VIP XD
Network Video Server
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong> Preface</td>
<td>5</td>
</tr>
<tr>
<td>1.1 About this Manual</td>
<td>5</td>
</tr>
<tr>
<td>1.2 Conventions in this Manual</td>
<td>5</td>
</tr>
<tr>
<td>1.3 Intended Use</td>
<td>5</td>
</tr>
<tr>
<td>1.4 EU Directives</td>
<td>6</td>
</tr>
<tr>
<td>1.5 Rating Plate</td>
<td>6</td>
</tr>
<tr>
<td><strong>2</strong> Safety Information</td>
<td>7</td>
</tr>
<tr>
<td>2.1 Electric Shock Hazard</td>
<td>7</td>
</tr>
<tr>
<td>2.2 Installation and Operation</td>
<td>7</td>
</tr>
<tr>
<td>2.3 Maintenance and Repair</td>
<td>7</td>
</tr>
<tr>
<td><strong>3</strong> Product Description</td>
<td>9</td>
</tr>
<tr>
<td>3.1 Scope of Delivery</td>
<td>9</td>
</tr>
<tr>
<td>3.2 System Requirements</td>
<td>10</td>
</tr>
<tr>
<td>3.3 Overview of Functions</td>
<td>11</td>
</tr>
<tr>
<td>3.4 Connections on the Front Panel</td>
<td>13</td>
</tr>
<tr>
<td>3.5 Connections on the Rear Panel</td>
<td>14</td>
</tr>
<tr>
<td><strong>4</strong> Installation</td>
<td>15</td>
</tr>
<tr>
<td>4.1 Preparations</td>
<td>15</td>
</tr>
<tr>
<td>4.2 Connections</td>
<td>16</td>
</tr>
<tr>
<td>4.3 Power On/Power Off</td>
<td>19</td>
</tr>
<tr>
<td>4.4 Setup Using the Configuration Manager</td>
<td>19</td>
</tr>
<tr>
<td><strong>5</strong> Configuration Using a Web Browser</td>
<td>21</td>
</tr>
<tr>
<td>5.1 Connecting</td>
<td>21</td>
</tr>
<tr>
<td>5.2 Configuration Menu</td>
<td>24</td>
</tr>
<tr>
<td>5.3 Identification</td>
<td>25</td>
</tr>
<tr>
<td>5.4 Password</td>
<td>25</td>
</tr>
<tr>
<td>5.5 Date/Time</td>
<td>26</td>
</tr>
<tr>
<td>5.6 Appearance</td>
<td>28</td>
</tr>
<tr>
<td>5.7 Decoder Profile</td>
<td>29</td>
</tr>
<tr>
<td>5.8 VGA</td>
<td>30</td>
</tr>
<tr>
<td>5.9 Monitor Display</td>
<td>33</td>
</tr>
<tr>
<td>5.10 Audio (Audio Version Only)</td>
<td>33</td>
</tr>
<tr>
<td>5.11 Alarm Connections</td>
<td>34</td>
</tr>
<tr>
<td>5.12 Audio Alarm (Audio Version Only)</td>
<td>37</td>
</tr>
<tr>
<td>5.13 Alarm E-Mail</td>
<td>38</td>
</tr>
<tr>
<td>5.14 Alarm Task Editor</td>
<td>40</td>
</tr>
<tr>
<td>5.15 Alarm Inputs</td>
<td>41</td>
</tr>
<tr>
<td>5.16 Relay</td>
<td>41</td>
</tr>
<tr>
<td>5.17 COM1</td>
<td>43</td>
</tr>
<tr>
<td>5.18 Network</td>
<td>44</td>
</tr>
<tr>
<td>5.19 Advanced</td>
<td>47</td>
</tr>
<tr>
<td>5.20</td>
<td>Encryption</td>
</tr>
<tr>
<td>5.21</td>
<td>Maintenance</td>
</tr>
<tr>
<td>5.22</td>
<td>Licenses</td>
</tr>
<tr>
<td>5.23</td>
<td>System Overview</td>
</tr>
<tr>
<td>5.24</td>
<td>Function Test</td>
</tr>
</tbody>
</table>

| 6 | Operation | 53 |
| 6.1 | Connecting | 53 |
| 6.2 | The CONNECTIONS Page | 56 |
| 6.3 | Connections Between the Sender and Receiver | 57 |
| 6.4 | Hardware Connections Between Video Servers | 59 |
| 6.5 | Operation with Management Software | 60 |

| 7 | Maintenance and Upgrades | 61 |
| 7.1 | Testing the Network Connection | 61 |
| 7.2 | Unit Reset | 61 |
| 7.3 | Repairs | 62 |
| 7.4 | Transfer and Disposal | 62 |

| 8 | Appendix | 63 |
| 8.1 | Troubleshooting | 63 |
| 8.2 | LEDs | 65 |
| 8.3 | Processor Load | 65 |
| 8.4 | Network Connection | 65 |
| 8.5 | Serial Interface | 66 |
| 8.6 | Terminal Block | 66 |
| 8.7 | Communication with Terminal Program | 67 |
| 8.8 | Copyrights | 69 |

| 9 | Specifications | 71 |
| 9.1 | Unit | 71 |
| 9.2 | Protocols/Standards | 72 |

| 10 | Glossary | 73 |

| 11 | Index | 77 |
Preface

1.1 About this Manual

This manual is intended for persons responsible for the installation and operation of the VIP XD. International, national and any regional electrical engineering regulations must be followed at all times. Relevant knowledge of network technology is required. The manual describes the installation and operation of the unit.

1.2 Conventions in this Manual

In this manual, the following symbols and notations are used to draw attention to special situations:

**CAUTION!**

This symbol indicates that failure to follow the safety instructions described may endanger persons and cause damage to the unit or other equipment.

It is associated with immediate, direct hazards.

**NOTICE!**

This symbol refers to features and indicates tips and information for easier, more convenient use of the unit.

1.3 Intended Use

The VIP XD network video server receives video and control signals over data networks (Ethernet LAN, Internet). Audio signals can also be transmitted with the audio version of the unit. The units are designed for use in CCTV systems. Various functions can be triggered automatically by incorporating external alarm sensors. Other applications are not permitted.

In the event of questions concerning the use of the unit which are not answered in this manual, please contact your sales partner or:

Bosch Security Systems
Robert-Koch-Straße 100
85521 Ottobrunn
Germany
www.boschsecurity.com
1.4 EU Directives

The VIP XD network video server complies with the requirements of EU Directives 89/336 (Electromagnetic Compatibility) and 73/23, amended by 93/68 (Low Voltage Directive).

1.5 Rating Plate

For exact identification, the model name and serial number are inscribed on the bottom of the housing. Please make a note of this information before installation, if necessary, so as to have it to hand in case of questions or when ordering spare parts.
2 Safety Information

2.1 Electric Shock Hazard
- Never attempt to connect the unit to any power network other than the type for which it is intended.
- Use only the power supply unit provided.
- Never open the housing.
- Never open the housing of the power supply unit.
- If a fault occurs, disconnect the power supply unit from the power supply and from all other units.
- Install the power supply and the unit only in a dry, weather-protected location.
- If safe operation of the unit cannot be ensured, remove it from service and secure it to prevent unauthorized operation. In such cases, have the unit checked by Bosch Security Systems. Safe operation is no longer possible in the following cases:
  - if there is visible damage to the unit or power cables,
  - if the unit no longer operates correctly,
  - if the unit has been exposed to rain or moisture,
  - if foreign bodies have penetrated the unit,
  - after long storage under adverse conditions, or
  - after exposure to extreme stress in transit.

2.2 Installation and Operation
- The relevant electrical engineering regulations and guidelines must be complied with at all times during installation.
- Relevant knowledge of network technology is required to install the unit.
- Before installing or operating the unit, make sure you have read and understood the documentation for the other equipment connected to it, such as monitors. The documentation contains important safety instructions and information about permitted uses.
- Perform only the installation and operation steps described in this manual. Any other actions may lead to personal injury, damage to property or damage to the equipment.

2.3 Maintenance and Repair
- Never open the housing of the VIP XD. The unit does not contain any user-serviceable parts.
- Never open the housing of the power supply unit. The power supply unit does not contain any user-serviceable parts.
- Ensure that all maintenance or repair work is carried out only by qualified personnel (electrical engineers or network technology specialists).
3 Product Description

3.1 Scope of Delivery

- VIP XD network video server (basic version or audio version)
- Power supply unit with four primary adapters
- Configuration cable
- Quick Installation Guide
- Product CD with the following content:
  - Quick Installation Guide
  - Manual
  - System Requirements document
  - Further documentation on Bosch Security Systems products
  - Configuration Manager
  - MPEG ActiveX control
  - Player and Archive Player
  - DirectX control
  - Microsoft Internet Explorer
  - Sun JVM
  - Adobe Acrobat Reader

NOTICE!
Check that the delivery is complete and in perfect condition. Arrange for the unit to be checked by Bosch Security Systems if you find any damage.
3.2 System Requirements

General Requirements
- Computer with Windows XP or Windows Vista operating system
- Network access (Intranet or Internet)
- Screen resolution 1,024 × 768 pixels
- 16- or 32-bit color depth
- Installed Sun JVM

NOTICE!
Also note the information in the System Requirements document on the product CD supplied. If necessary, you can install the required programs and controls from the product CD supplied (see Section 3.1 Scope of Delivery, page 9).
The Web browser must be configured to enable Cookies to be set from the IP address of the unit.
In Windows Vista, deactivate protected mode on the Security tab under Internet Options.
You can find notes on using Microsoft Internet Explorer in the online Help in Internet Explorer.

Additional Configuration Requirements
- Microsoft Internet Explorer (version 6.0 or higher)
  or
- Installed Configuration Manager program (version 2.0 or higher)

Additional Operational Requirements
- Microsoft Internet Explorer (version 6.0 or higher)
  or
- Management software, for example VIDOS (version 3.11 or higher) or Bosch Video Management System (version 2.02 or higher)
3.3 Overview of Functions

Network Video Receiver with Quad View
The VIP XD is an ultra-compact network video receiver for simultaneous reception of up to four video streams. It is primarily designed for decoding video data after transfer over an IP network and for transmitting control data. When connected to a monitor and used in conjunction with compatible MPEG-4 video servers, the VIP XD is ideally suited for making existing analog CCTV systems IP-compatible.

The VIP XD is small enough to be easily integrated into small housings as well. The use of existing networks means that integration with CCTV systems or local networks can be achieved quickly and easily.

Two units, for example a VIP X1600 as a sender and a VIP XD as a receiver, can create a standalone system for data transfer without a PC. Video images from a single sender can be received simultaneously on multiple receivers. A VIP XD receiver can simultaneously receive up to four video streams from one or more compatible senders.

The audio version of the VIP XD also allows the transmission of audio signals from and to compatible units.

Sender
Compatible hardware encoders can be used as senders, for example VIP X1, VIP X1600 or VideoJet X40. Computers with installed VIDOS software are suitable for convenient connection of the required senders to the respective receivers.

Multicast
In suitably configured networks, the multicast function enables simultaneous real-time video transmission to multiple receivers. The UDP and IGMP V2 protocols must be implemented on the network for this function.

Encryption
The VIP XD offers a variety of options for protection against unauthorized reading. Web browser connections can be protected using HTTPS. You can protect the control channels via the SSL encryption protocol. With an additional license, the user data itself can be encrypted.

Configuration
The VIP XD can be configured with a Web browser on the local network (Intranet) or via the Internet. Alternatively, you can perform the configuration using the Configuration Manager program, which is contained on the product CD included in the scope of delivery.

In the same way, firmware updates and fast loading of device configurations are possible.
Summary
The VIP XD provides the following main functions:
- Video and data reception over IP data networks
- Quad view function with simultaneous decoding of four video streams
- BNC composite video output (PAL/NTSC) for connecting an analog monitor and Sub-D video interface (VGA/SVGA) for connecting a computer monitor
- Video decoding using MPEG-4, MPEG-2 and H.264
- Integrated Ethernet port (10/100 Base-T)
- Transparent, bidirectional data channel via RS-232/RS-422/RS-485 serial interface
- Configuration and remote control of all internal functions via TCP/IP, also secured via HTTPS
- Password protection to prevent unauthorized connection or configuration changes
- Four alarm inputs for external sensors (such as door contacts)
- Relay output for switching external units (such as lamps or sirens)
- Event-controlled automatic connection
- Convenient maintenance via uploads
- Flexible encryption of control and data channels
- Authentication according to international standard 802.1x

The audio version also offers:
- Transmission and receipt of audio signals
- Bidirectional audio (mono) for line or microphone/speaker links
- Audio encoding to international standard G.711
3.4 Connections on the Front Panel

1. **Line In** audio line input (audio version only)
   3.5 mm / 1/8 in. stereo socket for connecting an audio line input signal

2. Terminal connector (audio version only)
   for microphone and loudspeaker connections

3. **Line Out** audio line output (audio versions only)
   3.5 mm / 1/8 in. stereo socket for connecting an audio line output signal

4. **VGA** video output
   Sub-D socket for connecting a computer monitor

5. **Video Out** video output
   BNC socket for connecting a video monitor
3.5 Connections on the Rear Panel

6 Factory reset button
to restore factory default settings

7 Terminal block
for alarm inputs, relay output, serial interface and power supply

8 Operating status LED
lights up green when ready for operation

9 L LED
lights up green when the unit is connected to the network

10 T LED
flashes orange when data is being transmitted over the network

11 ETH RJ45 socket
for connecting to an Ethernet LAN (local network), 10/100 MBit Base-T

NOTICE!
For more information about the LEDs, see Section 8.2 LEDs, page 65.
For terminal block assignment, see Section 8.6 Terminal Block, page 66.
4 Installation

4.1 Preparations

Thanks to its ultra-compact dimensions, the VIP XD is particularly well suited to installation in cabinets or consoles where space is at a premium.

**CAUTION!**
The unit is intended for use indoors or in housings. Select a suitable location for installation that guarantees to meet the environmental conditions. The ambient temperature must be between 0 and +50 °C (+32 and +122 °F). The relative humidity must not exceed 95%.
The VIP XD generates heat during operation, so you should ensure that there is adequate ventilation and enough clearance between the unit and heat-sensitive objects or equipment.

Please ensure the following installation conditions:
- Do not install the unit close to heaters or other heat sources. Avoid locations exposed to direct sunlight.
- Allow sufficient space for running cables.
- Ensure that the unit has adequate ventilation.
- When making connections, use only the cables supplied or use appropriate cables immune to electromagnetic interference.
- Position and run all cables so that they are protected from damage, and provide adequate cable strain relief where needed.
- Avoid impacts, blows and severe vibrations as these can irreparably damage the unit.
4.2 Connections

Monitors
As required, you can connect an analog video monitor (PAL/NTSC) or a VGA-compatible computer monitor.

- Connect an analog video monitor to the BNC Video Out socket using a video cable (75 Ohm, BNC plug) or
- Connect a VGA-compatible computer monitor to the VGA sub-D socket using a video cable (VGA, 15-pin sub-D plug).

Audio Connections (Audio Version Only)
The audio version of the VIP XD has two audio ports for audio line signals as well as a microphone input and a loudspeaker output.

The audio signals are transmitted two-way and in sync with the video signals. As a result, you can connect a speaker or door intercom system at the destination point, for example.

NOTICE!
If possible, you should use the line ports of the intercom for transmitting audio signals on the intercom systems. The following specifications should be complied with in all cases.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Line In:</strong></td>
<td>Impedance 9 kOhm typ., 5.5 V&lt;sub&gt;pp&lt;/sub&gt; max. input voltage</td>
</tr>
<tr>
<td><strong>Line Out:</strong></td>
<td>Impedance 16 Ohm min., 3 V&lt;sub&gt;pp&lt;/sub&gt; max. output voltage</td>
</tr>
<tr>
<td><strong>MIC (microphone):</strong></td>
<td>Impedance 2 kOhm typ., 2.8 V&lt;sub&gt;pp&lt;/sub&gt; max. input voltage, –20 dB in, power supply 2.3 V typ.</td>
</tr>
<tr>
<td><strong>SPK (loudspeaker):</strong></td>
<td>Impedance 4 Ohm min., 6 V&lt;sub&gt;pp&lt;/sub&gt; max. output voltage, power output RMS 1 W</td>
</tr>
</tbody>
</table>

The stereo plugs must be connected as follows:

<table>
<thead>
<tr>
<th>Contact</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tip</td>
<td>Channel 1</td>
</tr>
<tr>
<td>Middle ring</td>
<td>–</td>
</tr>
<tr>
<td>Lower ring</td>
<td>Ground</td>
</tr>
</tbody>
</table>

1. Connect an audio source with line level to the **Line In** socket of the VIP XD with a 3.5 mm stereo plug.
2. Connect a unit with line-in connection to the **Line Out** socket of the VIP XD with a 3.5 mm stereo plug.

If you wish to connect a microphone and a loudspeaker directly:
1. Connect the microphone cords to the **MIC** and **GND** connections on the push-in terminal.
2. Connect the loudspeaker cords to the **SPK** connections on the push-in terminal.
Network
You can connect the VIP XD to a 10/100 Base-T network using a standard UTP category 5 cable with RJ45 plugs.
► Connect the VIP XD to the network via the ETH socket.

Data Interface
The bi-directional data interface is used to control units connected to the VIP XD, for example a control panel for dome cameras with motorized lens. The connection supports the RS-232, RS-422 and RS-485 transmission standards.
The VIP XD offers the serial interface via the orange terminal block (see Section 8.6 Terminal Block, page 66).
The range of controllable equipment is expanding constantly. The manufacturers of the relevant equipment provide specific information on installation and control.

CAUTION!
Please take note of the appropriate documentation when installing and operating the unit to be controlled.
The documentation contains important safety instructions and information about permitted uses.

NOTICE!
A video connection is necessary to transmit transparent data.

Alarm Inputs
The VIP XD has four alarm inputs on the orange terminal block (see Section 8.6 Terminal Block, page 66). The alarm inputs are used to connect to external alarm devices such as door contacts or sensors. With the appropriate configuration, an alarm sensor can automatically connect the VIP XD to a particular sender, for example.
A zero potential closing contact or switch can be used as the actuator.

NOTICE!
If possible, use a bounce-free contact system as the actuator.

► Connect the lines to the appropriate terminals on the orange terminal block (IN1 to IN4) and check that the connection is secure.
Relay Output
The VIP XD has a relay output for switching external units such as lamps or sirens. This relay output can be activated manually during a connection session with the VIP XD. The output can also be configured to automatically activate sirens or other alarm units in response to an alarm signal. The relay output is also located on the orange terminal block (see Section 8.6 Terminal Block, page 66).

CAUTION!
The maximum rating of the relay contact is 30 V and 2 A (SELV).

- Connect the lines to the appropriate terminals of the orange terminal block (R) and check that the connection is secure.
4.3 Power On/Power Off

Power Supply
The VIP XD comes with a plug-in power supply unit (PSU) with four primary adapters and a terminal block. The VIP XD does not have a power switch. The VIP XD is ready for operation as soon as it is connected to the power supply.

CAUTION!
The VIP XD may only be operated using the supplied PSU with the correct primary adapter for your power outlet.
Where necessary, use suitable equipment to ensure that the power supply is free from interference such as voltage surges, spikes or voltage drops.
Do not connect the VIP XD to the power supply until all other connections have been made.

1. Plug the terminal block with the PSU cable connected to it into the orange socket on the VIP XD.
2. Ensure that the correct primary adapter is attached to the power supply unit and that a suitable power outlet is available.
3. Plug the power supply unit into the grounded power outlet. The unit is ready for operation as soon as the operating status LED stops flashing red during start-up and lights up green.
Provided the network connection has been correctly made, the green LED also lights up. The flashing orange LED indicates data traffic on the network.

4.4 Setup Using the Configuration Manager

The Configuration Manager program can be found on the product CD contained in the scope of delivery. This program allows you to implement and set up new video servers in the network quickly and conveniently.

NOTICE!
Using the Configuration Manager to set all parameters in the VIP XD is an alternative to configuration by means of a Web browser, as described in chapter 5 of this manual.

Installing the Program
1. Insert the CD into the computer's CD-ROM drive.
2. If the CD does not start automatically, open the Configuration Manager directory using Windows Explorer and double-click Setup.exe.
3. Follow the on-screen instructions.
Configuring the VIP XD

You can start the Configuration Manager immediately after installation.

1. Double-click the icon on the desktop or start the program via the Start menu. After the program has started, the network is immediately searched for compatible video servers.

2. You can start the configuration if a VIP XD is shown in the list in the left section of the window. To do this, right-click the entry for the unit.

3. Click **Unit network settings...** in the popup menu.

4. In the **Unit IP address** field, enter a valid IP address for your network (for example **192.168.0.32**) and click **OK**. The unit reboots and the IP address is valid.

5. If required, enter an appropriate subnet mask for the IP address, and additional network data.

**NOTICE!**

You must reboot to activate the new IP address, a new subnet mask or a gateway IP address.

---

**Reboot**

You can trigger the reboot directly with the assistance of the Configuration Manager.

- Right-click the entry for the unit in the list in the left section of the window and select the **Reset** command from the context menu.

**Additional Parameters**

You can check and set additional parameters with the assistance of the Configuration Manager. You can find detailed information on this in the documentation for this program.
5 Configuration Using a Web Browser

5.1 Connecting

The integrated HTTP server in the VIP XD provides you with the option to configure the unit over the network with a Web browser. This option is an alternative to configuration using the Configuration Manager program and is considerably richer in function and more convenient than configuration using the terminal program.

System Requirements

- Computer with Windows XP or Windows Vista operating system
- Network access (Intranet or Internet)
- Microsoft Internet Explorer (version 6.0 or higher)
- Screen resolution 1,024 × 768 pixels
- 16- or 32-bit color depth
- Installed Sun JVM

NOTICE!

Also note the information in the System Requirements document on the product CD supplied. If necessary, you can install the required programs and controls from the product CD supplied (see Section 3.1 Scope of Delivery, page 9).

The Web browser must be configured to enable Cookies to be set from the IP address of the unit.

In Windows Vista, deactivate protected mode on the Security tab under Internet Options. You can find notes on using Microsoft Internet Explorer in the online Help in Internet Explorer.

Installing MPEG ActiveX

Suitable MPEG ActiveX software must be installed on the computer to allow the live video images to be played back. If necessary, you can install the program from the product CD supplied.

1. Insert the product CD into the computer's CD-ROM drive. If the CD does not start automatically, open the root directory of the CD in Windows Explorer and double-click MPEGAx.exe.
2. Follow the on-screen instructions.
**Establishing the Connection**

The VIP XD must be assigned a valid IP address to operate on your network. The following default address is preset at the factory: **192.168.0.1**

1. Start the Web browser.
2. Enter the IP address of the VIP XD as the URL. The connection is established and after a short time you will see the **CONNECTIONS** page.

---

**Maximum Number of Connections**

If you do not connect, the unit may have reached its maximum number of connections. Depending on the unit and network configuration, each VIP XD can have up to 25 Web browser connections or up to 50 connections via VIDOS or Bosch Video Management System.
Protected VIP XD
If the VIP XD is password protected against unauthorized access, the Web browser displays a corresponding message and prompts you to enter the password when you attempt to access protected areas.

1. Enter the user name and associated password in the corresponding text fields.
2. Click OK. If the password is entered correctly, the Web browser displays the page that was called up.

Protected Network
If a RADIUS server is employed in the network for managing access rights (802.1x authentication), the VIP XD must be configured accordingly, otherwise no communication is possible.

To configure the unit, you must connect the VIP XD directly to a computer using a network cable. This is because communication via the network is not enabled until the Identity and Password parameters have been set and successfully authenticated (see Section Authentication, page 48).
5.2 Configuration Menu

The SETTINGS page provides access to the configuration menu, which contains all the unit’s parameters arranged in groups.

You can view the current settings by opening one of the configuration screens. You can change the settings by entering new values or by selecting a predefined value from a list field.

All parameter groups are described in this chapter in the order in which they are listed in the configuration menu, from the top of the screen to the bottom.

CAUTION!

The settings in the configuration menu should only be processed or modified by expert users or system support personnel.

All settings are backed up in the VIP XD memory so they are not lost even if the power fails.

Navigation

1. Click one of the menu items in the left window margin. The corresponding submenu is displayed.
2. Click one of the entries in the submenu. The Web browser opens the corresponding page.

Making Changes

Each configuration screen shows the current settings. You can change the settings by entering new values or by selecting a predefined value from a list field.

After each change, click Set to save the change.

CAUTION!

Save each change with the associated Set button.

Clicking the Set button saves the settings only in the current field. Changes in any other fields are ignored.
5.3 Identification

Device ID
Each VIP XD should be assigned a unique identifier that you can enter here as an additional means of identification.

Device name
You can give the VIP XD a name to make it easier to identify. The name makes the task of administering multiple units in larger video monitoring systems easier, for example using the VIDOS or Bosch Video Management System programs. The device name is used for the remote identification of a unit, in the event of an alarm for example. For this reason, enter a name that makes it as easy as possible to quickly identify the location.

5.4 Password

A VIP XD is generally protected by a password to prevent unauthorized access to the unit. You can use different authorization levels to limit access.

NOTICE!
Proper password protection with a user password is only guaranteed when the higher authorization level service is also password protected. When assigning passwords, you should therefore always start from the highest authorization level, service, and use different passwords.
Password
The VIP XD operates with two authorization levels: service and user. The highest authorization level is service. After entering the correct password, you can access all the functions of the VIP XD and change all configuration settings. You can use the user authorization level to connect the unit to a sender in the network and to disconnect it, but you cannot change the configuration. You can define and change a password for each authorization level if you are logged in as service or if the unit is not password protected. Enter the password for the appropriate authorization level here.

Confirm password
In each case, enter the new password a second time to eliminate typing mistakes.

**NOTICE!**
A new password is only saved when you click the Set button. You should therefore click the Set button immediately after entering and confirming a password.

### 5.5 Date/Time

#### Date format
Select your required date format.

#### Unit date / Unit time
If there are multiple devices operating in your system or network, it is important to synchronize their internal clocks. For example, it is only possible to identify and correctly evaluate simultaneous recordings when all units are operating on the same time.

1. Enter the current date. Since the unit time is controlled by the internal clock, there is no need to enter the day of the week – it is added automatically.
2. Enter the current time or click the **Sync to PC** button to copy your computer's system time to the VIP XD.

#### Unit time zone
Select the time zone in which your system is located.
Daylight saving time
The internal clock can switch automatically between normal and daylight saving time (DST).
The unit already contains the data for DST switch-overs up to the year 2018. You can use
these data or create alternative time saving data if required.

NOTICE!
If you do not create a table, there will be no automatic switching. When changing and clearing
individual entries, remember that two entries are usually related to each other and dependent
on one another (switching to summer time and back to normal time).

1. First check whether the correct time zone is selected. If it is not correct, select the
   appropriate time zone for the system, and click the Set button.
2. Click the Details button. A new window will open and you will see the empty table.
3. Select the region or the city that is closest to the system's location from the list field
   below the table.
4. Click the Generate button to generate data and enter this into the table.
5. Make changes by clicking an entry in the table. The entry is selected.
6. Clicking the Delete button will remove the entry from the table.
7. Select other values from the list fields below the table to change the entry. Changes are
   made immediately.
8. If there are empty lines at the bottom of the table, for example after deletions, you can
   add new data by marking the row and selecting required values from the list fields.
9. Now click the OK button to save and activate the table.

Time server IP address
Enter the IP address of a time server.

Time server type
The VIP XD can receive the time signal from a time server using various time server protocols,
and then use it to set the internal clock. The unit polls the time signal automatically once
every minute.
Select the protocol that is supported by the selected time server. Preferably, you should
select the SNTP server as the protocol. This supports a high level of accuracy and is required
for special applications and subsequent function extensions.
Select Time server for a time server that works with the protocol RFC 868.
5.6 Appearance

On this page you can adapt the appearance of the web interface and change the website language to meet your requirements. If necessary, you can replace the manufacturer's logo (top right) and the product name (top left) in the top part of the window with individual graphics.

**NOTICE!**
You can use either GIF or JPEG images. The file paths must correspond to the access mode (for example C:\Images\Logo.gif for access to local files, or http://www.mycompany.com/images/logo.gif for access via the Internet/Intranet).
When accessing via the Internet/Intranet, ensure that a connection is always available to display the image. The image file is not stored in the VIP XD.

**Website language**
Select the language for the user interface here.

**NOTICE!**
There are always two languages to choose from: English and another language. If the language you require is not available for selection, you can download the current firmware with another language combination from the website www.boschsecurity.com.

**Company logo**
Enter the path to a suitable graphic if you want to replace the manufacturer's logo. The image file can be stored on a local computer, in the local network or at an Internet address.

**Device logo**
Enter the path to a suitable graphic if you want to replace the product name. The image file can be stored on a local computer, in the local network or at an Internet address.

**NOTICE!**
If you want to use the original graphics again, simply delete the entries in the **Company logo** and **Device logo** fields.
5.7 Decoder Profile

In this screen you can set the various options for the display of video images on an analog monitor or VGA monitor. A number of presets are available for configuring the VGA video output signal. These presets can be adapted to individual requirements if necessary.

Monitor name

You can give the monitor connected to the VIP XD a name to make it easier to identify. The name makes the task of administering multiple units in larger video monitoring systems easier, for example using the VIDOS or Bosch Video Management System programs. The monitor name allows you to remotely identify the monitor location. For this reason, enter a name that makes it as easy as possible to quickly identify the location.

Standard

You can adapt the video output signal to the monitor you are using. Eight pre-configured settings for VGA monitors are available in addition to the PAL and NTSC options for analog video monitors.

Each pre-configured setting gives priority to different factors (resolution, border settings, refresh rate).

Details of the settings can be seen in the VGA field. Here you can also adapt the options to individual requirements if necessary.

1. Test different pre-configured settings from the list to obtain an optimum monitor image.
2. After selecting a setting, click the Set button to activate the setting at the video output.

Overscan

You can use the Overscan function to display images with clear, straight edges that go right up to the monitor margins.

Deactivate the Overscan function if you are using an analog monitor and single view display.

Window layout

You can specify the default image layout for the monitor. The image layout can also be selected at any time during operation on the CONNECTIONS page.

CAUTION!

Be sure to choose the correct video standard to avoid damaging the monitor. Selecting a VGA setting with values outside the technical specification of the monitor can result in severe damage to the monitor. Refer to the technical documentation of the monitor you are using.

You can adapt the video output signal to the monitor you are using. Eight pre-configured settings for VGA monitors are available in addition to the PAL and NTSC options for analog video monitors.

Each pre-configured setting gives priority to different factors (resolution, border settings, refresh rate).

Details of the settings can be seen in the VGA field. Here you can also adapt the options to individual requirements if necessary.

1. Test different pre-configured settings from the list to obtain an optimum monitor image.
2. After selecting a setting, click the Set button to activate the setting at the video output.

Overscan

You can use the Overscan function to display images with clear, straight edges that go right up to the monitor margins.

Deactivate the Overscan function if you are using an analog monitor and single view display.

Window layout

You can specify the default image layout for the monitor. The image layout can also be selected at any time during operation on the CONNECTIONS page.
**VGA screen size**
Enter the aspect ratio of the screen here (for example 4 × 3) or the physical size of the screen in millimeters. The unit uses this information to accurately scale the video image for distortion-free display.

### 5.8 VGA

The pre-configured settings are saved as **Profile 1** to **Profile 8**. You can change the different parameter values within a profile. You can switch between profiles by clicking the appropriate tabs.

The pre-configured settings (profiles) cover all standard applications. You should only change the preset values if none of the profiles gives satisfactory results.

**CAUTION!**
Selecting settings that are outside the technical specification of the monitor can result in severe damage to the monitor. Refer to the technical documentation of the monitor you are using.

**NOTICE!**
All parameters combine to make up a profile. The parameters are partially dependent on one another.
After each change, click the **Test** button to see the effect of the change on the connected monitor.
Resolution
You can enter the desired screen resolution in pixels here. On digital flat screens (LCD, TFT and others) the optimum resolution corresponds to the actual number of pixels. Resolutions up to 800 × 600 pixels are supported by default.

Refresh rate
Enter the desired refresh rate based on the technical specification of the monitor you are using. For smooth video playback, the 50 Hz setting is recommended for PAL sources and the 60 Hz setting for NTSC sources.

NOTICE!
For tube monitors, higher refresh rates may be advisable for ergonomic reasons. However, to prevent damage to monitors that do not support these refresh rates, the exact monitor data must first be set using the terminal program (see Section 8.7 Communication with Terminal Program, page 67).

Border top / bottom / left / right
You can place a frame around the video image to make it easier to see. The width of all four borders can be adjusted individually. The color of the frame (gray tone) can be specified in the Details window (see Section Details, page 32).

Horiz. spacing / Vert. spacing
For a quad view screen, as well as the outer frame you can define separating lines between the different images. You can set the width of the horizontal and vertical separating lines individually. The color is the same as the frame color.

Screen position
You can move the video image horizontally and vertically within the screen area. You can also adjust the width and height of the video image.
1. Click one of the four arrows in the large monitor graphic to move the image in the desired direction.
2. Click the plus or minus icons next to the small monitor graphics to change the size of the image.

NOTICE!
If the horizontal or vertical scaling of the monitor image is changed, the new values for Hor. scan rate and Dot clock are immediately displayed in the fields above the monitor graphics for information. You cannot enter or change these settings in the actual fields.
Details

The Details window allows you to adapt the video output signal to specific requirements with greater detail. You can also set the frame color for the image border.

**Horizontal synchronization / Vertical synchronization**
Here you can select the way in which the relevant synchronization pulse will be output.

**Border color**
You can set the required gray tone for the outer frame and any separating lines between the video images for a quad view screen, if necessary.
Click the arrows or move the slide control while holding down the mouse button.

**Sync. length / Retrace length / Sync. position**
Here you can match the settings for the synchronization signals to specific requirements, if necessary.

**Resetting Changes**
You can undo all the changes you have made to the profiles and restore each profile to its original settings.
1. Click the **Defaults** button to reset the settings for the profile currently displayed to their default values.
2. If you wish to discard changes to a profile that you have not yet explicitly saved, click the **Discard** button. You will see the last saved settings for that profile.

**Saving Changes**
Once you have tested your settings on the connected monitor by clicking the **Test** button, you can save the new settings. Settings will only be saved for the currently displayed profile.
Click the **Save** button to save the current profile with the settings displayed.
5.9 Monitor Display

The VIP XD can recognize transmission interruptions and display a warning on the monitor if set accordingly.

**Display transmission disturbance**
Select On if the monitor is to display a warning in the event of a transmission interruption.

**Disturbance sensitivity**
You can set the level of interruption at which the display should be triggered.

**Disturbance notification text**
Enter the text that the VIP XD should display on the monitor. The maximum text length is 31 characters.

5.10 Audio (Audio Version Only)

You can set the gain of the audio signals to suit your specific requirements. Your changes are effective immediately.

If you connect via Web browser you must activate the audio transmission on the **CONNECTIONS** page (see *Section 6.2 The CONNECTIONS Page, page 56*). For other connections, the transmission depends on the audio settings of the respective system.

**Audio**
The audio signals are sent in a separate data stream parallel to the video data, and so increase the network load. The audio data are encoded according to G.711 and require an additional bandwidth of approx. 80 kbps for each connection. If you do not want any audio data to be transmitted, select Off.
Line In / Microphone (MIC)
You can set the audio signal gain for the line and microphone input. Make sure that the display does not go beyond the green zone during modulation.

Line Out/Speaker (SPK)
You can set the gain of the line and loudspeaker output. Make sure that the display does not go beyond the green zone during modulation.

Selection
Click one of the option boxes and then click Set to display the level of the respective audio input for orientation and to set the gain.

5.11 Alarm Connections

You can select how the VIP XD responds to an alarm. In the event of an alarm, the unit can automatically connect to a pre-defined IP address. You can enter up to ten IP addresses to which the VIP XD will connect in sequence in the event of an alarm, until a connection is made.

Connect on alarm
Select On so that the VIP XD automatically connects to a predefined IP address in the event of an alarm.

By setting Follows input 1, the VIP XD automatically connects to a remote station and holds the connection as long as an alarm exists on alarm input 1. This option can also be used to connect two units (sender and receiver) via a switch connected to the VIP XD. You do not need a computer to make the connection in this case.

NOTICE!
In the default setting, Stream 2 is transmitted for automatic connections. Bear this fact in mind when assigning the profile to the corresponding sender.
**Number of destination IP address**
Specify the numbers of the IP addresses to be contacted in the event of an alarm. The unit contacts the remote stations one after the other in the numbered sequence until a connection is made.

**Destination IP address**
For each number, enter the corresponding IP address for the desired remote station.

**Destination password**
If the remote station is password protected, enter the password here.

In this page, you can save a maximum of ten destination IP addresses and hence up to ten passwords for connecting to remote stations. If connections to more than ten remote stations are to be possible, for example when initiating connections via higher-ranking systems such as VIDOS or Bosch Video Management System, you can store a general password here. The VIP XD can use this general password to connect to all remote stations protected with the same password. In this case, proceed as follows:

1. Select **10** from the **Number of destination IP address** list field.
2. Enter the address **0.0.0.0** in the **Destination IP address** field.
3. Enter your chosen password in the **Destination password** field.
4. Define this password as the **user** password for all remote stations to which a connection is to be possible.

**Video transmission**
If the unit is operated behind a firewall, **TCP (HTTP port)** should be selected as the transfer protocol. For use in a local network, select **UDP**.

**Remote port**
Depending on the network configuration, select a browser port here. The ports for HTTPS connections will be available only if the **On** option is selected in the **SSL encryption** parameter.

**Decoder**
Select a decoder of the receiver to display the alarm image. The decoder selected has an impact on the position of the image in a split screen. For example, you can specify that the upper-right quadrant should be used to display the alarm image by selecting decoder 2.

**SSL encryption**
The data for the connection, for example the password, can be securely transmitted with SSL encryption. If you have selected the **On** option, only encrypted ports are offered in the **Remote port** parameter.
You can activate and configure encryption of the media data (video, audio and metadata) on the Encryption page (see Section 5.20 Encryption, page 48).

**Auto-connect**
Select the On option to automatically re-establish a connection to one of the previously specified IP addresses after each reboot, after a connection breakdown or after a network failure.

**NOTICE!**
Please note that the SSL encryption must be activated and configured at both ends of a connection. This requires the appropriate certificates to be uploaded onto the VIP XD (see Section Delete decoder logo, page 50).

In the default setting, Stream 2 is transmitted for automatic connections. Bear this fact in mind when assigning the profile to the corresponding sender.

**Audio (Audio Version Only)**
Select the On option if you wish to additionally transmit a standalone G.711 encoded audio stream with alarm connections.

**Default camera**
Here you can select the camera whose image will be automatically displayed first on the receiver when the alarm connection is made. Depending on the system configuration, you can then select the other cameras as well.

**NOTICE!**
The numbering follows the labeling of the video inputs on the corresponding sender.
5.12 Audio Alarm (Audio Version Only)

The VIP XD can create alarms on the basis of audio signals. You can configure signal strengths and frequency ranges in such a way that false alarms, for example due to machine noise or background noise, are avoided.

**NOTICE!**
First set up normal audio transmission before you configure the audio alarm here (see Section 5.10 Audio (Audio Version Only), page 33).

**CAUTION!**
Do not use any special characters, for example &, in the name. Special characters are not supported by the system's internal recording management and may therefore result in the Player or Archive Player being unable to play back the recording.

---

**Audio Alarm**

Select **On** if you want the device to generate audio alarms.

**Name**
The name makes it easier to identify the alarm in extensive video monitoring systems, for example with the VIDOS and Bosch Video Management System programs. Enter a unique and clear name here.

**Threshold**
Set up the threshold on the basis of the signal visible in the graphic. You can set the threshold using the slide control or, alternatively, you can move the white line directly in the graphic using the mouse.
Sensitivity
You can use this setting to adapt the sensitivity to the sound environment. You can effectively suppress individual signal peaks. A high value represents a high level of sensitivity.

Signal Ranges
You can exclude particular signal ranges in order to avoid false alarms. For this reason the total signal is divided into 13 tonal ranges (mel scale). Check or uncheck the boxes below the graphic to include or exclude individual ranges.

5.13 Alarm E-Mail

As an alternative to automatic connecting, alarm states can also be documented by e-mail. In this way it is possible to notify a recipient who does not have a video receiver. In this case, the VIP XD automatically sends an e-mail to a previously defined e-mail address.

Send alarm e-mail
Select On if you want the unit to automatically send an alarm e-mail in the event of an alarm.

Mail server IP address
Enter the IP address of a mail server that operates on the SMTP standard (Simple Mail Transfer Protocol). Outgoing e-mails are sent to the mail server via the address you entered. Otherwise leave the box blank (0.0.0.0).

SMTP user name
Enter a registered user name for the chosen mailserver here.

SMTP password
Enter the required password for the registered user name here.
**Format**
You can select the data format of the alarm message.

- **Standard**
  E-mail.

- **SMS**
  E-mail in SMS format to an e-mail-to-SMS gateway (for example to send an alarm by cellphone).

---

**CAUTION!**
When a cellphone is used as the receiver, make sure to activate the e-mail or SMS function, depending on the format, so that these messages can be received.

You can obtain information on operating your cellphone from your cellphone provider.

---

**Destination address**
Enter the e-mail address for alarm e-mails here. The maximum address length is 49 characters.

**Sender name**
Enter a unique name for the e-mail sender, for example the location of the unit. This will make it easier to identify the origin of the e-mail.

**Test e-mail**
You can test the e-mail function by clicking the **Send Now** button. An alarm e-mail is immediately created and sent.
5.14 Alarm Task Editor

As an alternative to the alarm settings on the various alarm pages, you can enter your desired alarm functions in script form here. This will overwrite all settings and entries on the other alarm pages.

1. Click the Examples link under the Alarm Task Editor field to see some script examples. A new window will open.
2. Enter new scripts in the Alarm Task Editor field or change existing scripts in line with your requirements.
3. When you are finished, click the Set button to transmit the scripts to the unit. If the transfer was successful, the message Script successfully parsed is displayed over the text field. If it was not successful, an error message will be displayed with further information.

**CAUTION!**
Editing scripts on this page overwrites all settings and entries on the other alarm pages. This procedure cannot be reversed.

In order to edit this page, you must have programming knowledge and be familiar with the information in the Alarm Task Script Language document. You can find the document on the product CD supplied (see Section 3.1 Scope of Delivery, page 9).
5.15 **Alarm Inputs**

You can configure the alarm inputs of the VIP XD.

**Alarm input**

Select **Active high** if the alarm is to be triggered when the contact closes. Select **Active low** if the alarm is to be triggered when the contact opens.

**Name**

For easier identification, you can enter a name for each alarm input.

---

5.16 **Relay**

You can configure the switching behavior of the relay output. You can specify an open switch relay (normally closed contact) or a closed switch relay (normally open contact).

You can also specify whether the output should operate as a bistable or monostable relay. In bistable mode, the triggered state of the relay is maintained. In monostable mode, you can set the time after which the relay will return to the idle state.

You can select different events that automatically activate the output. It is possible, for example, to turn on a floodlight by triggering a motion alarm and then turning the light off again when the alarm has stopped.

**Idle state**

Select **Open** if you want the relay to operate as an NO contact, or select **Closed** if the relay is to operate as an NC contact.
Operating mode
Select an operating mode for the relay.
For example, if you want an alarm-activated lamp to stay on after the alarm ends, select Bistable. If you wish an alarm-activated siren to sound for ten seconds, for example, select 10 s.

Relay follows
If required, select a specific event that will trigger the relay. The following events are possible triggers:
- Off
  Relay is not triggered by events
- Connection
  Trigger whenever a connection is made
- Local input 1
  Trigger by external alarm input 1
- Remote input 1
  Trigger by remote station's switching contact 1 (only if a connection exists)

Relay name
You can assign a name for the relay here. The name is shown on the button next to Trigger relay.

Trigger relay
Click the button to trigger the relay manually (for testing or to operate a door opener, for example).
5.17  COM1

You can configure the serial interface parameters (orange terminal block) to meet your requirements.

**Serial port function**
Select the desired serial port function from the list. If you wish to use the serial port to transmit transparent data, when using a control desk for example, select **Transparent**. Select **Terminal** if you wish to operate the unit from a terminal.

**Baud rate**
Select the value for the transmission rate in bps.

**Data bits**
The number of data bits per character cannot be changed.

**Stop bits**
Select the number of stop bits per character.

**Parity check**
Select the type of parity check.

**Interface mode**
Select the desired protocol for the serial interface.
5.18 Network

The settings on this page are used to integrate the VIP XD into an existing network. Some changes only take effect after the unit is rebooted. In this case, the **Set** button changes to **Set and Reboot**.

1. Make the desired changes.
2. Click the **Set and Reboot** button. The VIP XD is rebooted and the changed settings are activated.
Automatic IP assignment
If a DHCP server is employed in the network for the dynamic assignment of IP addresses, you can activate acceptance of IP addresses automatically assigned to the VIP XD. Certain applications (VIDOS, Bosch Video Management System, Archive Player, Configuration Manager) use the IP address for the unique assignment of the unit. If you use these applications, the DHCP server must support the fixed assignment between IP address and MAC address, and must be appropriately set up so that, once an IP address is assigned, it is retained each time the system is rebooted.

IP address
Enter the desired IP address for the VIP XD in this field. The IP address must be valid for the network.

Subnet mask
Enter the appropriate subnet mask for the selected IP address here.

Gateway address
If you want the unit to establish a connection to a remote location in a different subnet, enter the IP address of the gateway here. Otherwise leave the box blank (0.0.0.0).

DNS server address
The unit can use a DNS server to trigger an address specified as a name. Enter the IP address of the DNS server here.

Video transmission
If the unit is operated behind a firewall, TCP (HTTP port) should be selected as the transfer protocol. For use in a local network, select UDP.

HTTP browser port
Select a different HTTP browser port from the list if required. The default HTTP port is 80. If you want to allow only secure connections via HTTPS, you must deactivate the HTTP port. In this case, select Off.

HTTPS browser port
If you wish to allow browser access on the network via a secure connection, select an HTTPS browser port from the list if necessary. The default HTTPS port is 443. Select the Off option to deactivate HTTPS ports; only unsecured connections will now be possible. The VIP XD uses the TLS 1.0 encryption protocol. You may have to activate this protocol via your browser configuration. You must also activate the protocol for the Java applications (via the Java control panel in the Windows control panel).

CAUTION!
If you change the IP address, subnet mask or gateway address, the VIP XD is only available under the new addresses after the reboot.

CAUTION!
Multicast operation is only possible with the UDP protocol. The TCP protocol does not support multicast connections. The MTU value in UDP mode is 1,514 bytes.
NOTICE!
If you want to allow only secure connections with SSL encryption, you must select the Off option for each of the parameters HTTP browser port, RCP+ port 1756 and Telnet support. This deactivates all unsecured connections. Connections will then only be possible via the HTTPS port.

You can activate and configure encryption of the media data (video, audio and metadata) on the Encryption page (see Section 5.20 Encryption, page 48).

RCP+ port 1756
To exchange connection data, you can activate the unsecured RCP+ port 1756. If you want connection data to be transmitted only when encrypted, select the Off option to deactivate the port.

Telnet support
If you want to allow only secure connections with encrypted data transmission, you must select the Off option to deactivate Telnet support. The unit will then no longer be accessible using the Telnet protocol.

Interface mode ETH
If necessary, select the Ethernet link type for the ETH interface. Depending on the unit connected, it may be necessary to select a special operation type.

Network MSS (Byte)
You can set the maximum segment size for the IP packet's user data. This gives you the option to adjust the size of the data packets to the network environment and to optimize data transmission. Please comply with the MTU value of 1,514 bytes in UDP mode.

Enable DynDNS
DynDNS.org is a DNS hosting service that stores IP addresses in a database ready for use. It allows you to select the VIP XD via the Internet using a host name, without having to know the current IP address of the unit. You can enable this service here. To do this, you must have an account with DynDNS.org and you must have registered the required host name for the unit on that site.

NOTICE!
Information about the service, registration process and available host names can be found at DynDNS.org.

Host name
Enter the host name registered on DynDNS.org for the VIP XD here.

User name
Enter the user name you registered at DynDNS.org here.

Password
Enter the password you registered at DynDNS.org here.

Force registration now
You can force the registration by transferring the IP address to the DynDNS server. Entries that change frequently are not provided in the Domain Name System. It is a good idea to force the registration when you are setting up the device for the first time. Only use this function when necessary and no more than once a day, to avoid the possibility of being blocked by the service provider. To transfer the IP address of the VIP XD, click the Register button.
**Status**
The status of the DynDNS function is displayed here for information purposes. You cannot change any of these settings.

**5.19 Advanced**

The settings on this page are used to implement advanced settings for the network.
Some changes only take effect after the unit is rebooted. In this case, the **Set** button changes to **Set and Reboot**.

1. Make the desired changes.
2. Click the **Set and Reboot** button. The VIP XD is rebooted and the changed settings are activated.

**SNMP**
The VIP XD supports the SNMP V2 (Simple Network Management Protocol) for managing and monitoring network components, and can send SNMP messages (traps) to IP addresses. The unit supports SNMP MIB II in the unified code. If you wish to send SNMP traps, enter the IP addresses of one or two required target units here.
If you select **On** for the **SNMP** parameter and do not enter an SNMP host address, the VIP XD does not send them automatically, but only replies to SNMP requests. If you enter one or two SNMP host addresses, SNMP traps are sent automatically. Select **Off** to deactivate the SNMP function.

1. **SNMP host address / 2. SNMP host address**
If you wish to send SNMP traps automatically, enter the IP addresses of one or two required target units here.
SNMP traps
You can select which traps are to be sent.
1. Click Select. A list is opened.
2. Click the checkboxes to select the required traps. All the checked traps will be sent.
3. Click OK to apply the selection.

Authentication
If a RADIUS server is employed in the network for managing access rights, authentication must be activated here to allow communication with the unit. The RADIUS server must also contain the corresponding data.
To configure the unit, you must connect the VIP XD directly to a computer using a network cable. This is because communication via the network is not enabled until the Identity and Password parameters have been set and successfully authenticated.

Identity
Enter the name that the RADIUS server is to use for identifying the VIP XD.

Password
Enter the password that is stored in the RADIUS server.

RTSP port
If necessary, select a different port for the exchange of the RTSP data from the list. The standard RTSP port is 554. Select Off to deactivate the RTSP function.

5.20 Encryption
A special license, with which you will receive a corresponding activation key, is required to encrypt user data. You can enter the activation key to release the function on the Licenses page (see Section 5.22 Licenses, page 51).
5.21 Maintenance

Firmware
The VIP XD is designed in such a way that its functions and parameters can be updated with firmware. To do this, transfer the current firmware package to the unit via the selected network. It will then be automatically installed there.

In this way, a VIP XD can be serviced and updated remotely without a technician having to change the installation on site.

You obtain the current firmware from your customer service or from the download area on our Internet site.

1. First store the firmware file on your hard drive.
2. Enter the full path of the firmware file in the field or click Browse to locate and select the file.
3. Next, click Upload to begin transferring the file to the unit. The progress bar allows you to monitor the transfer.

The new firmware is unpacked and the Flash EPROM is reprogrammed. The time remaining is shown by the message going to reset Reconnecting in ... seconds. The unit reboots automatically once the upload has successfully completed.

If the operating status LED lights up red, the upload has failed and must be repeated. To perform the upload you must now switch to a special page:

1. In the address bar of your browser, enter /main.htm after the IP address of the VIP XD (for example 192.168.0.32/main.htm).
2. Repeat the upload.

CAUTION!
Before launching the firmware upload make sure that you have selected the correct upload file. Uploading the wrong files can result in the unit no longer being addressable, in which case you must replace the unit.

You should never interrupt the installation of firmware. An interruption can lead to the flash-EPROM being incorrectly programmed. This in turn can result in the unit no longer being addressable, in which case it will have to be replaced. Even changing to another page or closing the browser window leads to an interruption.
Configuration
You can save configuration data for the VIP XD on a computer and then load saved configuration data from a computer to the unit.

Upload
1. Enter the full path of the file to upload or click Browse to select the required file.
2. Make certain that the file to be loaded comes from the same unit type as the unit you want to configure.
3. Next, click Upload to begin transferring the file to the unit. The progress bar allows you to monitor the transfer.

Once the upload is complete, the new configuration is activated. The time remaining is shown by the message going to reset Reconnecting in ... seconds. The unit reboots automatically once the upload has successfully completed.

Download
1. Click the Download button. A dialog box opens.
2. Follow the on-screen instructions to save the current settings.

SSL certificate
To be able to work with an SSL encrypted data connection, both ends of a connection must hold the relevant certificates. You can upload the SSL certificate, comprising one or multiple files, onto the VIP XD.

If you wish to upload multiple files onto the VIP XD, you must select them consecutively.

1. Enter the full path of the file to upload or click Browse to select the required file.
2. Next, click Upload to begin transferring the file to the unit.
3. Once all files have been successfully uploaded, the unit must be rebooted. In the address bar of your browser, enter /reset after the IP address of the VIP XD (for example 192.168.0.32/reset).

The new SSL certificate is valid.

Decoder logo
If no video camera is selected, the decoder logo is displayed instead of the camera image. It is possible to create your own decoder logo and load it onto the VIP XD.

To create the logo, you need a special program, which is available from Bosch Security Systems. Standard image formats are not supported for the decoder logo.
1. Enter the full path of the file to upload or click Browse to select the required file.
2. Click Upload to transfer the file to the unit.

Delete decoder logo
Click Delete decoder logo to remove the decoder logo.

Maintenance log
You can download an internal maintenance log from the unit to send it to Customer Service for support purposes. Click Download and select a storage location for the file.
5.22 Licenses

You can enter the activation key to release additional functions or software modules.

**NOTICE!**
The activation key cannot be deactivated again and is not transferable to other units.

5.23 System Overview

The data on this page are for information purposes only and cannot be changed. Keep a record of these numbers in case technical assistance is required.

**NOTICE!**
You can select all required text on this page with the mouse and copy it to the clipboard with the [Ctrl]+[C] key combination, for example if you want to send it via e-mail.
Function Test

The VIP XD offers a variety of configuration options. You should therefore check that it is functioning correctly after installation and configuration. The function test is the only way to ensure that the VIP XD operates as expected in the event of an alarm. 

Your check should include the following functions:
- Can the VIP XD be called up remotely?
- Does the VIP XD transmit all the required data?
- Does the VIP XD respond to alarm events as required?
- Is it possible to control peripherals if necessary?
6 Operation

6.1 Connecting

A computer with Microsoft Internet Explorer (version 6.0 or higher) can establish a connection to a compatible video server and play back the live images received on the monitor connected to the VIP XD.

System Requirements
- Computer with Windows XP or Windows Vista operating system
- Network access (Intranet or Internet)
- Microsoft Internet Explorer (version 6.0 or higher)
- Screen resolution 1,024 × 768 pixels
- 16- or 32-bit color depth
- Installed Sun JVM

NOTICE!
Also note the information in the System Requirements document on the product CD supplied. If necessary, you can install the required programs and controls from the product CD supplied (see Section 3.1 Scope of Delivery, page 9).

The Web browser must be configured to enable Cookies to be set from the IP address of the unit.
In Windows Vista, deactivate protected mode on the Security tab under Internet Options.
You can find notes on using Microsoft Internet Explorer in the online Help in Internet Explorer.

Installing MPEG ActiveX

Suitable MPEG ActiveX software must be installed on the computer to allow the live video images to be played back. If necessary, you can install the program from the product CD supplied.

1. Insert the product CD into the computer's CD-ROM drive. If the CD does not start automatically, open the root directory of the CD in Windows Explorer and double-click MPEGAx.exe.
2. Follow the on-screen instructions.
Establishing the Connection
The VIP XD must be assigned a valid IP address to operate on your network.
The following default address is preset at the factory: 192.168.0.1
1. Start the Web browser.
2. Enter the IP address of the VIP XD as the URL. The connection is established and after a short time you will see the CONNECTIONS page.

Maximum Number of Connections
If you do not connect, the unit may have reached its maximum number of connections. Depending on the unit and network configuration, each VIP XD can have up to 25 Web browser connections or up to 50 connections via VIDOS or Bosch Video Management System.
**Protected VIP XD**
If the VIP XD is password protected against unauthorized access, the Web browser displays a corresponding message and prompts you to enter the password when you attempt to access protected areas.

1. Enter the user name and associated password in the corresponding text fields.
2. Click **OK**. If the password is entered correctly, the Web browser displays the page that was called up.

**NOTICE!**
The VIP XD offers the option to limit the extent of access using various authorization levels (see *Section 5.4 Password, page 25*).

**Protected Network**
If a RADIUS server is employed in the network for managing access rights (802.1x authentication), the VIP XD must be configured accordingly, otherwise no communication is possible (see *Section Authentication, page 48*).
6.2 The CONNECTIONS Page

Once the connection is established, the Web browser first displays the CONNECTIONS page and the VIP XD automatically browses the network for available senders.

**Preview**

In this area you can select one of the video sources found in the network. You see a snapshot of the video image from the selected source. Besides the unit name, the snapshot provides an additional means of identifying the sender.

**Monitor**

As soon as a connection is established, you see the video image from the connected sender. The image is refreshed around once per second.
6.3 Connections Between the Sender and Receiver

When you open the CONNECTIONS page, the VIP XD automatically scans the network for available senders. As soon as a sender is found in the network, the VIP XD displays a JPEG snapshot from that sender. All senders found are listed in the Video sources list field.

NOTICE!
The sender and receiver must be located in the same subnet to establish a hardware connection.

Establishing the Connection

NOTICE!
If you do not connect, the unit may have reached its maximum number of connections. The maximum number of connections depends on the unit and network configuration.
The Serial data and Audio checkboxes must be selected before the connection is made in order to activate data and audio transmission. The window displays a green loudspeaker icon in the bottom right corner of the video image the first time an audio connection is made. This icon indicates which sender is holding the active audio link.

1. Choose the desired sender from the Video sources list field.
2. If necessary, enter the password.
3. Click OK. If the password is correct, a JPEG snapshot from the selected video source appears in the Preview area.
4. If the sender is a multi-channel unit, for example a VideoJet X40, you can set the Video input for playback.
5. If the sender works with Dual Streaming, for example a VIP X1600, you can select the Stream for playback.
6. Check the Serial data checkbox if you also want to transmit transparent data. Ensure that the sender and receiver are correctly configured for data transmission.
7. Check the Audio checkbox if you also want to transmit audio data. Ensure that the sender and receiver are correctly configured for audio transmission.
8. Click the appropriate checkbox again to deactivate the data or audio connection.
9. Click the MPEG-2 ->, MPEG-4 SH++ -> or H.264 -> button to start displaying the video images on the connected monitor. In the Monitor area you will see the video image from the connected sender. The image is refreshed around once per second.
Controlling Connections
You can control the selected connections and the monitor display using the buttons above the video image in the Monitor area. The buttons have the following functions:

- Switch to the previous connection in the connection history.

- Switch to the next connection in the connection history.

- Single view display

- Quad view

- Activate and deactivate auto-connect (see Section Auto-connect, page 36).

- Disconnect and end display of video images on the connected monitor.

- Update display of video image.

- Switch to the start-up connection (first connection after selecting VIP XD).

Selecting Decoder for Quad View
When selecting Quad view, you can select the appropriate decoder for the display. This allows you to freely assign in which quadrant the relevant video image is to be displayed.

1. In the Monitor area, click the button for Quad view.
2. Click the desired quadrant. The selected quadrant is marked by a red frame.
3. Establish the connection and start the display on the monitor (see Section Establishing the Connection, page 57). The video images are displayed in the selected quadrant.

Multicast scan
You can use the Multicast scan to search for video sources outside the subnet in which the VIP XD is located. Check the box in the Preview area to activate the Multicast scan.
6.4 Hardware Connections Between Video Servers

You can easily connect a VIP XD with a connected monitor as a receiver, together with a compatible sender (for example VIP X1600) with a connected camera via an Ethernet network. In this way it is possible to cover long distances without the need for major installation or cabling work.

NOTICE!
The sender and receiver must be located in the same subnet to establish a hardware connection.

Installation
Compatible video servers are designed to connect to one another automatically, provided they are correctly configured. They only need to be part of a closed network. Proceed as follows to install the units:

1. Connect the units to the closed network using Ethernet cables.
2. Connect them to the power supply.

NOTICE!
Make sure that the units are configured for the network environment and that the correct IP address for the remote location to be contacted in the event of an alarm is set on the Alarm Connections configuration page (see Section 5.11 Alarm Connections, page 34).

Connecting
There are three options for establishing a connection between a sender and a compatible receiver in a closed network:
- an alarm,
- a terminal program, or
- Internet Explorer.

Connecting on Alarm
With the appropriate configuration, a connection between a sender and a receiver is made automatically when an alarm is triggered (see Section 5.11 Alarm Connections, page 34). After a short time the live video image from the sender appears on the connected monitor. This option can also be used to connect a sender and a compatible receiver using a switch connected to the alarm input. You do not need a computer to make the connection in this case.

Connecting with a Terminal Program
Various requirements must be met in order to operate with a terminal program (see Section 8.7 Communication with Terminal Program, page 67).

1. Start the terminal program and enter the command 1 in the main menu to switch to the IP menu.
2. Enter the command 4 in the IP menu to change the remote IP address, then enter the IP address of the unit you wish to connect to.
3. Enter the command 0 to return to the main menu and then enter the command 4 to switch to the Rcp+ menu.
4. In the Rcp+ menu, enter the command 5 to activate the automatic connection.

Closing the Connection with a Terminal Program
1. Start the terminal program and enter the command 4 in the main menu to switch to the Rcp+ menu.
2. In the Rcp+ menu, enter the command 5 to deactivate the automatic connection.
6.5 Operation with Management Software

The use of management software such as VIDOS is recommended for operating larger systems with multiple senders and receivers.

VIDOS is a software package for operating, controlling and managing CCTV installations (such as surveillance systems) at remote locations. It runs under Microsoft Windows operating systems. It is primarily designed for decoding video, audio and control data received from a remote sender and for the convenient control of hardware connections.

Many options are provided for operation and configuration when using a VIP XD with VIDOS. Please refer to the software documentation for more details.

Another program that supports the VIP XD is Bosch Video Management System. Bosch Video Management System is an IP video security solution that enables the seamless management of digital video, audio and data over any IP network. It was developed for use with Bosch CCTV products as one component of an extensive video security management system. It allows you to integrate your existing components into a simple-to-control system or into the entire Bosch range, benefiting from a complete security solution based on the latest technology and years of experience.
7 Maintenance and Upgrades

7.1 Testing the Network Connection
You can use the ping command to check the connection between two IP addresses. This allows you to test whether a unit in the network is active.
1. Open the DOS command prompt.
2. Type ping followed by the IP address of the unit.
If the unit is found, the response appears as Reply from ... followed by the number of bytes sent and the transmission time in milliseconds. If not, the unit cannot be accessed over the network. This might be because:
- The unit is not correctly connected to the network. Check the cable connections in this case.
- The unit is not correctly integrated into the network. Check the IP address, subnet mask and gateway address.

7.2 Unit Reset
You can use the Factory Reset button to restore the unit to its original settings. Any changes to the settings are overwritten by the factory defaults. A reset may be necessary, for example, if the unit has invalid settings that prevent it from functioning as desired.

CAUTION!
All configured settings will be discarded during a reset. If necessary, back up the current configuration using the Download button on the Maintenance configuration page (see Section 5.21 Maintenance, page 49).

NOTICE!
After a reset, the unit can only be addressed via the factory default IP address. The IP address can be changed as described in the Installation chapter (see Section 4.4 Setup Using the Configuration Manager, page 19).

1. If necessary, back up the current configuration using the Download button on the Maintenance configuration page (see Section 5.21 Maintenance, page 49).
2. Using a pointed object, press the factory reset button until the operating status LED flashes red (see Section 3.5 Connections on the Rear Panel, page 14). All settings will revert to their defaults.
3. Change the IP address of the VIP XD if necessary.
4. Configure the unit to meet your requirements.
7.3 Repairs

CAUTION!
Never open the housing of the VIP XD.
The unit does not contain any user-serviceable parts.

Ensure that all maintenance or repair work is carried out only by qualified personnel (electrical engineers or network technology specialists). In case of doubt, contact your dealer's technical service center.

7.4 Transfer and Disposal

The VIP XD should only be passed on together with this installation and operating manual. Your Bosch product is designed and manufactured with high-quality materials and components which can be recycled and reused.

This symbol means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from your household waste. In the European Union, there are separate collection systems for used electrical and electronic products. Please dispose of this equipment at your local community waste collection/recycling center.
# Appendix

## 8.1 Troubleshooting

If you are unable to resolve a malfunction, please contact your supplier or systems integrator, or go directly to Bosch Security Systems Customer Service.

You can view a range of information about your unit version on the [System Overview] page (see Section 5.23 System Overview, page 51). Make a note of this information before contacting Customer Service. You can download an internal maintenance log from the unit on the [Maintenance] page if you wish to send it to Customer Service by e-mail (see Section Maintenance log, page 50).

The following table is intended to help you identify the causes of malfunctions and correct them where possible.

<table>
<thead>
<tr>
<th>Malfunction</th>
<th>Possible causes</th>
<th>Recommended solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>No connection between the unit and terminal program.</td>
<td>Incorrect cable connections.</td>
<td>Check all cables, plugs, contacts, terminals and connections.</td>
</tr>
<tr>
<td>The computer's serial interface is not connected.</td>
<td>Check the other serial interface.</td>
<td></td>
</tr>
<tr>
<td>Interface parameters do not match.</td>
<td>If necessary select a different interface and make sure that the computer's interface parameters match those of the unit. Try the following standard parameters: 19,200 baud, 8 data bits, no parity, 1 stop bit. Next, disconnect the unit from the power supply and reconnect it again after a few seconds.</td>
<td></td>
</tr>
<tr>
<td>No image on the monitor.</td>
<td>Monitor error.</td>
<td>Connect local camera or other video source to the monitor and check the monitor function.</td>
</tr>
<tr>
<td>Faulty cable connections.</td>
<td>Check all cables, plugs, contacts and connections.</td>
<td></td>
</tr>
<tr>
<td>No connection established, no image transmission.</td>
<td>The unit's configuration.</td>
<td>Check all configuration parameters.</td>
</tr>
<tr>
<td>Faulty installation.</td>
<td>Check all cables, plugs, contacts and connections.</td>
<td></td>
</tr>
<tr>
<td>Wrong IP address.</td>
<td>Check the IP addresses (terminal program).</td>
<td></td>
</tr>
<tr>
<td>Faulty data transmission within the LAN.</td>
<td>Check the data transmission with <code>ping</code>.</td>
<td></td>
</tr>
<tr>
<td>The maximum number of connections has been reached.</td>
<td>Wait until there is a free connection and then call the sender again.</td>
<td></td>
</tr>
<tr>
<td>Malfunction</td>
<td>Possible causes</td>
<td>Recommended solution</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------</td>
<td>----------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>No audio transmission to remote station.</td>
<td>Hardware fault.</td>
<td>Check that all connected audio units are operating correctly.</td>
</tr>
<tr>
<td></td>
<td>Faulty cable connections.</td>
<td>Check all cables, plugs, contacts and connections.</td>
</tr>
<tr>
<td></td>
<td>Incorrect configuration.</td>
<td>Check the audio parameters on the Audio configuration page.</td>
</tr>
<tr>
<td></td>
<td>The audio voice connection is already in use by another receiver.</td>
<td>Wait until the connection is free and then call the sender again.</td>
</tr>
<tr>
<td>The unit does not report an alarm.</td>
<td>Alarm source is not selected.</td>
<td>Select possible alarm sources on the Alarm Inputs configuration page.</td>
</tr>
<tr>
<td></td>
<td>No alarm response specified.</td>
<td>Specify the desired alarm response on the Alarm Connections configuration page, change the IP address if necessary.</td>
</tr>
<tr>
<td>Control of cameras or other units is not possible.</td>
<td>The cable connection between the serial interface and the connected unit is not correct.</td>
<td>Check all cable connections and ensure all plugs are properly fitted.</td>
</tr>
<tr>
<td></td>
<td>The interface parameters do not match those of the other unit connected.</td>
<td>Make sure that the settings of all units involved are compatible.</td>
</tr>
<tr>
<td>The unit is not operational after a firmware upload.</td>
<td>Power failure during programming by firmware file.</td>
<td>Have the unit checked by Customer Service and replace if necessary.</td>
</tr>
<tr>
<td></td>
<td>Incorrect firmware file.</td>
<td>Enter the IP address of the unit followed by /main.htm in your Web browser and repeat the upload.</td>
</tr>
<tr>
<td>Placeholders with a red cross are displayed instead of the ActiveX components.</td>
<td>Sun JVM is not installed on the computer or is not enabled.</td>
<td>Install Sun JVM from the product CD.</td>
</tr>
<tr>
<td>Web browser contains empty fields.</td>
<td>Active proxy server in network.</td>
<td>Create a rule in the local computer's proxy settings to exclude local IP addresses.</td>
</tr>
<tr>
<td>If a sender is connected to the receiver, the first connection remains.</td>
<td>Auto-connect configured.</td>
<td>Deactivate auto-connect.</td>
</tr>
</tbody>
</table>
8.2 LEDs

The VIP XD network video server has a number of LEDs on its rear panel that show the operating status and can give indications of possible malfunctions:

**Operating Status LED**

- Does not light up: VIP XD is switched off.
- Lights up green: VIP XD is switched on.
- Flashes green: The VIP XD is being accessed.
- Flashes red: Startup in progress.
- Lights up red: VIP XD is faulty, for example following failed firmware upload.

**LED L**

- Does not light up: No network connection.
- Lights up green: Network connection established.

**LED T**

- Flashes orange: Data being transmitted over the network.

8.3 Processor Load

If the VIP XD is accessed via the Web browser, you will see the processor load indicator in the top left of the window next to the manufacturer's logo.

Moving the mouse cursor over the graphic indicator displays the status of the processor together with the numerical values. This information may help you with troubleshooting or fine tuning the unit.

8.4 Network Connection

You can display information about the network connection. To do this, move the cursor over the i icon.

- Link: Ethernet link type
- UL: Uplink, speed of the outgoing data traffic
- DL: Downlink, speed of the incoming data traffic
8.5 Serial Interface
Options for using the serial interface include transferring transparent data, controlling connected units or operating the unit with a terminal program.
The serial interface supports the RS-232/RS-422/RS-485 transmission standards. The mode used depends on the current configuration (see Section 5.17 COM1, page 43). Connection is via the terminal block.

8.6 Terminal Block
The terminal block has several contacts for:
- 4 alarm inputs
- 1 relay output
- Serial data transmission

Pin Assignment
The pin assignment of the serial interface depends on the interface mode used (see Section 5.17 COM1, page 43).

<table>
<thead>
<tr>
<th>Contact</th>
<th>RS-232 mode</th>
<th>RS-422 mode</th>
<th>RS-485 mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTS</td>
<td>CTS (clear to send)</td>
<td>RxD- (receive data minus)</td>
<td>Data-</td>
</tr>
<tr>
<td>RTS</td>
<td>RTS (ready to send)</td>
<td>TxD- (transmit data minus)</td>
<td></td>
</tr>
<tr>
<td>RXD</td>
<td>RxD (receive data)</td>
<td>RxD+ (receive data plus)</td>
<td>Data+</td>
</tr>
<tr>
<td>TXD</td>
<td>TxD (transmit data)</td>
<td>TxD+ (transmit data plus)</td>
<td></td>
</tr>
<tr>
<td>GND</td>
<td>GND (ground)</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

Connect each alarm input to a ground contact (GND) when connecting alarm inputs.
8.7 Communication with Terminal Program

Data Terminal
If a VIP XD cannot be found in the network or the connection to the network is interrupted, you can connect a data terminal to the VIP XD for initial setup and setting of important parameters. The data terminal consists of a computer with a terminal program.

You require a serial transmission cable with a 9-pin Sub-D plug to connect to the computer and open ends for connection to the terminal block of the VIP XD (see Section Pin Assignment, page 66).

HyperTerminal, a communications accessory included with Microsoft Windows, can be used as the terminal program.

NOTICE!
Information on installing and using HyperTerminal can be found in the manuals or in the online help for MS Windows.

1. Disconnect the VIP XD from the Ethernet network before working with the terminal program.
2. Connect the serial interface of the VIP XD using any available serial interface on the computer.

Configuring the Terminal
Before the terminal program can communicate with the VIP XD, the transmission parameters must be matched. Make the following settings for the terminal program:

- 19,200 bps
- 8 data bits
- No parity check
- 1 stop bit
- No protocol

Command Inputs
After the connection has been established, you must log on to the VIP XD to access the main menu. Other submenus and functions can be accessed using the on-screen commands.

1. If necessary, turn off the local echo so that entered values are not repeated on the display.
2. Enter one command at a time.
3. When you have entered a value (such as an IP address), check the characters you have entered before pressing Enter to transfer the values to the VIP XD.
Assigning an IP Address

Before you can operate a VIP XD in your network you must first assign it an IP address that is valid for your network.

The following default address is preset at the factory: **192.168.0.1**

1. Start a terminal program such as HyperTerminal.
2. Enter the user name **service**. The terminal program displays the main menu.
3. Enter command 1 to open the **IP** menu.

```
  0' Exit menu IP (w = reset after change necessary)
  1' local IP    (w) 192.168.0.1
  2' local subnet mask (w) 255.255.0.0
  3' local gateway     (w) 0.0.0.0
  4' remote IP        0.0.0.0
  5' ntp server       0.0.0.0
  6' ntp mode         1 (SNTP)
  7' DSCP enabled     (w) NO
  8' igmp version     (w) Auto
  9' alarm IP ... 
 a' discover ... 
 b' iscsi ... 
 c' http port  80 
 d' https port 443 
 e' ftp server IP  0.0.0.0 
 f' syslog host IP  0.0.0.0
```

4. Enter 1 again. The terminal program displays the current IP address and prompts you to enter a new IP address.
5. Enter the desired IP address and press Enter. The terminal program displays the new IP address.
6. Use the displayed commands for any additional settings you require.

**NOTICE!**

You must reboot to activate the new IP address, a new subnet mask or a gateway IP address.

**Reboot**

Briefly interrupt the power supply to the VIP XD for a reboot (disconnect the power supply unit from the mains supply and switch on again after a few seconds).

**Additional Parameters**

You can use the terminal program to check other basic parameters and modify them where necessary. Use the on-screen commands in the various submenus to do this.
8.8 Copyrights

The firmware 4.0 uses the fonts "Adobe-Helvetica-Bold-R-Normal--24-240-75-75-P-138-ISO10646-1" and "Adobe-Helvetica-Bold-R-Normal--12-120-75-75-P-70-ISO10646-1" under the following copyright:


Permission to use, copy, modify, distribute and sell this software and its documentation for any purpose and without fee is hereby granted, provided that the above copyright notices appear in all copies and that both those copyright notices and this permission notice appear in supporting documentation, and that the names of Adobe Systems and Digital Equipment Corporation not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission.

This software is based in part on the work of the Independent JPEG Group.
9 Specifications

9.1 Unit

Operating voltage 12 to 24 V DC, power supply unit with various primary adapters included

Power consumption Approx. 7 W

LAN interfaces 1 × Ethernet 10/100 Base-T, automatic adjustment, half/full duplex, RJ45

Data interfaces 1 × RS-232/RS-422/RS-485, bidirectional, push-in terminal

Alarm inputs 4 × push-in terminals (non-isolated closing contact), maximum activation resistance 10 Ohm

Relay output 1 × push-in terminal, 30 V_p-p, 2 A (SELV), 2 contacts

Video outputs 1 × BNC, 1.0 V_p-p, 75 Ohm, PAL/NTSC
1 × Sub-D 15-pin, VGA/SVGA, 1.0 V_p-p, RGB analog

Displays 3 × LED (operating voltage, network connection, data transfer) on rear panel

Operating conditions Temperature: 0 to +50 °C / +32 to +122 °F
relative humidity: 0 to 95%, non-condensing

Approvals IEC 60950; UL 1950; AS/NZS 3548; EN 55103-1, -2;
EN 55130-4; EN 55022; EN 55024; EN 61000-3-2;
EN 61000-3-3; FCC 47 CFR Chapter 1 Part 15

Dimensions (H × W × D) 85 × 107 × 26 mm / 3.35 × 4.21 × 1.02 in,
including feet and connections

Weight Approx. 300 g (0.5 lb)

Audio Version Only:

Audio input 1 × 3.5 mm stereo socket
5.5 V_p-p max., impedance 9 kOhm typ.

Audio output 1 × 3.5 mm stereo socket
3.0 V_p-p max., impedance 16 kOhm min.

Microphone input 1 × push-in terminal, 2.8 V_p-p max. at –20 dB,
impedance 2 kOhm typ., supply 2.3 V typ.

Loudspeaker output 1 × push-in terminal, 6 V_p-p max., RMS 1 W,
impedance 4 Ohm min.
### 9.2 Protocols/Standards

<table>
<thead>
<tr>
<th>Video standards</th>
<th>PAL, NTSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video coding protocols</td>
<td>MPEG-4, MPEG-2, H.264 BP+ (Baseline Profile plus)</td>
</tr>
<tr>
<td>Video data rate</td>
<td>Up to 6 Mbps per stream</td>
</tr>
<tr>
<td>Image resolutions (PAL/NTSC)</td>
<td>704 × 576/480 pixels (4CIF/D1)</td>
</tr>
<tr>
<td></td>
<td>704 × 288/240 pixels (2CIF)</td>
</tr>
<tr>
<td></td>
<td>464 × 576/480 pixels (2/3 D1)</td>
</tr>
<tr>
<td></td>
<td>352 × 576/480 pixels (1/2 D1)</td>
</tr>
<tr>
<td></td>
<td>352 × 288/240 pixels (CIF)</td>
</tr>
<tr>
<td></td>
<td>176 × 144/120 pixels (QCIF)</td>
</tr>
<tr>
<td>Total delay</td>
<td>120 ms (PAL/NTSC, MPEG-4, no network delay)</td>
</tr>
<tr>
<td>Image refresh rate</td>
<td>25/30 ips max.</td>
</tr>
<tr>
<td>Network protocols</td>
<td>RTP, Telnet, UDP, TCP, IP, HTTP, HTTPS, DHCP, IGMP V2, IGMP V3, ICMP, ARP, SNTP, SNMP (V1/V2c/V3 MIB-II), 802.1x</td>
</tr>
</tbody>
</table>

**Audio Version Only:**

<table>
<thead>
<tr>
<th>Audio coding protocol</th>
<th>G.711, 300 Hz to 3.4 kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio sampling rate</td>
<td>8 kHz</td>
</tr>
<tr>
<td>Audio data rate</td>
<td>80 kbps</td>
</tr>
</tbody>
</table>
# 10 Glossary

## Symbols

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/100/1000 Base-T</td>
<td>IEEE-802.3 specification for 10, 100 or 1000 Mbps Ethernet</td>
</tr>
<tr>
<td>802.1x</td>
<td>The IEEE 802.1x standard provides a general method for authentication and authorization in IEEE-802 networks. Authentication is carried out via the authenticator, which checks the transmitted authentication information using an authentication server (see RADIUS server) and approves or denies access to the offered services (LAN, VLAN or WLAN) accordingly.</td>
</tr>
<tr>
<td>ARP</td>
<td>Address Resolution Protocol: a protocol for mapping MAC and IP addresses</td>
</tr>
<tr>
<td>Baud</td>
<td>Unit of measurement for the speed of data transmission</td>
</tr>
<tr>
<td>bps</td>
<td>Bits per second, the actual data rate</td>
</tr>
<tr>
<td>BVIP</td>
<td>Bosch Video over IP unit</td>
</tr>
<tr>
<td>CABAC</td>
<td>Context-based Adaptive Binary Arithmetic Coding; an effective way to compress binary data without loss. In the video standard MPEG-4/Part10 (H.264/AVC), CABAC is characterized by high picture quality, a high compression rate and high computing requirements.</td>
</tr>
<tr>
<td>CF</td>
<td>CompactFlash; interface standard, for digital storage media amongst other things. Used in computers in the form of CF cards, digital cameras and Personal Digital Assistants (PDA).</td>
</tr>
<tr>
<td>CIF</td>
<td>Common Intermediate Format, video format with 352 × 288/240 pixels</td>
</tr>
<tr>
<td>DHCP</td>
<td>Dynamic Host Configuration Protocol: uses an appropriate server to enable dynamic assignment of an IP address and other configuration parameters to computers on a network (Internet or LAN)</td>
</tr>
<tr>
<td>DNS</td>
<td>Domain Name System, mainly used for converting domain names to IP addresses</td>
</tr>
<tr>
<td>DynDNS</td>
<td>DNS hosting service that works according to RFC 2845 and stores the IP addresses of its clients in a database, ready for use</td>
</tr>
<tr>
<td>FTP</td>
<td>File Transfer Protocol</td>
</tr>
<tr>
<td>Full duplex</td>
<td>Simultaneous data transmission in both directions (sending and receiving)</td>
</tr>
<tr>
<td>GBIC</td>
<td>GigaBit Interface Converter; applied in network technology to render interfaces flexible, for converting an electrical interface into an optical interface, for example. This enables flexible...</td>
</tr>
</tbody>
</table>
operation of an interface as a Gigabit Ethernet via twisted-pair cables or fiber optic cables.

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOP</td>
<td>Group of Pictures</td>
</tr>
<tr>
<td>H.264</td>
<td>Further development of video compression standard H.262 with higher image quality and high compression factor</td>
</tr>
<tr>
<td>HTTP</td>
<td>Hypertext Transfer Protocol: protocol for transmitting data over a network</td>
</tr>
<tr>
<td>HTTPS</td>
<td>Hypertext Transfer Protocol Secure: encrypts and authenticates communication between Web server and browser</td>
</tr>
<tr>
<td>ICMP</td>
<td>Internet Control Message Protocol</td>
</tr>
<tr>
<td>ID</td>
<td>Identification: a machine readable character string</td>
</tr>
<tr>
<td>IEEE</td>
<td>Institute of Electrical and Electronics Engineers</td>
</tr>
<tr>
<td>IGMP</td>
<td>Internet Group Management Protocol</td>
</tr>
<tr>
<td>Internet Protocol</td>
<td>The main protocol used on the Internet, normally in conjunction with the Transfer Control Protocol (TCP): TCP/IP</td>
</tr>
<tr>
<td>IP</td>
<td>See Internet Protocol</td>
</tr>
<tr>
<td>IP address</td>
<td>A 4-byte number uniquely defining each unit on the Internet. It is usually written in dotted decimal notation, for example &quot;209.130.2.193&quot;</td>
</tr>
<tr>
<td>iSCSI</td>
<td>Storage over IP process for storage networks; specifies how storage protocols are operated over IP</td>
</tr>
<tr>
<td>ISDN</td>
<td>Integrated Services Digital Network</td>
</tr>
<tr>
<td>JPEG</td>
<td>An encoding process for still images (Joint Photographic Experts Group)</td>
</tr>
<tr>
<td>kbps</td>
<td>Kilobits per second, the actual data rate</td>
</tr>
<tr>
<td>LAN</td>
<td>See Local Area Network</td>
</tr>
<tr>
<td>Local Area Network</td>
<td>A communications network serving users within a limited geographical area such as a building or university campus. It is controlled by a network operating system and uses a transfer protocol.</td>
</tr>
<tr>
<td>LUN</td>
<td>Logical Unit Number; logical drive in iSCSI storage systems</td>
</tr>
<tr>
<td>MAC</td>
<td>Media Access Control</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>------</td>
<td>------------</td>
</tr>
<tr>
<td>MIB</td>
<td>Management Information Base; a collection of information for remote servicing using the SNMP protocol</td>
</tr>
<tr>
<td>MPEG-2</td>
<td>Improved video/audio compression standard, compression on highest level allows images in studio quality; now established as broadcast standard</td>
</tr>
<tr>
<td>MPEG-4</td>
<td>A further development of MPEG-2 designed for transmitting audiovisual data at very low transfer rates (for example over the Internet)</td>
</tr>
<tr>
<td>MSS</td>
<td>Maximum Segment Size; maximum byte figure for the user data in a data packet</td>
</tr>
<tr>
<td>N</td>
<td>Net mask; A mask that explains which part of an IP address is the network address and which part is the host address. It is usually written in dotted decimal notation, for example &quot;255.255.255.192.&quot;</td>
</tr>
<tr>
<td>NTP</td>
<td>Network Time Protocol; a standard for synchronizing computer system clocks via packet-based communication networks. NTP uses the connectionless network protocol UDP. This was developed specifically for enabling time to be reliably transmitted over networks with variable packet runtime (Ping)</td>
</tr>
<tr>
<td>OF</td>
<td>Optical Fiber; now used predominantly as the transmission medium for line-borne telecommunication processes (glass fiber cable)</td>
</tr>
<tr>
<td>P</td>
<td>Parameters; Values used for configuration</td>
</tr>
<tr>
<td>Q</td>
<td>QCIF; Quarter CIF, video format with 176 × 144/120 pixels</td>
</tr>
<tr>
<td>R</td>
<td>RADIUS server; Remote Authentication Dial-In User Service: a client/server protocol for the authentication, authorization and accounting of users with dial-up connections on a computer network. RADIUS is the de-facto standard for central authentication of dial-up connections via Modem, ISDN, VPN, Wireless LAN (see 802.1x) and DSL</td>
</tr>
<tr>
<td>RFC 868</td>
<td>A protocol for synchronizing computer clocks over the Internet</td>
</tr>
<tr>
<td>RS-232/-422/-485</td>
<td>Standards for serial data transmission</td>
</tr>
<tr>
<td>RTP</td>
<td>Real-Time Transport Protocol; a transmission protocol for real-time video and audio</td>
</tr>
<tr>
<td>RTSP</td>
<td>Real-Time Streaming Protocol; network protocol for controlling the continuous transmission of audiovisual data (streams) or software over IP-based networks</td>
</tr>
<tr>
<td>S</td>
<td>SFP; Small Form-factor Pluggable; small, standardized module for network connections, designed as a plug connector for high-speed network connections</td>
</tr>
<tr>
<td><strong>SNIA</strong></td>
<td>Storage Networking Industry Association; association of companies for defining the iSCSI standard</td>
</tr>
<tr>
<td><strong>SNMP</strong></td>
<td>Simple Network Management Protocol; a protocol for network management, for managing and monitoring network components</td>
</tr>
<tr>
<td><strong>SNTP</strong></td>
<td>Simple Network Time Protocol; a simplified version of NTP (see NTP)</td>
</tr>
<tr>
<td><strong>SSL</strong></td>
<td>Secure Sockets Layer; an encryption protocol for data transmission in IP-based networks</td>
</tr>
<tr>
<td><strong>Subnet mask</strong></td>
<td>See Net mask</td>
</tr>
</tbody>
</table>

**T**

| **TCP** | Transmission Control Protocol |
| **Telnet** | Login protocol with which users can access a remote computer (Host) on the Internet |
| **TLS** | Transport Layer Security; TLS 1.0 and 1.1 are the standard advanced developments of SSL 3.0 (see SSL) |
| **TTL** | Time-To-Live; life cycle of a data packet in station transfers |

**U**

| **UDP** | User Datagram Protocol |
| **URL** | Uniform Resource Locator |
| **UTP** | Unshielded Twisted Pair |

**W**

| **WAN** | See Wide Area Network |
| **Wide Area Network** | A long distance link used to extend or connect remotely located local area networks |
11 Index

A
Activation key 51
Alarm e-mail 38
Alarm input 17
Alarm sources 41
Audio connections 16
Audio stream on alarm 36
Audio transmission 33
Auto-connect 36

B
Baud rate 43

C
Changes 24
Checking network 61
Closing contact 17
COM1 43
Configuration 21, 50
Configuration download 50
Configuration mode 24
Connect on alarm 34
Connecting 21, 59
Conventions 5

D
Danger 7
Data bits 43
Data interface 17
Data terminal 67
Date 26
Date format 26
Daylight saving time 27
Device ID 25
Device name 25, 29
Dome camera 17
DynDNS 46

E
Echo 67
Electromagnetic compatibility 6
E-mail 38
Encryption protocol 45
EPROM 49
Establishing the connection 22, 54

F
Firewall 35, 45
Firmware upload 49
Front panel connections 13
Function test 52

G
Gateway 45
General password 35

H
HTTP port 45
HTTPS port 45

I
Identification 6, 25, 29
IEEE 802.1x 48
Installation 7
Installation conditions 15

L
Language 28
Licenses 51
Live video images 21, 53
Loudspeaker 16, 34
Low Voltage Directive 6

M
Main functions 12
Maintenance 7
Manufacturer logo 28
Microphone 16, 34
Monitor 16
MPEG ActiveX 21, 53
MTU value 45, 46
Multicast connection 45
Multicast function 11

N
Navigation 24
Network 17, 44, 47
Network connection 19, 65
Number of connections 22, 54

O
Operation 7

P
Parameters 20, 68
Parity check 43
Password 23, 25, 26, 55
Pin assignment 66
Playback button 58
Port 45
Power supply 7
Power switch 19
Processor load 65
Processor load indicator 65
Product name 28
Profile configuration 30
Protocol 43

Q
Quad view 58

R
RADIUS 48
Reboot 20, 68
Receiver password 35
Regulations 5
Relay output 18, 41
Repair 7, 62
Reset 61

S
Safety 7
Scope of delivery 9
Screen resolution 10, 21, 53
Sender 11
<table>
<thead>
<tr>
<th>Term</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serial number</td>
<td>6</td>
</tr>
<tr>
<td>Serial port function</td>
<td>43</td>
</tr>
<tr>
<td>Signal source</td>
<td>17</td>
</tr>
<tr>
<td>SMS</td>
<td>39</td>
</tr>
<tr>
<td>SNMP</td>
<td>47</td>
</tr>
<tr>
<td>SNTP server</td>
<td>27</td>
</tr>
<tr>
<td>SSL certificate</td>
<td>50</td>
</tr>
<tr>
<td>SSL encryption</td>
<td>36</td>
</tr>
<tr>
<td>Stop bits</td>
<td>43</td>
</tr>
<tr>
<td>Subnet mask</td>
<td>45</td>
</tr>
<tr>
<td>Summer time</td>
<td>27</td>
</tr>
<tr>
<td>Symbols</td>
<td>5</td>
</tr>
<tr>
<td>Synchronize</td>
<td>26</td>
</tr>
<tr>
<td>System requirements</td>
<td>10, 21, 53</td>
</tr>
<tr>
<td>TCP</td>
<td>35, 45</td>
</tr>
<tr>
<td>Terminal</td>
<td>43</td>
</tr>
<tr>
<td>Test</td>
<td>52</td>
</tr>
<tr>
<td>Time</td>
<td>26</td>
</tr>
<tr>
<td>Time server</td>
<td>27</td>
</tr>
<tr>
<td>Time server IP address</td>
<td>27</td>
</tr>
<tr>
<td>Time server protocol</td>
<td>27</td>
</tr>
<tr>
<td>Time signal</td>
<td>27</td>
</tr>
<tr>
<td>Time zone</td>
<td>26</td>
</tr>
<tr>
<td>TLS</td>
<td>45</td>
</tr>
<tr>
<td>Transmission interruptions</td>
<td>33</td>
</tr>
<tr>
<td>Transmission parameters</td>
<td>67</td>
</tr>
<tr>
<td>Transmission protocol</td>
<td>35, 45</td>
</tr>
<tr>
<td>Transmission rate</td>
<td>43</td>
</tr>
<tr>
<td>Transmission standards</td>
<td>17, 66</td>
</tr>
<tr>
<td>Transparent</td>
<td>43</td>
</tr>
<tr>
<td>Traps</td>
<td>48</td>
</tr>
<tr>
<td>Trigger</td>
<td>17</td>
</tr>
<tr>
<td>Trigger relay</td>
<td>42</td>
</tr>
<tr>
<td>UDP</td>
<td>35, 45</td>
</tr>
<tr>
<td>Unit date</td>
<td>26</td>
</tr>
<tr>
<td>Unit identification</td>
<td>25, 29</td>
</tr>
<tr>
<td>Unit name</td>
<td>25, 29</td>
</tr>
<tr>
<td>Unit reset</td>
<td>61</td>
</tr>
<tr>
<td>Unit time</td>
<td>26</td>
</tr>
<tr>
<td>URL</td>
<td>22, 54</td>
</tr>
<tr>
<td>User name</td>
<td>26</td>
</tr>
</tbody>
</table>