



# Digital Video Recorder

## Quick Start Guide

**Quick Start Guide**

**About this Manual**

This Manual is applicable to Turbo HD Digital Video Recorder (DVR).

The Manual includes instructions for using and managing the product. Pictures, charts, images and all other information hereinafter are for description and explanation only. The information contained in the Manual is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version in the company website.

Please use this user manual under the guidance of professionals.

**Legal Disclaimer**

REGARDING TO THE PRODUCT WITH INTERNET ACCESS, THE USE OF PRODUCT SHALL BE WHOLLY AT YOUR OWN RISKS. OUR COMPANY SHALL NOT TAKE ANY RESPONSIBILITIES FOR ABNORMAL OPERATION, PRIVACY LEAKAGE OR OTHER DAMAGES RESULTING FROM CYBER ATTACK, HACKER ATTACK, VIRUS INSPECTION, OR OTHER INTERNET SECURITY RISKS; HOWEVER, OUR COMPANY WILL PROVIDE TIMELY TECHNICAL SUPPORT IF REQUIRED.

SURVEILLANCE LAWS VARY BY JURISDICTION. PLEASE CHECK ALL RELEVANT LAWS IN YOUR JURISDICTION BEFORE USING THIS PRODUCT IN ORDER TO ENSURE THAT YOUR USE CONFORMS THE APPLICABLE LAW. OUR COMPANY SHALL NOT BE LIABLE IN THE EVENT THAT THIS PRODUCT IS USED WITH ILLEGITIMATE PURPOSES. IN THE EVENT OF ANY CONFLICTS BETWEEN THIS MANUAL AND THE APPLICABLE LAW, THE LATER PREVAILS.

## Regulatory Information

### FCC Information

Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**FCC compliance:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

### FCC Conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

### EU Conformity Statement



This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the EMC Directive 2014/30/EU, the LVD Directive 2014/35/EU, the RoHS Directive 2011/65/EU, 2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as

unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: [www.recyclethis.info](http://www.recyclethis.info)

2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see:




[www.recyclethis.info](http://www.recyclethis.info)

### Industry Canada ICES-003 Compliance

This device meets the CAN ICES-3 (A)/NMB-3(A) standards requirements.

## Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
 <b>NOTE</b>	Provides additional information to emphasize or supplement important points of the main text.
 <b>WARNING</b>	Indicates a potentially hazardous situation, which if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
 <b>DANGER</b>	Indicates a hazard with a high level of risk, which if not avoided, will result in death or serious injury.

## Safety Instructions

- Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.
- In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region. Please refer to technical specifications for detailed information.
- Input voltage should meet both the SELV (Safety Extra Low Voltage) and the Limited Power Source with 100~240 VAC, 12 VDC or 48 VDC according to the IEC60950-1 standard. Please refer to technical specifications for detailed information.
- Do not connect several devices to one power adapter as adapter overload may cause over-heating or a fire hazard.
- Please make sure that the plug is firmly connected to the power socket.
- If smoke, odor or noise rise from the device, turn off the power at once and unplug the power cable, and then please contact the service center.

## Preventive and Cautionary Tips

Before connecting and operating your device, please be advised of the following tips:

- Ensure unit is installed in a well-ventilated, dust-free environment.
- Unit is designed for indoor use only.
- Keep all liquids away from the device.
- Ensure environmental conditions meet factory specifications.
- Ensure unit is properly secured to a rack or shelf. Major shocks or jolts to the unit as a result of dropping it may cause damage to the sensitive electronics within the unit.
- Use the device in conjunction with an UPS if possible.
- Power down the unit before connecting and disconnecting accessories and peripherals.
- A factory recommended HDD should be used for this device.
- Improper use or replacement of the battery may result in hazard of explosion. Replace with the same or equivalent type only. Dispose of used batteries according to the instructions provided by the battery manufacturer.

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- L'utilisation ou le remplacement inadéquats de la pile peuvent entraîner un risque d'explosion. Remplacez-la par le même type ou l'équivalent du même type seulement. Jetez les piles usagées conformément aux directives fournies par le fabricant de la pile.

## Chapter 1 Rear Panel Interfaces Description

The rear panel interfaces vary with different models. Refer to Table 1-1 for the common interfaces description of rear panels.

Table 1-1 Common Interfaces Description of Rear Panels

Item	Description	Item	Description
<b>VIDEO IN</b>	BNC interface for Turbo HD and analog video input	<b>VIDEO OUT</b>	BNC connector for video output
<b>AUDIO IN</b>	RCA connector	<b>AUDIO OUT</b>	RCA connector
<b>LINE IN</b>	Connector for two-way audio input	<b>USB Interface</b>	Universal Serial Bus (USB) port for additional devices
<b>VGA</b>	DB15 connector for VGA output. Displays local video output and menu.	<b>HDMI</b>	HDMI video output connector
<b>RS-485 Interface</b>	Connector for RS-485 devices	<b>RS-232 Interface</b>	Connector for RS-232 devices
<b>LAN</b>	Connector for network	<b>eSATA</b>	Storage and expansion interface for record or backup
<b>ALARM IN/OUT</b>	Connector for alarm input/output	<b>GND</b>	Ground
<b>Power Switch</b>	Switch for turning on/off the device	<b>Power Supply</b>	100 to 240 VAC, 48 VDC, or 12 VDC for different models

## Chapter 2 Installation and Connections

### 2.1 DVR Installation

During installation of the DVR:

- Use brackets for rack mounting.
- Ensure ample room for audio and video cables.
- When routing cables, ensure that the bend radius of the cables is no less than five times than its diameter.
- Connect the alarm cable.
- Allow at least 2 cm (≈0.75-inch) of space between racks mounted devices.
- Ensure the DVR is grounded.
- Environmental temperature should be within the range of -10 to +55° C, +14 to +131° F.
- Environmental humidity should be within the range of 10% to 90%.

## 2.2 HDD Installation

### Before you start

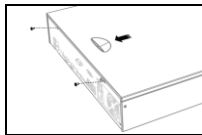
Before installing a hard disk drive (HDD), please make sure the power is disconnected from the device. A factory recommended HDD should be used for the installation.

**Tools Required:** Cross screwdriver.

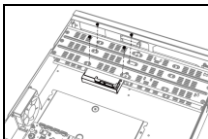
### 2.2.1 Bracket Installation

Bracket installation is applicable when you need to remove the cover of the device and install the HDD to the internal bracket.

**Step 1** Remove the cover from device by unfastening the screws on the back and pushing the cover backwards.



**Step 2** Fix the HDD on the bracket with screws.

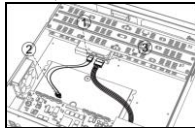


#### NOTE

To install the HDD on the bracket of lower layer, uninstall the bracket of upper layer first.

**Step 3** Connect the data cable and power cable.

- 1) Connect one end of data cable to the device motherboard.
- 2) Connect the other end of data cable to HDD.
- 3) Connect power cable to HDD.



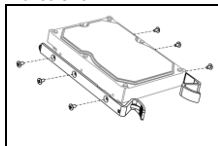
**Step 4 (Optional)** Repeat the steps above to install other HDDs.

**Step 5** Reinstall the device cover and fasten screws.

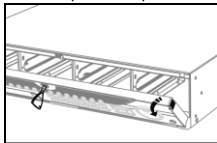
### 2.2.2 Front Panel Plug-Pull Installation

Front panel plug-pull installation is applicable when you need to open the device front panel with key and install the HDD.

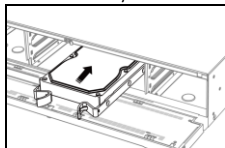
**Step 1** Fix mounting ears to HDD with screws.



**Step 2** Unlock the front panel with the attached key, and press the buttons on both sides of the front panel to open it.



**Step 3** Insert the HDD until it is fixed firmly.



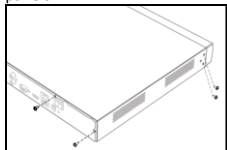
**Step 4 (Optional)** Repeat the steps above to install other HDDs.

**Step 5** Close the front panel and lock it with key.

## 2.2.3 Fix-on-Bottom Installation

Fix-on-bottom installation is applicable when you need to install and fix the HDD on the device bottom.

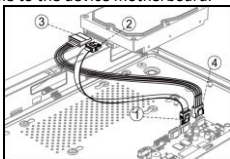
Step 1 Remove the cover from device by unfastening the screws on panels.



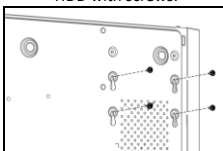
Step 2 Connect the data cable and power cable.

1) Connect one end of data cable to the device motherboard.

- 2) Connect the other end of data cable to HDD.
- 3) Connect one end of power cable to HDD.
- 4) Connect the other end of power cable to the device motherboard.



Step 3 Set the device up, match HDD screw threads with the reserved holes on the device bottom, and fix HDD with screws.



Step 4 (Optional) Repeat the steps above to install other HDDs.

Step 5 Reinstall the device cover and fasten screws.

## 2.3 RS-485 and Controller Connection

To connect PTZ to the DVR:

Step 1 Disconnect *pluggable block* from the RS-485 terminal block.

Step 2 Press and hold the orange part of the pluggable block, insert signal cables into slots, and release the orange part. Ensure signal cables are in tight.

Step 3 Connect A+ on PTZ to D+ on terminal block. Fasten stop screws.

Step 4 Connect pluggable block back into terminal block.

Typical Connection:

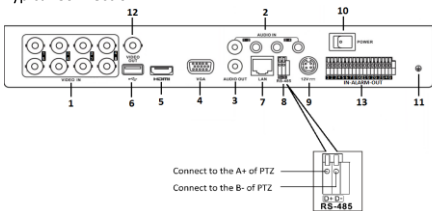


Figure 2-1 Controller Connection A



NOTE

Make sure both the controller and DVR are grounded.



## Chapter 3 Menu Operation

### 3.1 Startup

Proper startup is crucial to expanding the life of the DVR.

Step 1 Check the power supply is plugged into an electrical outlet.

It is HIGHLY recommended that an Uninterruptible Power Supply (UPS) be used in conjunction with the device. The Power button on the front panel should be red, indicating the device is receiving the power.

Step 2 Press the POWER button on the front panel.

The Power LED should turn blue. The unit will begin to start.

### 3.2 Activate Your Device

#### **Purpose**

For the first-time access, you need to activate the device by setting an admin password. No operation is allowed before activation. You can also activate the device via Web Browser, SADP, or client software.

Step 1 Enter the admin password twice.

Step 2 Enter the password to activate the IP camera (s) connected to the device.

Step 3 Optionally, check **Export GUID**, **Security Question Configuration**, or **Reserved E-mail Settings** for password resetting in the future.

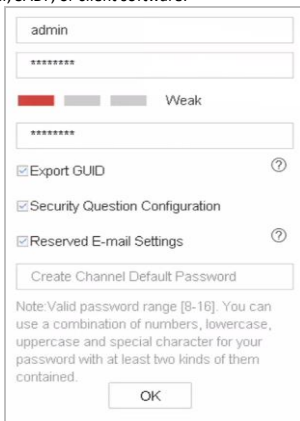
Step 4 Click **OK** to save the password and activate the device.

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#### **WARNING**

**STRONG PASSWORD RECOMMENDED**—We highly recommend you create a strong password of your own choosing (Using a minimum of 8 characters, including at least three of the following categories: upper case letters, lower case letters, numbers, and special characters.) in order to increase the security of your product. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.

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admin

\*\*\*\*\*

Weak

\*\*\*\*\*

Export GUID ?

Security Question Configuration

Reserved E-mail Settings ?

Create Channel Default Password

Note: Valid password range [8-16]. You can use a combination of numbers, lowercase, uppercase and special character for your password with at least two kinds of them contained.

OK

Figure 3-1 Set Admin Password

### 3.3 Use the Unlock Pattern for Login

#### **Purpose**

For the Admin user, you can configure the unlock pattern for device login.

After the device is activated, you can configure the device unlock pattern.

- Step 1 Use the mouse to draw a pattern among the 9 dots on the screen. Release the mouse when the pattern is done.



#### **NOTE**

- Connect at least 4 dots to draw the pattern.
- Each dot can be connected for once only.

- Step 2 Draw the same pattern again to confirm it. When the two patterns match, the pattern is configured successfully.

- Step 3 You can use the configured unlock pattern for future login.

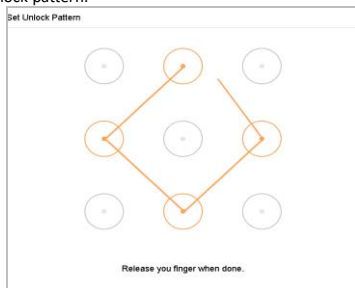


Figure 3-2 Draw the Pattern

### 3.4 User Login

#### **Purpose**

If DVR has logged out, you must log in to the device before operating the menu and other functions.

- Step 1 Select **User Name**.

- Step 2 Enter **Password**.

- Step 3 Click **OK** to log in.



#### **NOTE**

For the admin, if you have entered the wrong password for 7 times, the account will be locked for 60 seconds.

For the operator, if you have entered the wrong password for 5 times, the account will be locked for 60 seconds.

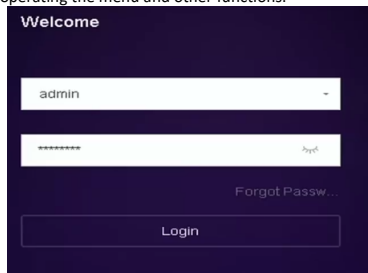


Figure 3-3 Login

## 3.5 User Logout, Shutdown and Reboot

### Purpose

You can log out of the system, shut down, or reboot the device.

Step 1 Click  on the menu bar.

Step 2 Click **Logout, Shutdown, or Reboot**.




### NOTE

After you have logged out of the system, menu operation on the screen is invalid. User name and password are required to unlock the system.

## 3.6 Configure Signal Input

### Purpose

For some models, you can configure the analog and IP signal input types and 5 MP long distance transmission. For other models, the analog signal inputs (Turbo HD, AHD, HDCVI, CVBS) and IP signal input can be recognized and connected automatically.

Step 1 Click  on the main menu bar.


Step 2 Click **Camera > Analog**.



### NOTE

The Signal Input Status interface differs with different models.

Step 3 Check to select different signal input types: HD/CVBS and IP.

Step 4 Click .

Step 5 Select channel(s) to enable 5 MP long distance transmission.

Step 6 Save the settings.

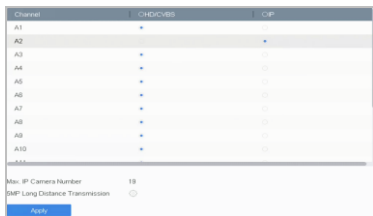


Figure 3-4 Signal Input Status

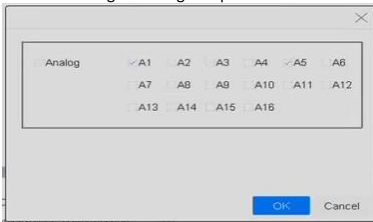


Figure 3-5 5 MP Long Distance Transmission Settings


## 3.7 Add IP Cameras

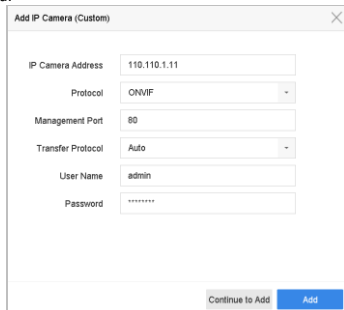
### **Purpose**

Add the network cameras to the connection list of the device before getting live video or recording videos.

### **Before you start**

Ensure the network connection is valid and correct, and the IP camera to add has already been activated. Please refer to the *User Manual* for activating the inactive IP camera.

- Step 1 Click  on the main menu bar.
- Step 2 Click **Custom Add** on the title bar.
- Step 3 Enter IP address, protocol, management port, and other information of the IP camera to add.
- Step 4 Enter the login user name and password of the IP camera.
- Step 5 Click **Add**.



The screenshot shows a dialog box titled "Add IP Camera (Custom)". It contains the following fields and values:

IP Camera Address	110.110.1.11
Protocol	ONVIF
Management Port	80
Transfer Protocol	Auto
User Name	admin
Password	*****

At the bottom right, there are two buttons: "Continue to Add" (disabled) and "Add" (active).

Figure 3-6 Add IP Camera

## 3.8 Network Settings

### 3.8.1 Configuring General Settings

#### **Purpose**

Network settings must be properly configured before you operate DVR over network.

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Step 1 Go to **System > Network > TCP/IP**.

Step 2 In the General Settings interface, you can configure the following settings: NIC Type, IPv4 Address, IPv4 Gateway, MTU and DNS Server.

Step 3 Save the settings.

The screenshot shows a network configuration interface with the following fields and values:

- Working Mode: Net Fault Tolerance
- Select NIC: lan0
- NIC Type: 100Y100M100GM Self-adapt
- Enable DHCP:
- IPv4 Address: 192.168.2.107
- IPv4 Subnet Mask: 255.255.255.0
- IPv4 Default Gateway: 192.168.2.254
- MAC Address: 48:14:37:aa:09:a3
- MTU(bytes): 1500
- Main NIC: LAN1
- Enable Obtain DNS:
- Preferred DNS Server: [Empty field]
- Alternate DNS Server: [Empty field]

At the bottom, there is a blue 'Apply' button.

Figure 3-7 Network Settings

### 3.8.2 Configure Guarding Vision

#### Purpose

Guarding Vision provides mobile phone application and platform service to access and manage your connected devices, which enables you to get a convenient remote access to the surveillance system.

Step 1 Go to **System > Network > Advanced > Platform Access**.

Step 2 Check Enable to activate the function. Then the service terms will pop up.

- 1) Enter the verification code in **Verification Code**.
- 2) Scan the QR code to read the service terms and privacy statement.
- 3) Check **The Guarding Vision service will require internet access. Please read Service Terms and Privacy Statement before enabling the service** if you agree the service terms and privacy statement.
- 4) Click **OK** to save the settings.

#### NOTE

- Guarding Vision is disabled by default.
- The verification code is empty by default. It must contain 6 to 12 letters or numbers, and it is case sensitive.

Step 3 (Optional) Check **Custom** to enter the server address as your desire.

Step 4 (Optional) Check **Enable Stream Encryption**, verification code is required for remote access and live view.


Step 5 (Optional) Click **Unbind** if the device requires to unbind with the current Guarding Vision account.

Step 6 Click **Apply**.

#### What to do next:

After configuration, you can access and manage your devices through Guarding Vision app or website.

## 3.9 Live View

Enter the live view mode ()

- You can select a window and double click a camera from the list to play the video from the camera in the selected window.
- Use the toolbar at the playing window bottom to realize the capture, instant playback, audio on/off, digital zoom, live view strategy, show information and start/stop recording.

## 3.10 Recording Settings

### **Before you start**


Make sure that the disk has already been installed. If not, please install a disk and initialize it. You may refer to the user manual for detailed information.

In the live view mode, select a connected camera window and click  at the toolbar to start recording.

## 3.11 Playback

### **Purpose**

The recorded video files and pictures on the hard disk can be played back in the following modes: instant playback, all-day playback for the specified channel, and playback by normal/event/smart/tag/system logs/sub-periods/external file search/picture.

Step 1 Enter the playback mode ()

Step 2 Check the channel(s) in the list.

Step 3 Double-click to select a date on the calendar.

Step 4 You can use the toolbar in the bottom part of Playback interface to control playing progress.



Figure 3-8 Playback

## Chapter 4 Accessing by Web Browser

**NOTE**

You shall acknowledge that the use of the product with Internet access might be under network security risks. For avoidance of any network attacks and information leakage, please strengthen your own protection. If the product does not work properly, please contact with your dealer or the nearest service center.

**Purpose**

You can get access to the device via web browser. You may use one of the following web browsers: Internet Explorer 6.0, Internet Explorer 7.0, Internet Explorer 8.0, Internet Explorer 9.0, Internet Explorer 10.0, Apple Safari, Mozilla Firefox, and Google Chrome. The supported resolutions include 1024\*768 and above.

Step 1 Open web browser, enter the IP address of the device and then press Enter.

Step 2 Log in to the device.

- If the device has not been activated, you need to activate the device first by setting the password for the admin user account.
- If the device is already activated, enter the user name and password in the login interface, and click **Login**.

Step 3 Install the plug-in before viewing the live video and managing the camera. Please follow the installation prompts to install the plug-in.

**NOTE**

- You may have to close the web browser to finish the installation of the plug-in.
- After login, you can perform the operation and configuration of the device, including the live view, playback, log search, configuration, etc.

Activation

User Name: admin

Password: [Progress Bar] Strong

Valid password range [8-16]. You can use a combination of numbers, lowercase, uppercase and special character for your password with at least two kinds of them contained.

Confirm: [Asterisks]

OK

Figure 4-1 Activate the Device

User Name: admin

Password: [Asterisks]

Login

Figure 4-2 Login