DIVAR IP 7000 2U

DIP-7080-00N, DIP-7082-8HD, DIP-7083-8HD

BOSCH

en Quick Installation Guide

Table of contents

1   Safety precautions

Observe the safety precautions in this chapter.

1.1   General safety precautions

Follow these rules to ensure general safety:
–   Keep the area around the system clean and free of clutter.
–   Place the chassis top cover and any system components that have been removed away
     from the system or on a table so that they won't accidentally be stepped on.
–   While working on the system, do not wear loose clothing such as neckties and
     unbuttoned shirt sleeves, which can come into contact with electrical circuits or be
     pulled into a cooling fan.
–   Remove any jewelry or metal objects from your body, which are excellent metal
     conductors that can create short circuits and harm you if they come into contact with
     printed circuit boards or areas where power is present.
–   After accessing the inside of the system, close the system back up and secure it to the
     rack unit after ensuring that all connections have been made.
–   The system is heavy when fully loaded. When lifting the system, two people at either end
     should lift slowly with their feet spread out to distribute the weight. Always keep your
     back straight and lift with your legs.

⚠	**Warning!** Interruption of mains supply: Voltage is applied as soon as the mains plug is inserted into the mains socket. However, for devices with a mains switch, the device is only ready for operation when the mains switch (ON/OFF) is in the ON position. When the mains plug is pulled out of the socket, the supply of power to the device is completely interrupted.
⚠	**Warning!** Removing the housing: To avoid electric shock, the housing must only be removed by qualified service personnel. Before removing the housing, the plug must always be removed from the mains socket and remain disconnected while the housing is removed. Servicing must only be carried out by qualified service personnel. The user must not carry out any repairs.
⚠	**Warning!** Power cable and AC adapter: When installing the product, use the provided or designated connection cables, power cables and AC adaptors. Using any other cables and adaptors could cause a malfunction or a fire. Electrical Appliance and Material Safety Law prohibits the use of UL or CSA-certified cables (that have UL/CSA shown on the code) for any other electrical devices.

Warning!

Lithium battery:

Batteries that have been inserted wrongly can cause an explosion. Always replace empty batteries with batteries of the same type or a similar type recommended by the manufacturer. Handle used batteries carefully. Do not damage the battery in any way. A damaged battery may release hazardous materials into the environment.

Dispose of empty batteries according to the manufacturer's instructions.

Warning!

Handling of lead solder materials used in this product may expose you to lead, a chemical known to the State of California to cause birth defects and other reproductive harm.

Notice!

Electrostatically sensitive device:

To avoid electrostatic discharges, the CMOS/MOSFET protection measures must be carried out correctly.

When handling electrostatically sensitive printed circuits, grounded anti-static wrist bands must be worn and the ESD safety precautions observed.

Notice!

Installation should only be carried out by qualified customer service personnel in accordance with the applicable electrical regulations.

	Disposal Your Bosch product has been developed and manufactured using high-quality materials and components that can be reused. This symbol means that electronic and electrical devices that have reached the end of their working life must be disposed of separately from household waste. In the EU, separate collecting systems are already in place for used electrical and electronic products. Please dispose of these devices at your local communal waste collection point or at a recycling center.

1.2 Electrical safety precautions

Basic electrical safety precautions should be followed to protect you from harm and the system from damage:

– Be aware of the locations of the power on/off switch on the chassis as well as the room's emergency power-off switch, disconnection switch or electrical outlet. If an electrical accident occurs, you can then quickly remove power from the system.

– Do not work alone when working with high voltage components.

– Power should always be disconnected from the system when removing or installing main system components, such as the motherboard or memory modules. When disconnecting power, you should first turn off the system and then unplug the power cords from all the power supply modules in the system.

– When working around exposed electrical circuits, another person who is familiar with the power-off controls should be nearby to switch off the power if necessary.

- – Use only one hand when working with powered-on electrical equipment. This is to avoid making a complete circuit, which will cause electrical shock. Use extreme caution when using metal tools, which can easily damage any electrical components or circuit boards they come into contact with.
- – The power supply power cords must include a grounding plug and must be plugged into grounded electrical outlets. The unit has more than one power supply cord. Disconnect both power supply cords before servicing to avoid electrical shock.
- – Mainboard replaceable soldered-in fuses: Self-resetting PTC (Positive Temperature Coefficient) fuses on the mainboard must be replaced by trained service technicians only. The new fuse must be the same or equivalent as the one replaced. Contact technical support for details and support.

Caution!
Mainboard Battery: There is a danger of explosion if the onboard battery is installed upside down, which will reverse its polarities. This battery must be replaced only with the same or an equivalent type recommended by the manufacturer (CR2032). Dispose of used batteries according to the manufacturer's instructions.

Caution!
DVD-ROM Laser: This system comes without a DVD-ROM drive but if added: To prevent direct exposure to the laser beam and hazardous radiation exposure, do not open the enclosure or use the unit in any unconventional way.

1.3 ESD precautions

Electrostatic Discharge (ESD) is generated by two objects with different electrical charges coming into contact with each other. An electrical discharge is created to neutralize this difference, which can damage electronic components and printed circuit boards. The following measures are generally sufficient to neutralize this difference before contact is made to protect your equipment from ESD:

- – Do not use mats designed to decrease electrostatic discharge as protection from electrical shock. Instead, use rubber mats that have been specifically designed as electrical insulators.
- – Use a grounded wrist strap designed to prevent static discharge.
- – Keep all components and printed circuit boards (PCBs) in their antistatic bags until ready for use.
- – Touch a grounded metal object before removing the board from the antistatic bag.
- – Do not let components or printed circuit boards come into contact with your clothing, which may retain a charge even if you are wearing a wrist strap.
- – Handle a board by its edges only. Do not touch its components, peripheral chips, memory modules or contacts.
- – When handling chips or modules, avoid touching their pins.
- – Put the mainboard and peripherals back into their antistatic bags when not in use.
- – For grounding purposes, make sure your computer chassis provides excellent conductivity between the power supply, the case, the mounting fasteners and the mainboard.

1.4 Operating precautions

The chassis cover must be in place when the system is operating to assure proper cooling. Out of warranty damage to the system can occur if this practice is not strictly followed.

Note:
Please handle used batteries carefully. Do not damage the battery in any way. A damaged battery may release hazardous materials into the environment. Do not discard a used battery in the garbage or a public landfill. Please comply with the regulations set up by your local hazardous waste management agency to dispose of your used battery properly.

1.5   Important notices

	Accessories - Do not place this unit on an unstable stand, tripod, bracket, or mount. The unit may fall, causing serious injury and/or serious damage to the unit. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer. When a cart is used, use caution and care when moving the cart/apparatus combination to avoid injury from tip-over. Quick stops, excessive force, or uneven surfaces may cause the cart/unit combination to overturn. Mount the unit per the manufacturer's instructions.

1.6   FCC and ICES compliance

(only for U.S.A. and Canada)
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 manufacturer's instruction manual, may cause harmful interference with radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case you will be required to correct the interference at your own expense.

2   System overview

DIVAR IP 7000 is an affordable, simple and reliable all-in-one recording, viewing and management solution for network surveillance systems of up to 64 channels (with 32 channels pre-licensed). Running the full Bosch VMS (Video Management System) solution and powered by Bosch VRM (Video Recording Manager) software, the DIVAR IP 7000 is an intelligent IP storage device that eliminates the need for separate NVR (Network Video Recorder) server and storage hardware.

The 2U rack mount unit combines advanced management and state-of-the-art recording management into a single cost-effective, plug and play IP recording appliance for IT-minded customers which are seeking for a state-of-the-art "second generation" NVR recording solution.

DIVAR IP 7000 features:

– Instant real time access to video
   View high quality HD video despite low or limited bandwidth connections. Dynamic Transcoding technology ensures that you can view your video immediately — anytime, anywhere.

– Easy installation
   DIVAR IP 7000 2U features wizard based set-up and centralized configuration to reduce installation times. All components are pre-installed and pre-configured. Simply connect to the network and turn on the unit — DIVAR IP 7000 2U starts recording straight out of the box.

– Access to Bosch VMS
   After starting the system, immediate access to the Bosch VMS management application is offered by a customized user interface. The ability to use one central user interface for configuration and operation management reduces installation and training requirements, and helps to keep ongoing system management costs low.

Front view:
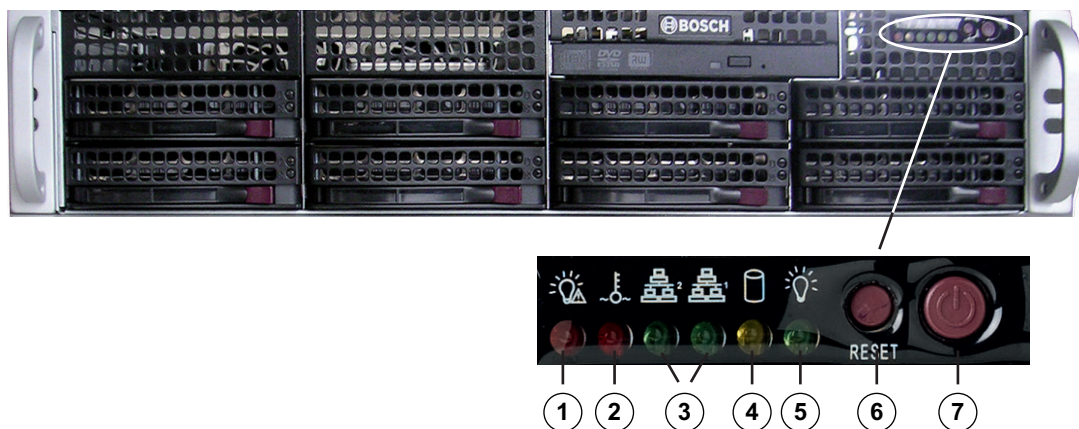
1	Power Failure	5	Power
2	Overheat/Fan Fail	6	Reset
3	NIC1/NIC2	7	Power on/off
4	HDD		

Rear view:
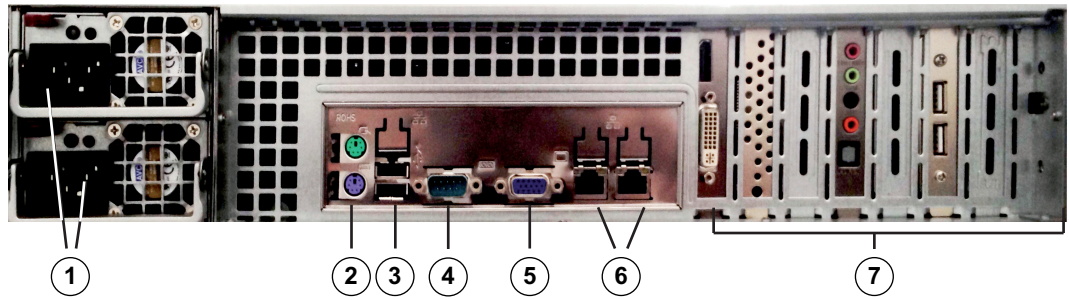
1	2x mains connection 100 – 240 VAC, 50 - 60 Hz	**5**	Monitor (VGA) **Note:** Do not use!
2	2x PS/2 (mouse and keyboard)	**6**	2x NIC
3	2x USB	**7**	Slots for:
4	Serial interface COM1		– 1x graphic card (1x Display Port, 1x DVI) – DVI port must be used for configuration – 1x sound card – 2x USB 2.0

3   System setup - hardware

3.1   Introduction

Scope of delivery:
– DIVAR IP 7000 – 8-bay system, fully equipped with 8 hard drives (DIP-7082-8HD)
– In addition to the system itself, the following items should have been shipped along with each system
    – One rackmount kit
    – One AC power cable for each power supply in the system
    – This quick install guide

3.2   Unpacking the system

You should inspect the box the chassis was shipped in and note if it was damaged in any way. If the chassis itself shows damage, file a damage claim with the carrier who delivered it and notify the respective Bosch RMA desk.
You will also need it placed near at least one grounded power outlet.
Due to the weight of the system: After opening the top of the shipping box, one person should stand at either end and lift the disk array out together.
Be sure to read the safety precautions.

3.3   Preparing for setup

The box the system is shipped in includes a rack mount kit, which you will need to install the system into the rack.
Follow the steps in the order given to complete the installation process in a minimum amount of time. Read this section before you begin the installation procedure outlined in the sections that follow.

3.3.1   Choosing a setup location

– Situate the system in a clean, dust-free area that is well ventilated. Avoid areas where heat, electrical noise and electromagnetic fields are generated. Place the system near a grounded power outlet.
– Leave approximately 25 inches clearance in front of the rack to be able to open the front door completely.
– Leave approximately 30 inches of clearance in the back of the rack to allow for sufficient airflow and ease in servicing.
– Install the system only in a Restricted Access Location (dedicated equipment rooms, service closets and the like).

> **i   Notice!**
> This product is not suitable for use with visual display work place devices acccording to §2 of the the German Ordinance for Work with Visual Display Units.

3.3.2   Rack precautions

⚠️ **Warning!**

To prevent bodily injury when mounting or servicing this unit in a rack, you must take special precautions to ensure that the system remains stable. The following guidelines are provided to ensure your safety:

–   Ensure that the leveling jacks on the bottom of the rack are fully extended to the floor with the full weight of the rack resting on them.
–   In single rack installations, attach stabilizers to the rack.
–   If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.
–   This unit should be mounted at the bottom of the rack if it is the only unit in the rack.
–   When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
–   In multiple rack installations, couple the racks together.
–   Always make sure the rack is stable before extending a component from the rack.
–   Extend only one component at a time - extending two or more simultaneously may cause the rack to become unstable.

3.3.3   General system precautions

–   Review the electrical and general safety precautions that came with the components you are adding to your chassis.
–   Determine the placement of each component in the rack before installing the rails.
–   Install the heaviest components on the bottom of the rack first, and then work up.
–   Use a regulating uninterruptible power supply (UPS) to protect the system from power surges, voltage spikes if you want to keep your system operating in case of a power failure.
–   Allow the SATA hard drives and power supply modules to cool before touching them.
–   Always keep the rack's front door and all panels and components on the system closed when not servicing to maintain proper cooling.

See also:
–   *Safety precautions, page 4*

3.3.4   Rack mounting considerations

Ambient operating temperature
If installed in a closed or multi-unit rack assembly, the ambient operating temperature of the rack environment may be greater than the ambient temperature of the room. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature (Tmra).

Reduced airflow
Equipment should be mounted into a rack so that the amount of airflow required for safe operation is not compromised.

Mechanical loading
Equipment should be mounted into a rack so that a hazardous condition does not arise due to uneven mechanical loading.

Circuit overloading

Consideration should be given to the connection of the equipment to the power supply circuitry and the effect that any possible overloading of circuits might have on overcurrent protection and power supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

Reliable ground

A reliable ground must be maintained at all times. To ensure this, the rack itself should be grounded. Particular attention should be given to power supply connections other than the direct connections to the branch circuit (i.e. the use of power strips, etc.).

3.4 Rack mounting instructions

This section provides information on installing the chassis into a rack unit. There are a variety of rack units on the market, which may mean the assembly procedure will differ slightly. You should also refer to the installation instructions that came with the rack unit you are using.

> **Notice!**
>
> This rail will fit a rack between 26" and 33.5" deep.

3.4.1 Separating the sections of the rack rails

The chassis package includes two rail assemblies in the rack mounting kit. Each assembly consists of two sections:

– an inner fixed chassis rail that secures directly to the chassis
– an outer fixed rack rail that secures directly to the rack itself.

To separate the inner and outer rails:
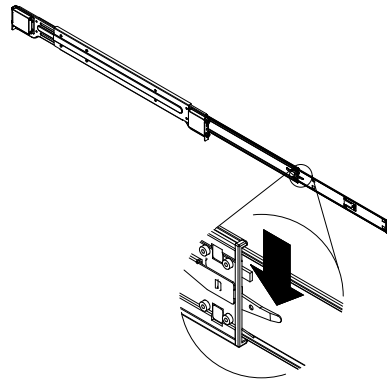
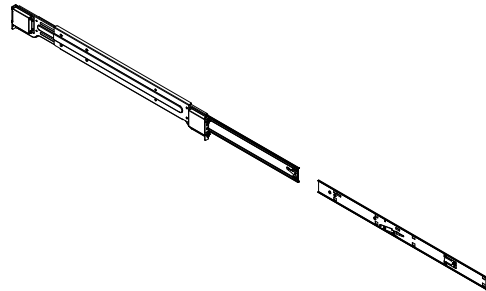1. Locate the rail assembly in the chassis packaging.
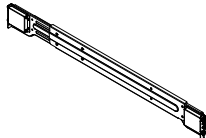
2. Extend the rail assembly by pulling it outward.
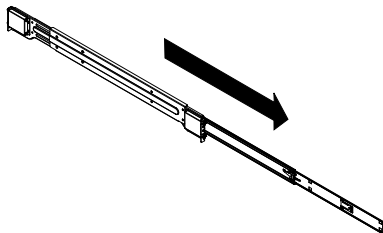
3.   Press the quick-release tab.

4.   Separate the inner rail extension from the outer rail assembly.

3.4.2   Installing the inner rails

The chassis includes a set of inner rails in two sections: inner rails and inner rail extensions. The inner rails are pre-attached to the chassis, and do not interfere with normal use of the chassis if you decide not to use a server rack. The inner rail extension is attached to the inner rail to mount the chassis in the rack.
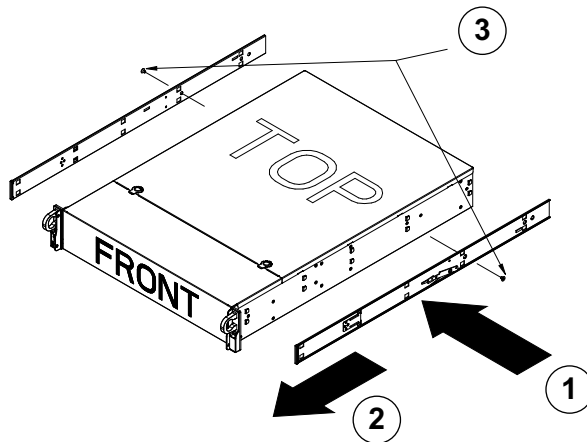
To install the inner rails:

1.   Place the inner rail extensions on the side of the chassis aligning the hooks of the chassis with the rail extension holes. Make sure the extension faces "outward" just like the pre-attached inner rail.
2.   Slide the extension toward the front of the chassis.
3.   Secure the chassis with 2 screws as illustrated.
4.   Repeat steps for the other inner rail extension.

3.4.3 Installing the outer rails to the rack

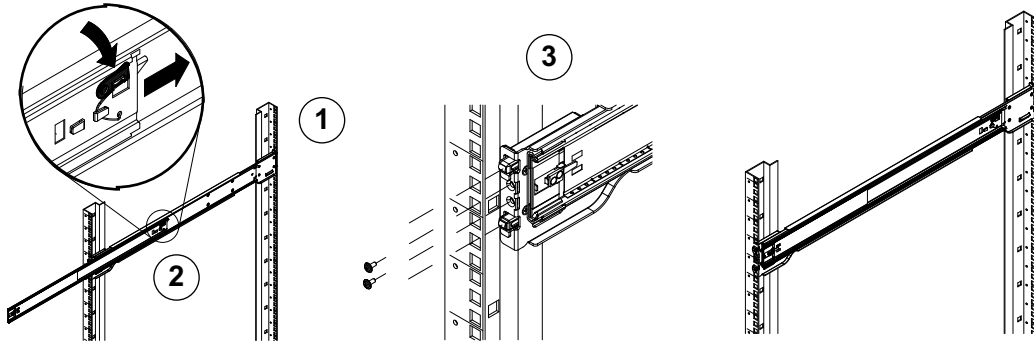Outer rails attach to the rack and hold the chassis in place. The outer rails extend between 30 inches and 33 inches.
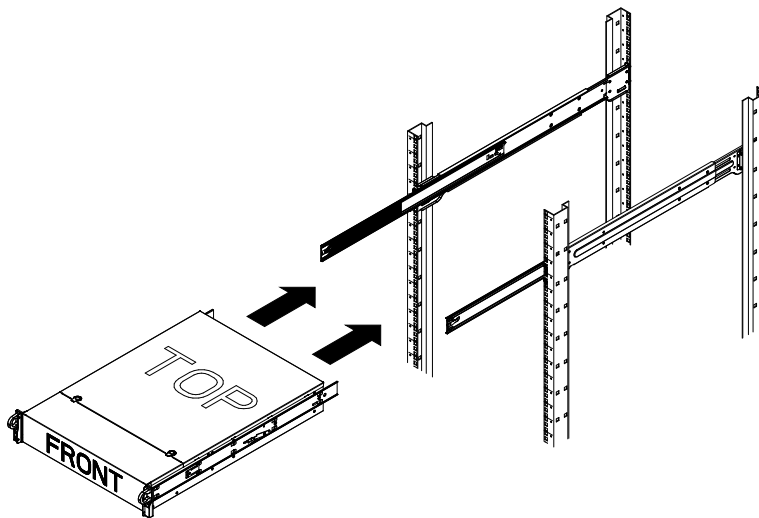

To install the outer rails to the rack:
1.   Secure the back end of the outer rail to the rack, using the screws provided.
2.   Press the button where the two outer rails are joined to retract the smaller outer rail.
3.   Hang the hooks of the rails onto the rack holes and if desired, use screws to secure the front of the outer rail onto the rack.
4.   Repeat steps 1-3 for the remaining outer rail.

Locking Tabs

Both chassis rails have a locking tab, which serves two functions. The first is to lock the system into place when installed and pushed fully into the rack, which is its normal position. Secondly, these tabs also lock the system in place when fully extended from the rack. This prevents the system from coming completely out of the rack when you pull it out for servicing.

3.4.4 Installing the chassis into the rack

To install the chassis into a rack:
1.   Extend the outer rails as illustrated above.
2.   Align the inner rails of the chassis with the outer rails on the rack.
3.   Slide the inner rails into the outer rails, keeping the pressure even on both sides. When the chassis has been pushed completely into the rack, it should click into the locked position.
4.   Optional screws may be used to secure the to hold the front of the chassis to the rack.

> **Warning!**
> Do not pick up the unit with the front handles. The handles are designed to pull the system from a rack only.

> **Warning!**
> Stability hazard
> Before sliding the unit out for servicing make sure that the rack stabilizing mechanism is in place, or the rack is bolted to the floor. Failure to stabilize the rack can cause the rack to tip over.

See also:
Rack precautions, page 11

3.4.5   Installing the chassis into a Telco rack

To install the chassis into a Telco type rack, use two L-shaped brackets on either side of the chassis (four in total). First, determine how far the chassis will extend out the front of the rack. Larger chassis should be positioned to balance the weight between front and back. If a bezel is included on the chassis, remove it. Then attach the two front brackets to each side of the chassis, then the two rear brackets positioned with just enough space to accommodate the width of the Telco rack. Finish by sliding the chassis into the rack and tightening the brackets to the rack.

3.5   Turning on the system

The last thing to be done is to provide input power to the system.

To turn on the system:
1.   Plug the power cord from the power supply unit into a high-quality power strip that offers protection from electrical noise and power surges. We recommended using an uninterruptible power supply (UPS).
2.   Press the power button on the control panel to turn on the system.

4   System setup - first steps

The following installation directive provides information on Installation and Configuration. This chapter is valid for DIVAR IP models that come with pre-installed hard drives. Empty units start into the DOM recovery menu on first start. The recovery process and the RAID setup are described in the installation manual.

See also:
–   *Additional documentation and client software, page 20*

4.1   Introduction

DIVAR IP systems are shipped with a pre-installed Configuration Wizard from factory.

4.2   Setup instruction

All DIVAR IP systems are preconfigured with a default IP address and with default iSCSI settings.
–   IP Address: 192.168.0.200
–   Subnet mask: 255.255.255.0

Observe the following:
–   DIVAR IP needs to have an active network link during installation. Make sure that the network switch you are connecting to is powered on.
–   The default IP address must not be occupied by any other device in the network. Make sure that the default IP addresses of existing DIVAR IP systems in the network are changed before adding another DIVAR IP.
–   Determine whether the initial installation is on a DHCP network. If not then you must assign valid IP addresses to the video devices. Consult the local IT administrator to obtain a valid IP address range to be used with DIVAR IP and associated devices.
–   The default iSCSI settings are optimized for use with Bosch VMS/VRM.

User with administrator rights:
–   User: BVRAdmin
–   Password: WSS4Bosch

i	**Notice!** We strongly recommend not changing the user settings. Changing the user settings can result in malfunctioning of the system.

4.3   Starting the application

DIVAR IP system is ready to go out of the box. The application provides a simple to install and intuitive to use solution for network surveillance systems.

To start the application:
1.   Connect the unit and the cameras to the network.
2.   Turn on the unit.
      The Windows Server 2008 R2 setup process starts.
3.   Select the appropriate language for the installation, then click **Next**.
4.   In the **Country or region**, **Time and currency** and **Keyboard layout** lists, click the appropriate item, then click **Next**.
      The Microsoft Software License Terms and the EULA (End User License Agreement) are displayed.

5. Accept the license terms, then click **Start**. Windows restarts.
    After restart is finished, different Bosch VMS versions are displayed on the screen.
6. Click the Bosch VMS version you want to install.
    Note: We recommend that you install the latest version.
    The installation can take several minutes. Do not turn off the computer. If necessary, restart the system.
7. After restart is finished, press CTR+ALT+DELETE. The Windows logon page is displayed.
8. Enter the default password **WSS4Bosch**.
9. After entering the password, a message is displayed that you must change the password before logging on the first time. To confirm, click **OK**.
10. Change the password.
    A series of scripts perform important setup tasks. This can take several minutes. Do not turn off the computer.
    The Bosch VMS default screen is displayed.
    Note: In case of password loss a system recovery must be performed as described in the installation manual. The configuration must be done from scratch or must be imported.

11. On the Bosch VMS default screen, double-click the **Bosch VMS Wizard** icon ![icon] to start the Configuration Wizard.
    The **Welcome** page is displayed.
12. Configure the system using the Configuration Wizard.

> **Notice!**
>
> To perform administrative tasks, the BVRAdmin account can be entered when Bosch VMS default screen is displayed. To do so, press CTRL+ALT+DEL, then hold down SHIFT while clicking the **Switch User** option and keep SHIFT pressed for about five seconds.

> **Notice!**
>
> We strongly recommend not changing any operating system settings. Changing operating system settings can result in malfunctioning of the system.

See also:

4.4   Using Bosch VMS Config Wizard

Intended use for Config Wizard is the quick and easy configuration of a smaller system. Config Wizard helps you to achieve a configured system including VRM, iSCSI system, cameras, recording profiles and user groups.
User groups and their permissions are configured automatically. You can add or remove users and set passwords.
Config Wizard can access Management Server only on the local computer.
You can save an activated configuration for backup purposes and import this configuration later. You can change this imported configuration after import.
Config Wizard adds the local VRM automatically.

Restrictions:
The following tasks cannot be done with the Configuration Wizard. Use Bosch VMS Configuration Client instead.

- adding additional license packages
- adjusting schedules
- configuring systems with no or multiple VRM
- configuring external storage devices
- adding Video Streaming Gateway
- all advanced configurations beyond a basic setup (maps or alarms, for example)

To achieve a quick configuration using the Configuration Wizard:

1. On the Bosch VMS default screen, double-click the **Bosch VMS Wizard** icon. The **Welcome** page is displayed.
2. Follow the wizard and observe the instructions on the screen.

> **Notice!**
>
> For the tasks that cannot be done with Configuration Wizard, and for detailed information concerning Configuration Wizard itself, refer to the Bosch VMS manual (see Additional Documentation and client software).

4.5 Adding additional licenses

You can add additional licenses using Configuration Client.

To activate the software:

1. Start Configuration Client.
2. On the **Tools** menu, click **License Manager...**.
   The **License Manager** dialog box is displayed.
3. Click to check the boxes for the software package, the features, and the expansions that you want to activate. For the expansions, enter the number of licenses.
   If you have received a Bundle Information file, click **Import Bundle Info** to import it.
4. Click **Activate**.
   The **License Activation** dialog box is displayed.
5. Write down the computer signature or copy and paste it into a text file.
6. On a computer with Internet access, enter the following URL into your browser:
   https://activation.boschsecurity.com
   If you do not have an account to access the Bosch License Activation Center, either create a new account (recommended) or click the link to activate a new license without logging on. If you create an account and log on before activating, the License Manager keeps track of your activations. You can then review this at any time.
   Follow the instructions to obtain the License Activation Key.
7. Return to the Bosch VMS software. In the **License Activation** dialog box, type the License Activation Key obtained from the License Manager and click **Activate**.
   The software package is activated.

4.6 Using Bosch VMS Operator Client

Use Bosch VMS Operator Client to verify the live, recording and playback functionality of DIVAR IP.

To verify live image functionality in the Operator Client

1. On the Bosch VMS default screen, double-click the Operator Client icon . The application starts.

2.   Enter the following and click **OK**.
     User name: admin
     Password: no password required (if not set with the wizard)
     Connection: 127.0.0.1
3.   Click the live image icon. The Logical Tree with the cameras is displayed.
4.   Select a camera and drag it to an image window. The image of the camera is displayed if
     the camera is assigned correctly.
     Note:
     Cameras in the image window with a red dot in the camera's icon are viewed live.

To verify recording functionality in the Operator Client

▸   Cameras in the Logical Tree with a red dot in the camera's icon are recording.

To verify playback functionality in the Operator Client

▸   The time line moves if the a camera is viewed in playback mode.

To perform further functionalities refer to the Bosch VMS manual.

Performance overview live

	4CIF		
	2.5 Mbit	5 Mbit	10 Mbit
Number of software monitors	20	13	9

	720p		
	2.5 Mbit	5 Mbit	10 Mbit
Number of software monitors	14	11	6

	1080p		
	2.5 Mbit	5 Mbit	10 Mbit
Number of software monitors	8	6	5

References to the manual are described in *Additional documentation and client software, page 20*.

5   Additional documentation and client software

Documentation for Bosch Security Systems products can be found as follows:

▸   Open any browser > enter www.boschsecurity.com > select your region and your country > start a search for your product > select the product in the search results to show the existing documents.

And on the following network share:

▸   \\<IP address of DIVAR IP>\sources