

SOP for CCTVs in SunGuide

BOSCH AutoDome 7000 HD

This Standard Operating Procedure is to provide a standard configuration for CCTV cameras in District 5 for consistent operation in SunGuide, VLC and IVEDDS. Standard settings to check: Network settings, Video/Encoder settings, SNTP (time server type), IP addresses, PTZ settings, Date and Time, RTSP port, NTCIP (port and address), and On Screen Display (ODS).

The following SOP is for the BOSCH AutoDome 7000 HD (7230) IP camera.

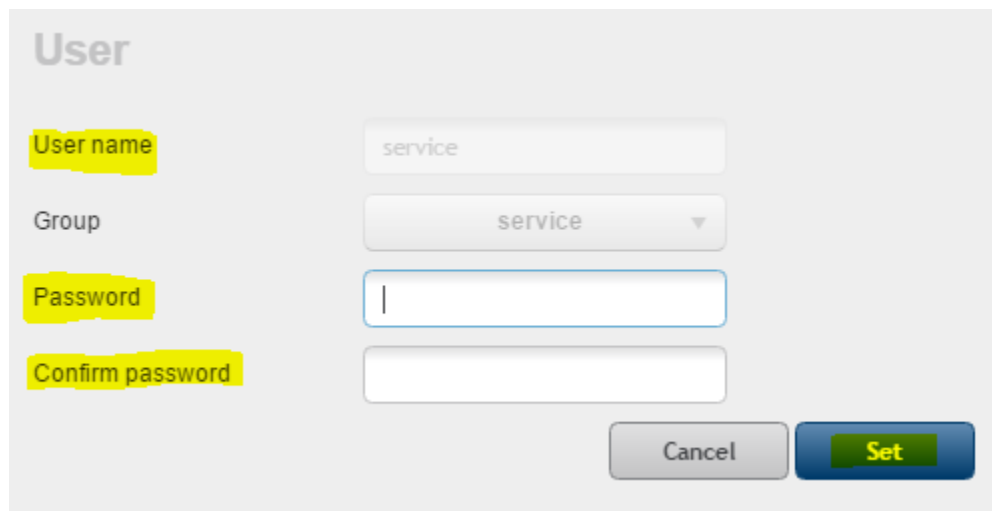
Log into the camera, using Internet Explorer or Chrome to access the camera's user interface. Type in the default IP address.



Enter the following:

Enter the user name: <service>

Enter the password: <Default>

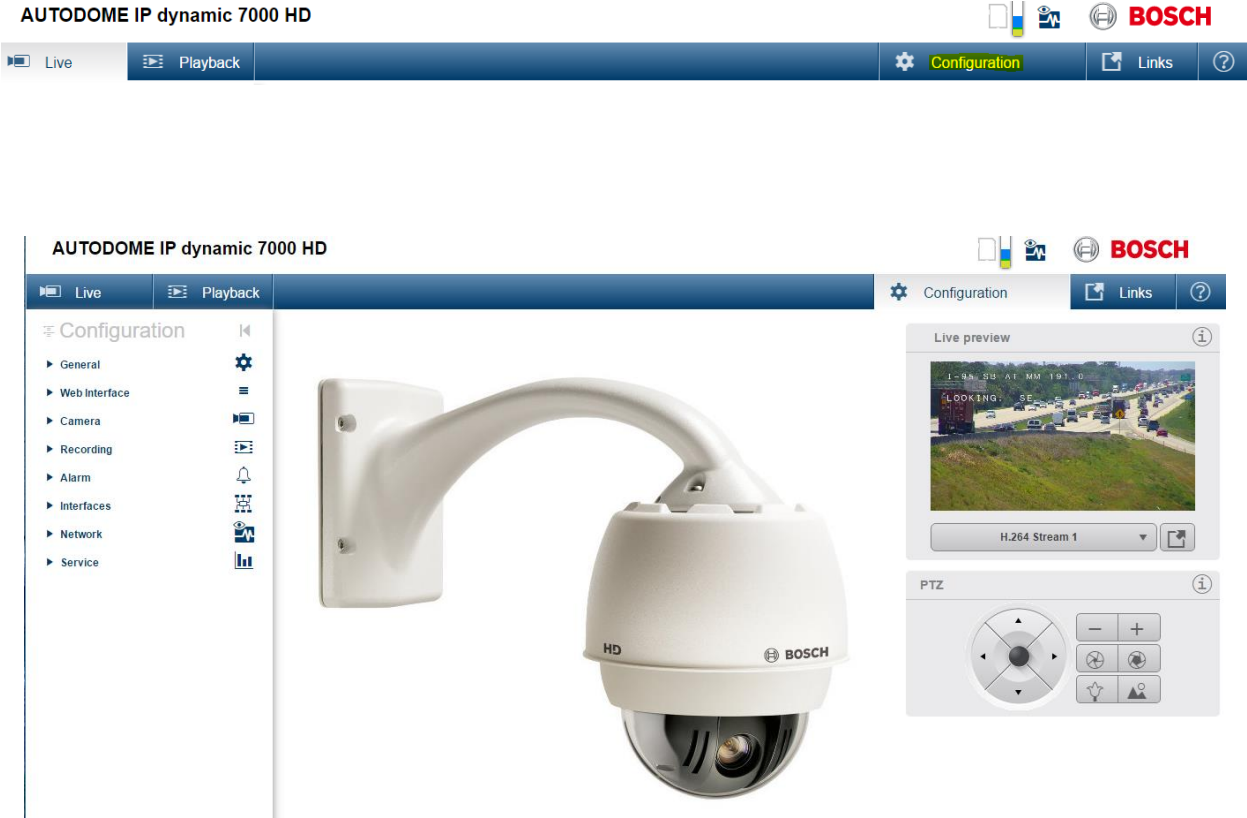
A screenshot of a web-based user configuration interface. The title is 'User'. There are four input fields: 'User name' (containing 'service'), 'Group' (a dropdown menu with 'service' selected), 'Password' (empty), and 'Confirm password' (empty). The 'User name', 'Password', and 'Confirm password' labels are highlighted in yellow. At the bottom right, there are two buttons: 'Cancel' and 'Set' (highlighted in green).

Click "Set".

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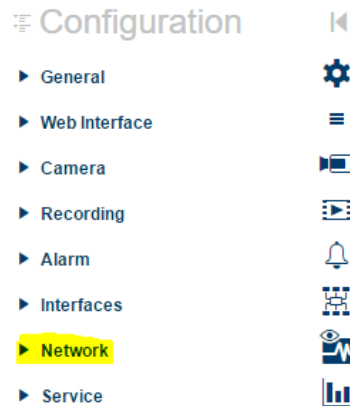


Click on "Configuration".

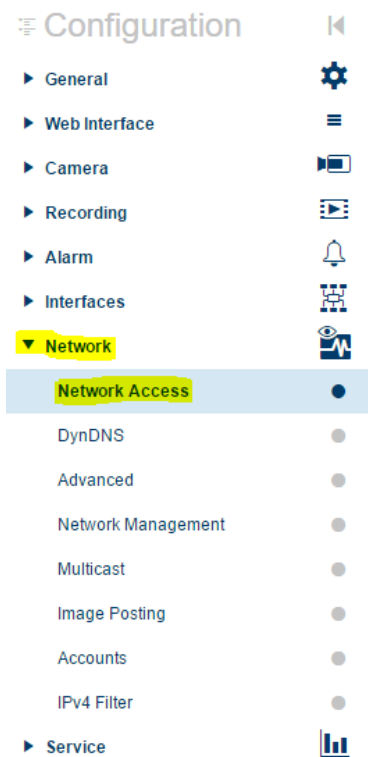


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Click on “Network”.



Click on “Network Access”.



NOTE: Click Set/SAVE after every configuration setting for that window before moving to the next menu item.

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1. Network settings:

Set the following parameters for the “Network Access”.

<i>DHCP is disabled</i>	<Off>
<i>IP address</i>	<10.X.X.X>
<i>Subnet mask</i>	<255.255.255.X>
<i>Gateway</i>	<10.X.X.X>

Network Access

Automatic IPv4 assignment

DHCP

Ethernet

IPv4

IP address

Subnet mask

Gateway address

IPv6

Automatic address

IP address

Prefix length

Gateway address

DNS server address 1

DNS server address 2

Video transmission

TCP rate control

HTTP browser port

HTTPS browser port

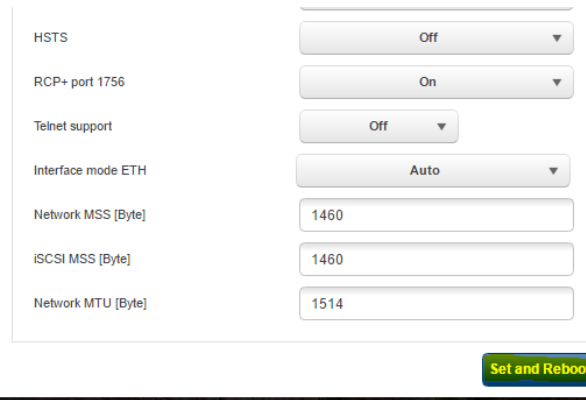
HSTS

RCP+ port 1756

Telnet support

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Click “Set and Reboot”.



HSTS	Off
RCP+ port 1756	On
Telnet support	Off
Interface mode ETH	Auto
Network MSS [Byte]	1460
iSCSI MSS [Byte]	1460
Network MTU [Byte]	1514

Set and Reboot

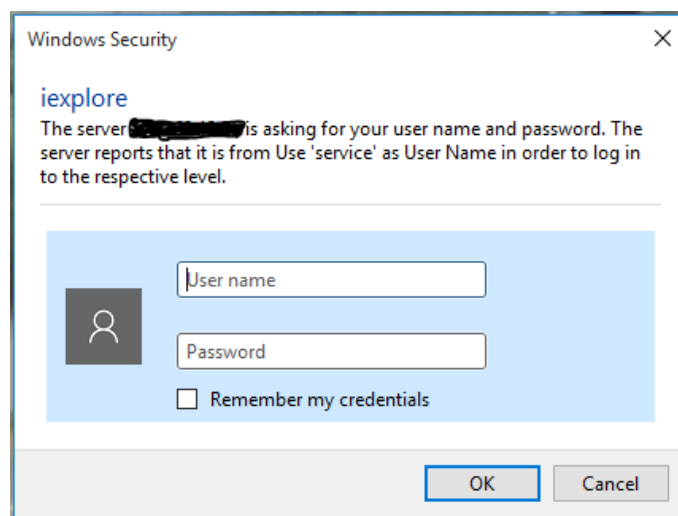
After Reboot, log into the camera, use Internet Explorer or Chrome to access the camera’s user interface. Type in the assigned IP address.



Enter the following:

Enter the user name: <service>

Enter the password: <Default>



Click “OK”.

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Click on “Configuration”.

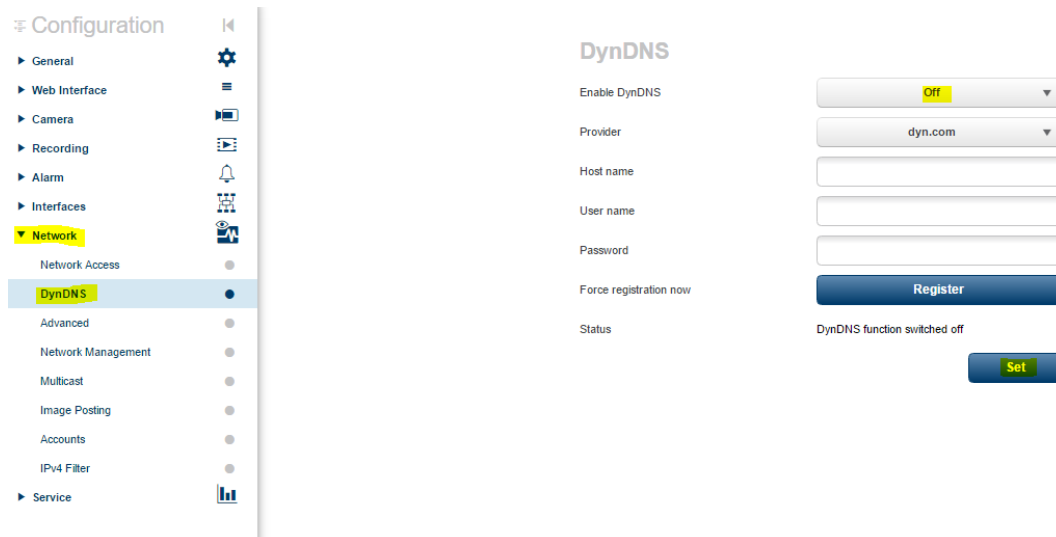


Click on “Network.”

Click on “DynDNS.”

Set the following parameters for the “DynDNS” setting.

DynDNS is disabled <Off>

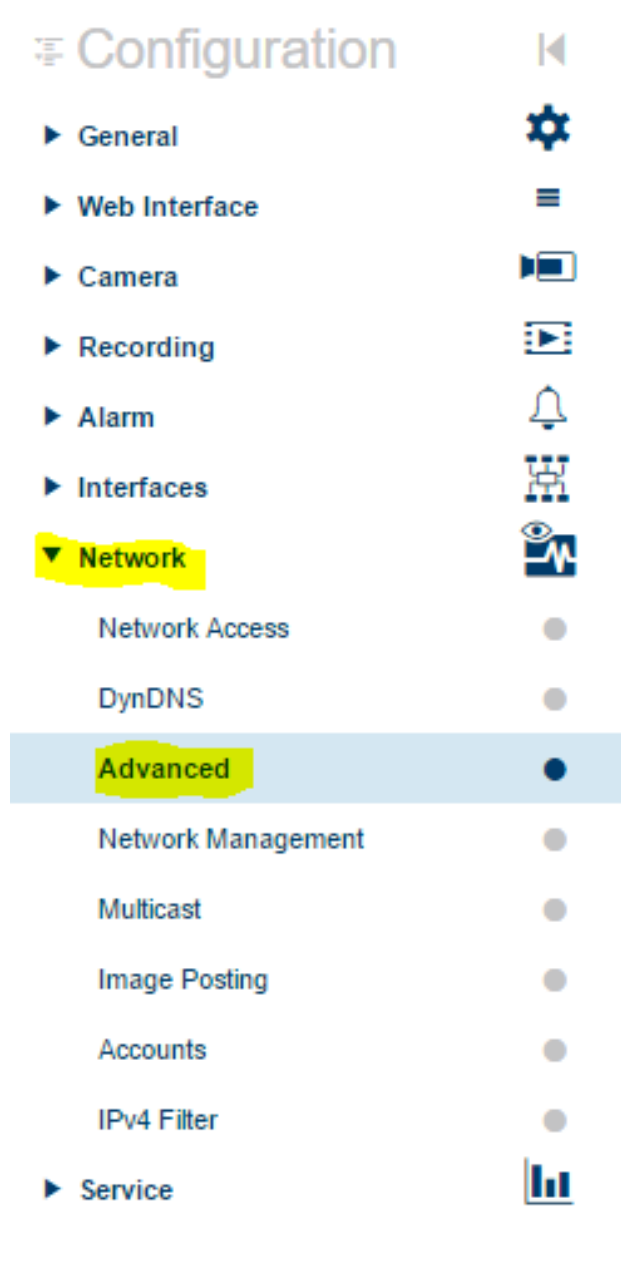


Click “Set”.

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Click on “Network.”

Click on “Advanced.”



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Set the following parameters for the “Advanced” setting.

RTSP Port: < 554 >

NTCIP Port: < 4439 >

NTCIP Address: < 1 >

Advanced

Cloud-based services

Operation

RTSP

RTSP port

802.1x

Authentication

Identity

Password [EAP-MD5]

Certificates [EAP-TLS]

NTCIP

Port

Address

TCP metadata input

TCP port

Sender IP address

Click “Set”.

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Click on “Network”.

Click on “Network Management”.

Set the following parameters for the “Network Management” setting.

SNMP: < On >

UPnP: < Off >

The screenshot displays the SunGuide configuration interface. On the left is a navigation menu under the heading "Configuration". The menu items are: General, Web Interface, Camera, Recording, Alarm, Interfaces, Network (highlighted with a yellow background), Network Access, DynDNS, Advanced, Network Management (highlighted with a blue background), Multicast, Image Posting, Accounts, IPv4 Filter, and Service. The main content area is titled "Network Management". It contains three sections: 1. "SNMP" section with a dropdown menu set to "On", two input fields for "1. SNMP host address" and "2. SNMP host address" both containing "0.0.0.0", and a "Select" button for "SNMP traps". 2. "UPnP" section with a dropdown menu set to "Off". 3. "Quality of service" section with input fields for "Audio", "Video", "Control", and "Alarm video" all set to "0", and a dropdown for "Post-alarm time" set to "15 s". A "Set" button is located at the bottom right of the configuration area.

Click “Set”.

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Click on “Network.”

Click on “Multicast”

Set the following parameters for the “Multicast” setting Stream 1 and Stream 2.

Enable: < check box >

Multicast Address: < If provided 232.219.X.X >

Port: (Stream 1) < 5554 >, (Stream 2) < 5556 >

Streaming: < check box >

Multicast packet TTL: < 64 >

(NOTE: The same multicast IP is used for both stream 1 and stream2)

The screenshot shows the SunGuide configuration interface. On the left is a navigation menu with 'Configuration' expanded and 'Multicast' selected. The main content area is titled 'Multicast' and contains a table for configuring video streams. The 'Video 1' row is active, with 'Enable' checked, 'Multicast Address' set to '232.219.0.1', 'Port' set to '5554', and 'Streaming' checked. Below the table, 'Stream 1' is selected, and 'Multicast packet TTL' is set to '64'. A green 'Set' button is at the bottom right.

Video	Enable	Multicast Address	Port	Streaming
Video 1	<input checked="" type="checkbox"/>	232.219.0.1	5554	<input checked="" type="checkbox"/>

Stream 1 | Stream 2

Multicast packet TTL: 64

Set

The screenshot shows the SunGuide configuration interface. On the left is a navigation menu with 'Configuration' expanded and 'Multicast' selected. The main content area is titled 'Multicast' and contains a table for configuring video streams. The 'Video 1' row is active, with 'Enable' checked, 'Multicast Address' set to '232.219.0.1', 'Port' set to '5556', and 'Streaming' checked. Below the table, 'Stream 2' is selected, and 'Multicast packet TTL' is set to '64'. A green 'Set' button is at the bottom right.

Video	Enable	Multicast Address	Port	Streaming
Video 1	<input checked="" type="checkbox"/>	232.219.0.1	5556	<input checked="" type="checkbox"/>

Stream 1 | Stream 2

Multicast packet TTL: 64

Set

Click “Set”.

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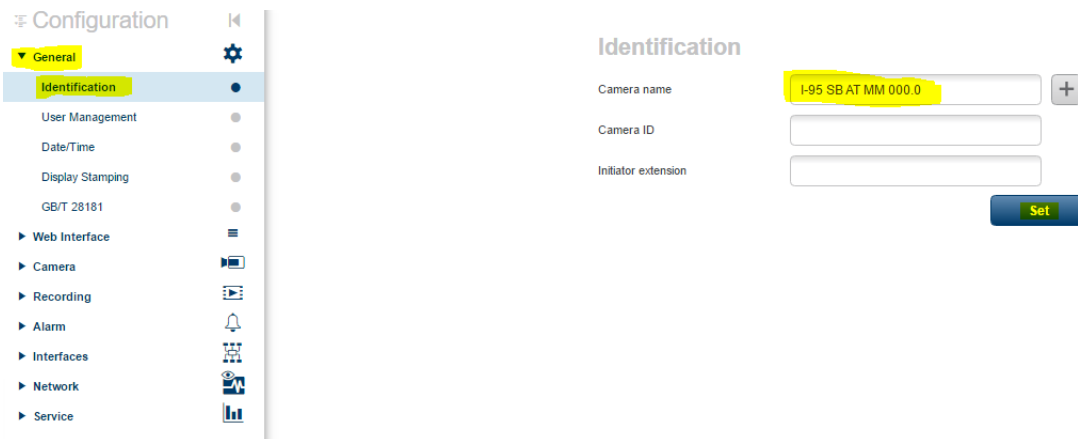
Click on “General”.

Click on “Identification”.

Type the Camera Name or Camera Location.

Camera name: <Example: I-95 NB AT MM 000.0>

Camera name: <Example: SR 50 at JYP>



Click “Set”.

Click “Date/Time”.

Set the following parameters for the “Date/Time”.

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Date format: < MM/DD/YYYY >

Device Time Zone: < Select (UTC -5:00) Eastern Time >

Device Time format: < Select Sync to PC >

The screenshot shows the SunGuide configuration interface. On the left, a sidebar menu is visible with 'Date/Time' selected. The main content area is titled 'Date/Time' and contains the following settings:

- Date format: MM/DD/YYYY
- Device date: Tuesday, 05 / 09 / 2017
- Device time: 13 : 38 : 42 (with a 'Sync to PC' button)
- Device time zone: (UTC -5:00) Eastern Time
- Daylight saving time: Details button
- Time server IP address: (empty text field)
- Overwrite by DHCP: (unchecked checkbox)
- Time server type: SNTP protocol
- Set button

Click "Set".

Click "Display Stamping".

Set the following parameters for the "Display Stamping".

Camera name stamping: < Top >

Camera OSD: < On >

The screenshot shows the SunGuide configuration interface with 'Display Stamping' selected in the sidebar. The main content area is titled 'Display Stamping' and contains the following settings:

- Camera name stamping: Top
- Logo: Choose File (No file chosen) with an Upload button
- Logo position: Off
- Time stamping: Off
- Display milliseconds: Off
- Alarm mode stamping: Off
- Alarm message: (empty text field, max 31 characters)
- Title OSD: Momentary, Position (XY) 0 / 0 (0..255)
- Camera OSD: On, Position (XY) 0 / 240 (0..255)
- Transparent background: (unchecked checkbox)
- Video authentication: Off
- Signature interval [s]: 0
- Set button

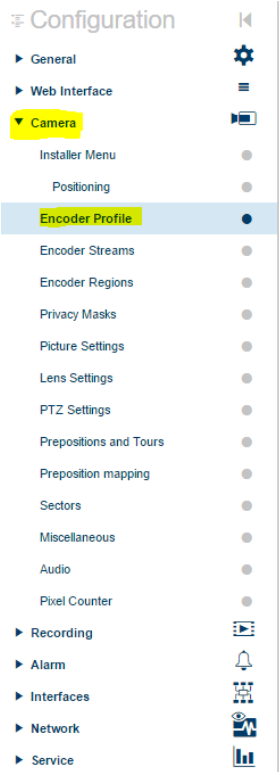
Click "Set".

2. Camera Video/Encoder settings:

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Click on "Camera".

Click on "Encoder Profile".



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Click on “Profile 6”.

Set the following parameters for the **Profile 6** Tab.

Profile name: < iVEDDS >

Target bit rate: < 500 kbps>

Maximum bit rate: < 1100 kbps>

Video resolution: < 240p >

The screenshot displays the SunGuide configuration interface. On the left is a navigation menu under the heading "Configuration". The menu items include: General, Web Interface, Camera (expanded), Encoder Profile (selected), Encoder Streams, Encoder Regions, Privacy Masks, Picture Settings, Lens Settings, PTZ Settings, Prepositions and Tours, Preposition mapping, Sectors, Miscellaneous, Audio, Pixel Counter, Recording, Alarm, Interfaces, Network, and Service. The main content area is titled "Encoder Profile" and shows a tabbed interface with tabs for Profile 1 through Profile 8. Profile 6 is the active tab. The settings for Profile 6 are: Profile name: iVEDDS; Target bit rate: 500 kbps; Maximum bit rate: 1100 kbps; Encoding interval: 30.00 fps; Video resolution: 240p (only for SD streams). At the bottom right of the settings area are buttons for "Expert Settings >>", "Default", and "Set".

Click “Set”.

Click on “Profile 8”.

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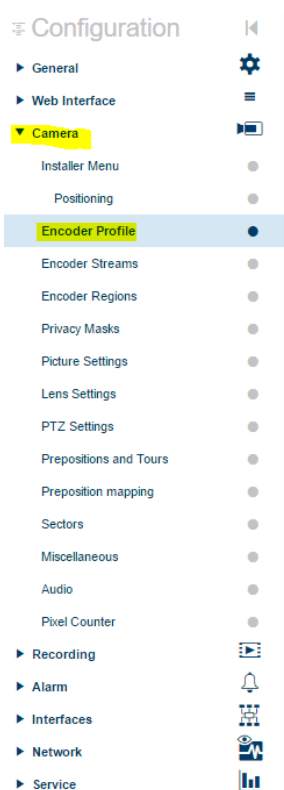
Set the following parameters for the **Profile 8** Tab.

Profile name: < ITS >

Target bit rate: < 1500 kbps>

Maximum bit rate: < 3000 kbps>

Video resolution: < 240p >



Encoder Profile

Profile 1 Profile 2 Profile 3 Profile 4 Profile 5 Profile 6 Profile 7 **Profile 8**

Profile name	<input type="text" value="ITS"/>	
Target bit rate	<input type="text" value="1500"/>	kbps
Maximum bit rate	<input type="text" value="3000"/>	kbps
Encoding interval	<input type="text" value="30.00"/>	(30.00 fps)
Video resolution	<input type="text" value="240p"/>	(only for SD streams)

[Expert Settings >>](#)

[Default](#) [Set](#)

Click "Set".

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Click on “Encoder Streams”.

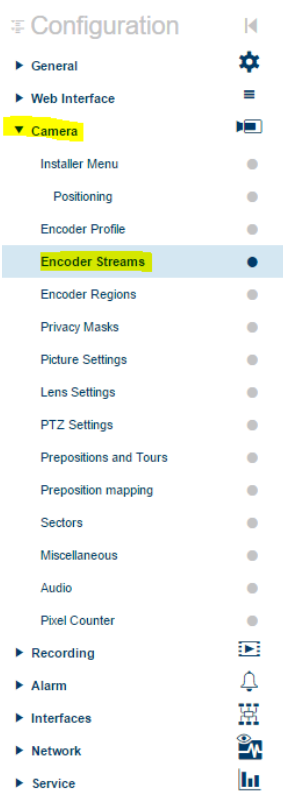
Set the following parameters for the “Encoder Streams”.

Property Stream 1: < H.264 MP 720p25/30fixed >

Non-recording profile: < 8: ITS >

Property Stream 2: < H.264 MP SD >

Non-recording profile: < 6: iVEDDS >



Encoder Streams

A screenshot of the 'Encoder Streams' configuration page for 'Video 1' (I-95 SB ATMM 101.0). The page is divided into three main sections: Stream 1, Stream 2, and JPEG stream. Stream 1 settings: Property is 'H.264 MP 720p fixed', Non-recording profile is '8: ITS', and Current profile is 'ITS'. Stream 2 settings: Property is 'H.264 MP SD', Non-recording profile is '6: iVEDDS', and Current profile is 'iVEDDS'. JPEG stream settings: Resolution is 'Best possible', Max. frame rate is '25 fps', and Picture quality is a slider set between 'Low' and 'High'. A 'Set' button is located at the bottom right of the configuration area.

Click “Set”.

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Click on “Picture Settings”.

Ensure that the following parameters for the “Picture Settings” are set.

The screenshot displays the SunGuide web interface. On the left, the 'Configuration' menu is visible, with 'Picture Settings' highlighted. The main content area shows the 'Picture Settings' configuration page. The parameters and their current values are as follows:

Parameter	Value / Setting
Current mode	Custom
White balance	ATW
Red gain	0
Blue gain	0
Saturation	170%
Color hue	0°
Intelligent DNR	On
Gain control	AGC
Fixed gain	2
Maximum gain level	High
AE-response speed	Medium
Sharpness	12
Shutter mode	Automatic exposure
Shutter	1/60
Maximum automatic exposure	1/4
Top shutter speed	1/10000
Backlight compensation	Off
High sensitivity	Off
Stabilization	Off
High dynamic range	Off
Night mode	Auto
Night mode threshold	30

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Click on “Lens Settings”.

Ensure that the following parameters for the “Lens Settings” are set.

The screenshot displays the SunGuide configuration interface. On the left is a navigation menu with categories: Configuration, General, Web Interface, Camera, Recording, Alarm, Interfaces, Network, and Service. Under the 'Camera' category, 'Lens Settings' is selected and highlighted. The main panel shows the 'Lens Settings' configuration page with the following parameters:

- Focus:**
 - Autofocus: Autofocus
 - Focus speed: 4
 - IR focus correction: Off
 - Day near limit [m]: 0.3
 - Night near limit [m]: 0.1
- Iris:**
 - Auto iris: Constant
 - Auto iris level: 8
- Zoom:**
 - Maximum zoom speed: Fast
 - Zoom limit: 30x
 - Digital zoom: Standard

Click on “PTZ Settings”.

Ensure that the following parameters for the “PTZ Settings” are set.

The screenshot displays the SunGuide configuration interface. On the left is a navigation menu with categories: Configuration, General, Web Interface, Camera, Recording, Alarm, Interfaces, Network, and Service. Under the 'Camera' category, 'PTZ Settings' is selected and highlighted. The main panel shows the 'PTZ Settings' configuration page with the following parameters:

- Auto pan speed: 30
- Inactivity: Off
- Inactivity period: 2 min
- Number of sectors: 16
- Auto pivot: On
- Freeze frame: On
- Turbo mode: Off
- Azimuth: Off
- Max. PT speed [%]: 50
- Tracking zoom-out limit [%]: 50
- Tracking idle time [s]: 30
- Auto pan left limit: Set / Show
- Auto pan right limit: Set / Show
- Tilt up limit: Set / Clear
- Tour A: Start Recording
- Tour B: Start Recording
- Compass: Off
- North point: Clear

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Click on “Service”.

Click on “Maintenance”. Browse and Upload the provided Firmware file for the camera.

The screenshot shows the SunGuide web interface. On the left is a navigation menu under 'Configuration' with options: General, Web Interface, Camera, Recording, Alarm, Interfaces, Network, Service (expanded), Maintenance (selected), Licenses, Certificates, Diagnostics, and System Overview. The main content area is titled 'Maintenance' and contains several sections: 'Update server' with a text input containing 'https://downloadstore.boschsecurity.com/index.php' and a 'Check' button; 'Firmware' with a 'Choose File' button, 'No file chosen' text, and an 'Upload' button; a checkbox for 'Accept only signed firmware'; 'Progress' with a '0%' indicator; 'Upload history' with a 'Show' button; 'Configuration' with a 'Choose File' button and 'No file chosen' text, and 'Upload' and 'Download' buttons; and 'Maintenance log' with a 'Download' button.

Click on “Service”.

Click on “System Overview”. Check the System to see if the Firmware was loaded.

The screenshot shows the SunGuide web interface. On the left is a navigation menu under 'Configuration' with options: General, Web Interface, Camera, Recording, Alarm, Interfaces, Network, Service (expanded), Maintenance, Licenses, Certificates, Diagnostics, and System Overview (selected). The main content area is titled 'System Overview' and displays a list of system parameters and their values:

Device type	AUTODOME IP dynamic 7000 HD (CPP4)
Commercial type number	VG5-7230-EPC4
Serial number	044012351827100028
Product ID	0x23
Product variant ID	0x09
Hardware ID	0x4d
IP address	[REDACTED]
MAC address	00-07-5F-87-80-1E
Firmware version	6.32.0099 (99500632)
Min. firmware version	5.90
Hardware version	F0004D43
Security coprocessor version	3
Audio option	Yes
Storage medium attached	No
Initiator name	iqn.2005-12.com.bosch:unit00075f87801e
System controller version	04.16.00.29 / 04.00.01.05
CMC version	01.01.00.01 / 01.08.00.01
Stream 1	ITS
Stream 2	IVEDDS
Temperature	109 °F/42.5 °C (max. 127 °F/52.5 °C)
Cloud state	Not running (Automatic IP assignment not active)
Open source licenses	

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Click on Live and PTZ camera.



Log out of camera.