steps when creating your virtual disk. Unless otherwise noted below, leave other settings at their default values.

These instructions use the maxView Storage Manager browser-based RAID management console. Refer to the included RAID controller user manual for more information about installing and using this software.

1. 1. Open the maxView Storage Manager.
   2. Enter the PXIe's Host User Name and Password.
   3. Select the desired Logical Device from Enterprise View.
   4. Select the Delete icon located at the top of the screen and confirm the selection.
   5. Select the desired controller and select the Create logical device icon at the top of the screen.
   6. Select Custom Mode and then Next.
   7. Select RAID 0 and Next.
   8. Manually select all 24 drives and select Next.
   9. Make the following changes on the properties page:
   • Stripe Size (KB)—Largest Available
   • Write cache—Enabled (Write Back)
   • SkipInitialization—Checked
   • Power Management—Unchecked
   10. Select Next.
   11. Select Finish.

Hardware Overview

This section presents an overview of NI HDD-8266 hardware functionality and explains the operation of each functional unit.

Functional Overview

The NI HDD-8266 is based on PCI Express technology. The NI PXIe-8384 paired with the NI HDD-8266 uses PCI Express redrivers to enable control of a PCI Express RAID card in an external chassis. The PCI Express redriver architecture is transparent to device drivers, so only the RAID driver is needed for the NI HDD-8266 to function. The link between the PC and the chassis is a x8 PCI Express link (Generation 2). This link is a dual-simplex communication channel comprised of low-voltage, differentially driven signal pairs. The link can transmit at a rate of 4 Gbps in each direction simultaneously in x8 mode.

LED Indicators

The LEDs on NI HDD-8266 cards give status information about power supplies and link state. The back of the NI HDD-8266 has two LEDs, one for power supply status and one for link state.

Table 1 describes the meaning of the LEDs on the back of the NI HDD-8266.

Table 1. NI HDD-8266 Back Panel Status LED Messages

RAID Card Manufacturer

Manufacturer ……………………………………………. Adaptec
Model…………………………………………………………. 72405
Website ……………………………………………………. www.adaptec.com

Cable Options

The NI HDD-8266 systems support only the 3 m cable length. Table 2 shows the cable available from National Instruments

Table 2. National Instruments x8 Cable for Use with NI PXIe-8384 and NI HDD-8266

Specifications

This section lists the system specifications for the NI HDD-8266 series. These specifications are

typical at 25 °C, unless otherwise stated.

Physical

Dimensions

NI HDD-8266 …………………………………….2U × 440 × 558.8 mm
(2U × 17.3 × 22.0 in.)

Maximum cable length ………………………………3 m

Weight

NI HDD-8266

3.5 TB (782858-01) ………………………..17.55 kg (38.7 lb)

5.75 TB (782859-01) ……………………15.15 kg (33.41 lb)

24 TB (782854-01) ………………………17.74 kg (39.14 lb)

Power requirements

Specification …………………………………………100 to 240 V, 7 to 3.5 A

Measured, Peak Inrush…………………………280 W

Measured, Idle ……………………………………150 W

Measured, Active ……………………………….175 W

Caution Using the NI HDD-8266 in a manner not described in this document may impair the protection the NI HDD-8266 provides.

Environment

Maximum altitude………………………………………2,000 m (800 mbar)
(at 25 °C ambient temperature)

Pollution Degree …………………………………………..2

Indoor use only.

Operating Environment

Ambient temperature range

3.5 TB (782858-01) …………………………….5 to 35 °C

5.75 TB (782859-01) …………………………..0 to 45 °C

24 TB (782854-01) …………………………….5 to 35 °C

Relative humidity range…………………………………10 to 90%, noncondensing

Storage Environment

Ambient temperature range ……………………………-20 to 70 °C

Relative humidity range……………………………………5 to 95%, noncondensing

Shock and Vibration (782859-01 only)

Operational Shock

Operating …………………………………………….. 25 g peak, half-sine, 11 ms pulse
(Tested in accordance with IEC 60068-2-27.
Meets MIL-PRF-28800F Class 2 limits.)

Nonoperating ………………………………………….. 50 g peak, half-sine, 11 ms pulse
(Tested in accordance with IEC 60068-2-27.
Meets MIL-PRF-28800F Class 2 limits.)

Random Vibration

Operating …………………………………………….. 5 to 500 Hz, 0.31 grms

Nonoperating ………………………………………….. 5 to 500 Hz, 2.46 grms

Cleaning

Clean the NI HDD-8266 with a soft nonmetallic brush. Make sure the device is completely dry and free from contaminants before returning it to service.

Safety

This product is designed to meet the requirements of the following standards of safety for information technology equipment:

• IEC 60950-1, EN 60950-1

• UL 60950-1, CSA 60950-1

Shock and Vibration (782859-01 only)

Operational Shock

Operating …………………………………………….. 25 g peak, half-sine, 11 ms pulse
(Tested in accordance with IEC 60068-2-27.

Meets MIL-PRF-28800F Class 2 limits.)
Nonoperating …………………………………….. 50 g peak, half-sine, 11 ms pulse
(Tested in accordance with IEC 60068-2-27.
Meets MIL-PRF-28800F Class 2 limits.)
Random Vibration
Operating …………………………………….. 5 to 500 Hz, 0.31 grms
Nonoperating …………………………………….. 5 to 500 Hz, 2.46 grms
Cleaning
Clean the NI HDD-8266 with a soft nonmetallic brush. Make sure the device is completely dry
and free from contaminants before returning it to service.
Safety
This product is designed to meet the requirements of the following standards of safety for
information technology equipment:
• IEC 60950-1, EN 60950-1
• UL 60950-1, CSA 60950-1

Note For EMC declarations and certifications, and additional information, refer to
the Online Product Certification section.
CE Compliance
This product meets the essential requirements of applicable European Directives as follows:
• 2006/95/EC; Low-Voltage Directive (safety)
• 2004/108/EC; Electromagnetic Compatibility Directive (EMC)
Online Product Certification
Refer to the product Declaration of Conformity (DoC) for additional regulatory compliance
information. To obtain product certifications and the DoC for this product, visit ni.com/
certification, search by model number or product line, and click the appropriate link in the
Certification column.
Environmental Management
NI is committed to designing and manufacturing products in an environmentally responsible
manner. NI recognizes that eliminating certain hazardous substances from our products is
beneficial to the environment and to NI customers.
For additional environmental information, refer to the Minimize Our Environmental Impact web
page at ni.com/environment. This page contains the environmental regulations and
directives with which NI complies, as well as other environmental information not included in
this document.
Waste Electrical and Electronic Equipment (WEEE)
EU Customers At the end of the product life cycle, all products must be sent to a
WEEE recycling center. For more information about WEEE recycling centers,
National Instruments WEEE initiatives, and compliance with WEEE Directive
2002/96/EC on Waste and Electronic Equipment, visit ni.com/environment/
weee.

Worldwide Support and Services
The National Instruments website is your complete resource for technical support. At ni.com/
support you have access to everything from troubleshooting and application development
self-help resources to email and phone assistance from NI Application Engineers.
Visit ni.com/services for NI Factory Installation Services, repairs, extended warranty, and
other services.
Visit ni.com/register to register your National Instruments product. Product registration
facilitates technical support and ensures that you receive important information updates from NI.
A Declaration of Conformity (DoC) is our claim of compliance with the Council of the European
Communities using the manufacturer's declaration of conformity. This system affords the user
protection for electromagnetic compatibility (EMC) and product safety. You can obtain the DoC
for your product by visiting ni.com/certification. If your product supports calibration,
you can obtain the calibration certificate for your product at ni.com/calibration.
National Instruments corporate headquarters is located at 11500 North Mopac Expressway,
Austin, Texas, 78759-3504. National Instruments also has offices located around the world. For
telephone support in the United States, create your service request at ni.com/support or dial

1 866 ASK MYNI (275 6964). For telephone support outside the United States, visit the
Worldwide Offices section of ni.com/niglobal to access the branch office websites, which
provide up-to-date contact information, support phone numbers, email addresses, and current
event

Refer to the NI Trademarks and Logo Guidelines at ni.com/trademarks for more information on National
Instruments trademarks. Other
product and company names mentioned herein are trademarks or trade names of their respective companies. For
patents covering National
Instruments products/technology, refer to the appropriate location: Help»Patents in your software, the patents.txt
file on your media, or the
National Instruments Patents Notice at ni.com/patents. You can find information about end-user license
agreements (EULAs) and third-party
legal notices in the readme file for your NI product. Refer to the Export Compliance Information at
ni.com/legal/export-compliance
for the National Instruments global trade compliance policy and how to obtain relevant HTS codes, ECCNs, and
other import/export data. NI MAKES
NO EXPRESS OR IMPLIED WARRANTIES AS TO THE ACCURACY OF THE INFORMATION CONTAINED
HEREIN AND SHALL NOT BE LIABLE FOR
ANY ERRORS. U.S. Government Customers: The data contained in this manual was developed at private
expense and is subject to the applicable
limited rights and restricted data rights as set forth in FAR 52.227-14, DFAR 252.227-7014, and DFAR 252.227-
7015.

Documents / Resources

	NATIONAL INSTRUMENTS HDD-8266 Analog Signal Generator [pdf] Installation Guide HDD-8266 Analog Signal Generator, HDD-8266, Analog Signal Generator, Signal Generator, Generator

References

- **Engineer Ambitiously - NI**
- **Engineer Ambitiously - NI**
- **Calibration Services - NI**
- **Product Certifications - NI**
- **Engineering a Healthy Planet - NI**
- **Managing Critical Substances - NI**
- **Managing Critical Substances - NI**
- **Trade Compliance - NI**
- **Contact Us - NI**
- **National Instruments Patents - NI**
- **Log In - National Instruments**
- **NI Services - NI**
- **Support - NI**
- **NI Trademarks and Logo Guidelines - NI**
- **adaptec.com**
- **Calibration Services - NI**
- **Product Certifications - NI**
- **Contact Us - NI**

-
-
-
-

Manuals+,