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Lingo Camera Tool

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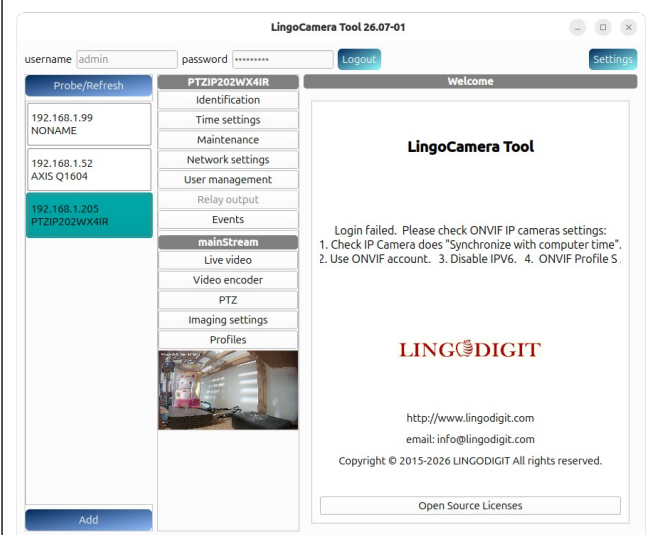
1 、 Brief Introduction

Lingo Camera Tool is an ONVIF IP camera manager built for Ubuntu 26.04 LTS. Its GUI utilizes Qt6Core (version 10) and GStreamer to demonstrate how to control and communicate with IP cameras through ONVIF and display live video. We also provide a C-based client library without a GUI, allowing developers to build an ONVIF client with their own GUI or RTSP libraries.

To develop your ONVIF Client products,

we provide a reference procedure, Lingo Client Procedure, for calling Lingodigit's client library APIs in C based on public ONVIF specifications, covering tasks such as retrieving services, changing video encoder settings, and more.

If you are interested in our software for ONVIF Client and would like to request a demo version of the library running on a Linux console application, please contact us for further information at info@lingodigit.com.



Lingo Camera Tool

```
== Profile T Test Functions ==
[0] GetDeviceInformation / Get Services /GetDate and Time
[1] select profile
[2] change video encoder settings
[3] rtsp stream url (UDP, get rtsp streamings and auto close)
[4] rtsp stream url (TCP, get rtsp streamings and auto close)
[5] rtsp stream url (HTTP, get http streamings and auto close)
[6] Create new profile
[7] delete profile
[8] enable event loop
[n] metadata test , event
[i] imaging service test
[n] Network configuration
[p] ptz service test
[q] disconnect and return to main menu
```

Lingo Client Procedure

Lingo Camera Tool :

Based on ubuntu 26.04 and Qt6Core64 version 6.10, supports HTTP Digest Authentication.

Supported Features:

- Device Discovery
- Device Management Service
- Media Service
- RTSP streaming
- Imaging Settings
- Event Service
- PTZ Service
- Relay Output
- Snapshot

Lingodigit's Software for ONVIF Client Supported Features:

- Devices Discovery
- HTTP Digest Authentication for RTSP
- Media Service , Video Streaming
- Media2 Service, H.265 Video Streaming
- Video Encoder Configurations
- Event Notification
- Motion Alarm
- Imaging Service (brightness, contrast, ...)
- Network Configuration
- PTZ Control. Support absolute, relative and continuous move models, PTZ preset.
- MetaData with event, PTZ
- Audio and Video Configuration
- Video Source Configuration
- Video Analytics
- Digital (Relay) Output
- Snapshot

2 、Lingo Camera Tool Install

Lingo Camera Tool Based on QT6 ubuntu 26.04

```
## Install dpkg  
sudo dpkg -i LingoCameraTool-26.07.deb
```

```
## libqt6core6t64 v10.02  
sudo apt install libb2-1  
sudo apt install libqt6core6t64  
sudo apt install libqt6quickwidgets6  
sudo apt install gstreamer1.0-qt6  
sudo apt install gstreamer1.0-libav
```

```
## Remove  
sudo dpkg -r LingoCameraTool
```

LingoCamera Tool active from console :

\$ sudo dpkg -i LingoCameraTool-26.07.deb

(Reading database ... 292599 files and directories currently installed.)

Preparing to unpack LingoCameraTool-26.07.deb ... Unpacking lingocameratool (26.07-01) over (26.07-01) ... Setting up lingocameratool (26.07-01) ... Processing triggers for gnome-menus (3.38.1-1ubuntu1) ... Processing triggers for desktop-file-utils (0.28-1build1) ... Processing triggers for hicolor-icon-theme (0.18-2build1) ...

\$ LingoCameraTool

QML debugging is enabled. Only use this in a safe environment.

Lingo Camera Tool is an ONVIF IP camera manager built for Ubuntu 26.04 LTS.

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Lingo Camera Tool Install dpkg issues from a new Ubuntu 26.04:

\$ sudo dpkg -i LingoCameraTool-26.07.deb

dpkg:

lingocameratool depend on gstreamer1.0-libav ;

gstreamer1.0-libav not found. install package:

sudo apt install sudo apt install gstreamer1.0-libav

dpkg: error processing package lingocameratool (--install):

\$ sudo apt install gstreamer1.0-libav

need 'apt --fix-broken install' to fix

Unsatisfied dependencies:

\$ sudo apt --fix-broken install

\$ LingoCameraTool

QML debugging is enabled. Only use this in a safe environment.

qml6glsink not found. install package:

sudo apt install gstreamer1.0-qt6

\$ sudo apt install gstreamer1.0-qt6

\$ LingoCameraTool

QML debugging is enabled. Only use this in a safe environment.

LingoCamera Tool is an ONVIF IP camera manager built for Ubuntu 26.04 LTS.

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3 、 Active Usage

Test Cameras:

AXIS P3245-V
ACTi Z41 (Zoom)
LTS PTZIP202WX4IR
AXIS Q1604

Lingo Camera Tool version history:

v26.10-12

Allow devices without the event service.

Add login messages for devices without media services.

Rename Lingo Camera Tool

v26.07-29

Update Exposure Mode display options (Auto/Manual).

Adjust image settings value conversion.

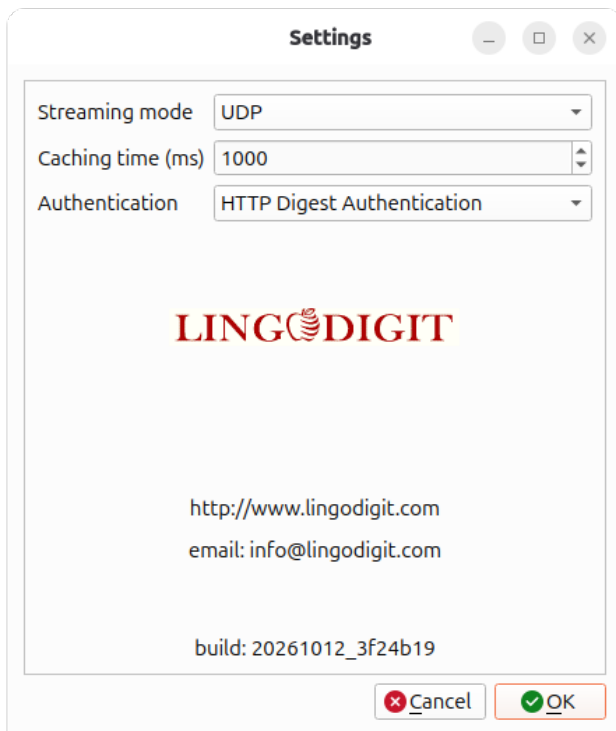
3.1 Probe to discover ONVIF IP cameras

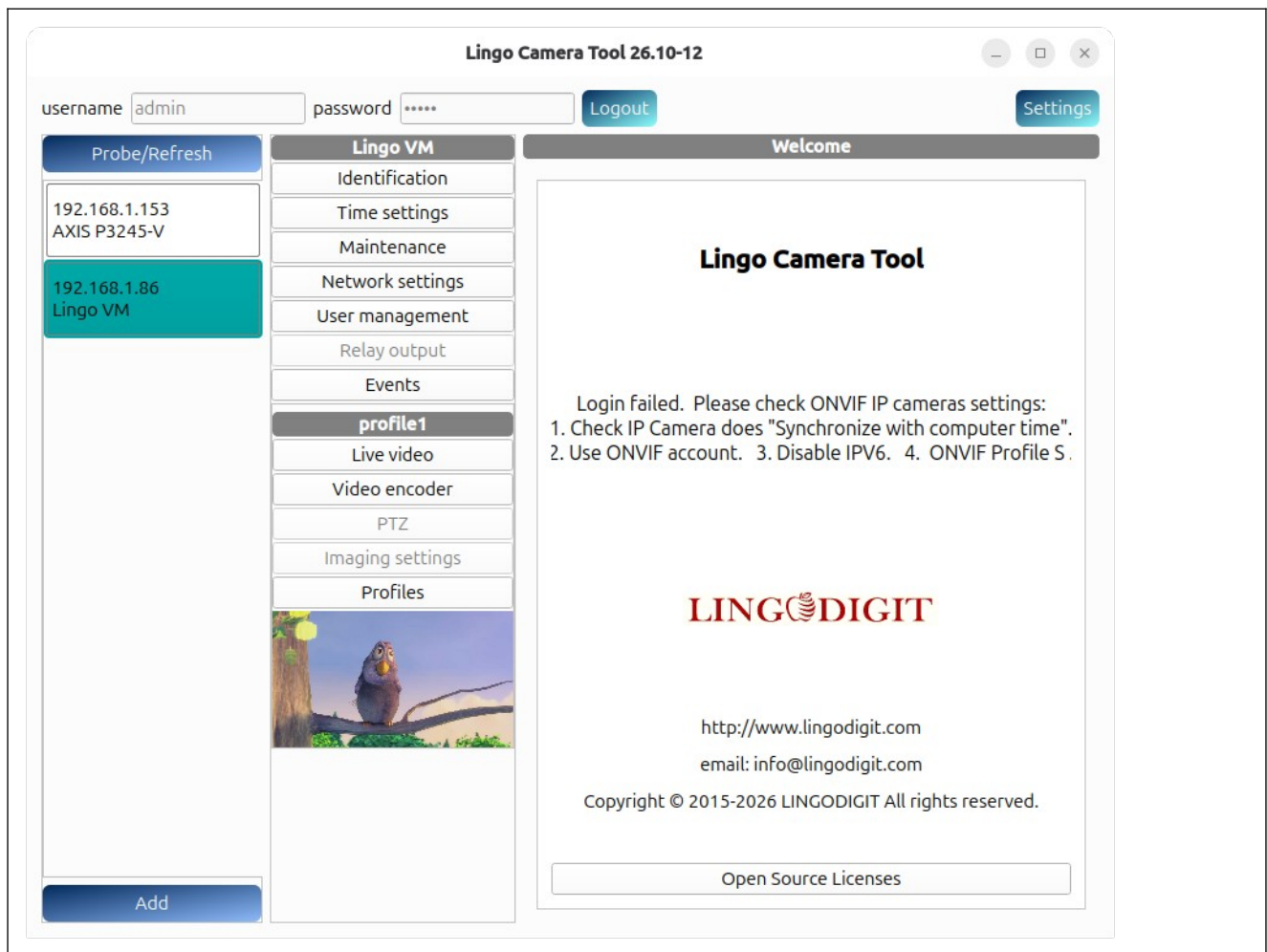
[Login/Logout] Log in using an ONVIF account.

[Settings] Change Authentication methods

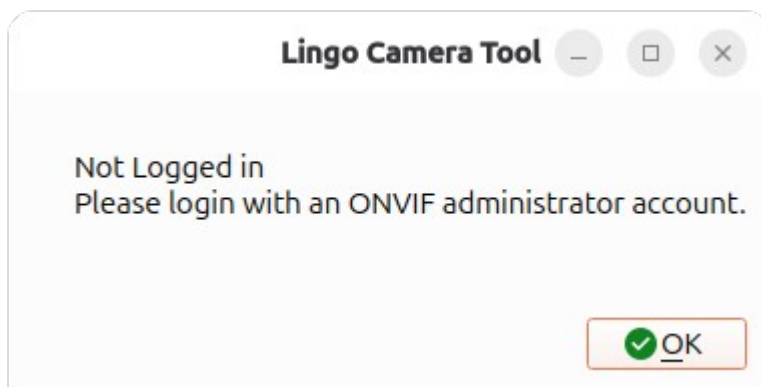
[Probe/Refresh] Search for ONVIF devices and select one from the list to log in.

Change Authentication methods and RTSP streaming modes.





Log in using an ONVIF account.



3.2 ONVIF Account

Log in to the AXIS P3245-V using the ONVIF account "admin";
Configure the ONVIF account via the webpage.

Lingo Camera Tool 26.10-12

username password Logout Settings

Probe/Refresh

192.168.1.153
AXIS P3245-V

192.168.1.86
Lingo VM

Add

AXIS P3245-V

Identification

Time settings

Maintenance

Network settings

User management

Relay output

Events

profile_1 h264

Live video

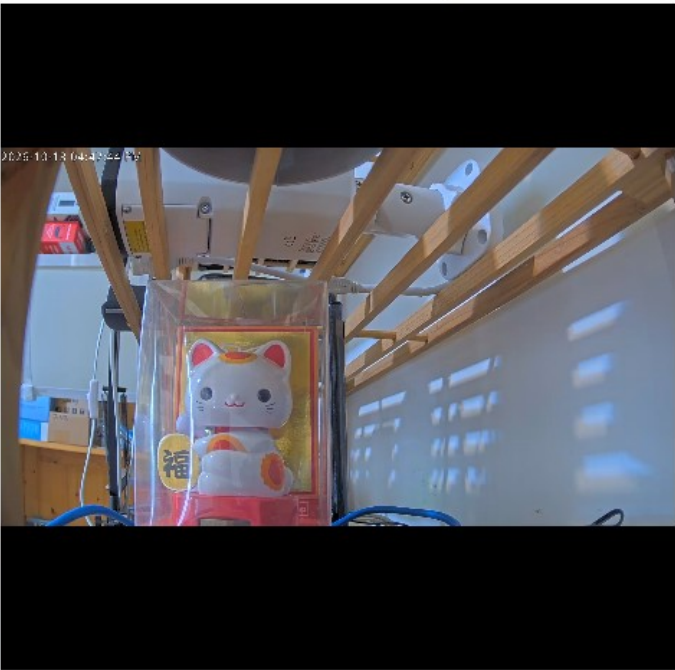
Video encoder

PTZ

Imaging settings

Profiles

Video encoder settings



Codec/Resolut

Bitrate limit, kbps

Framerate, fps

Encoding interval

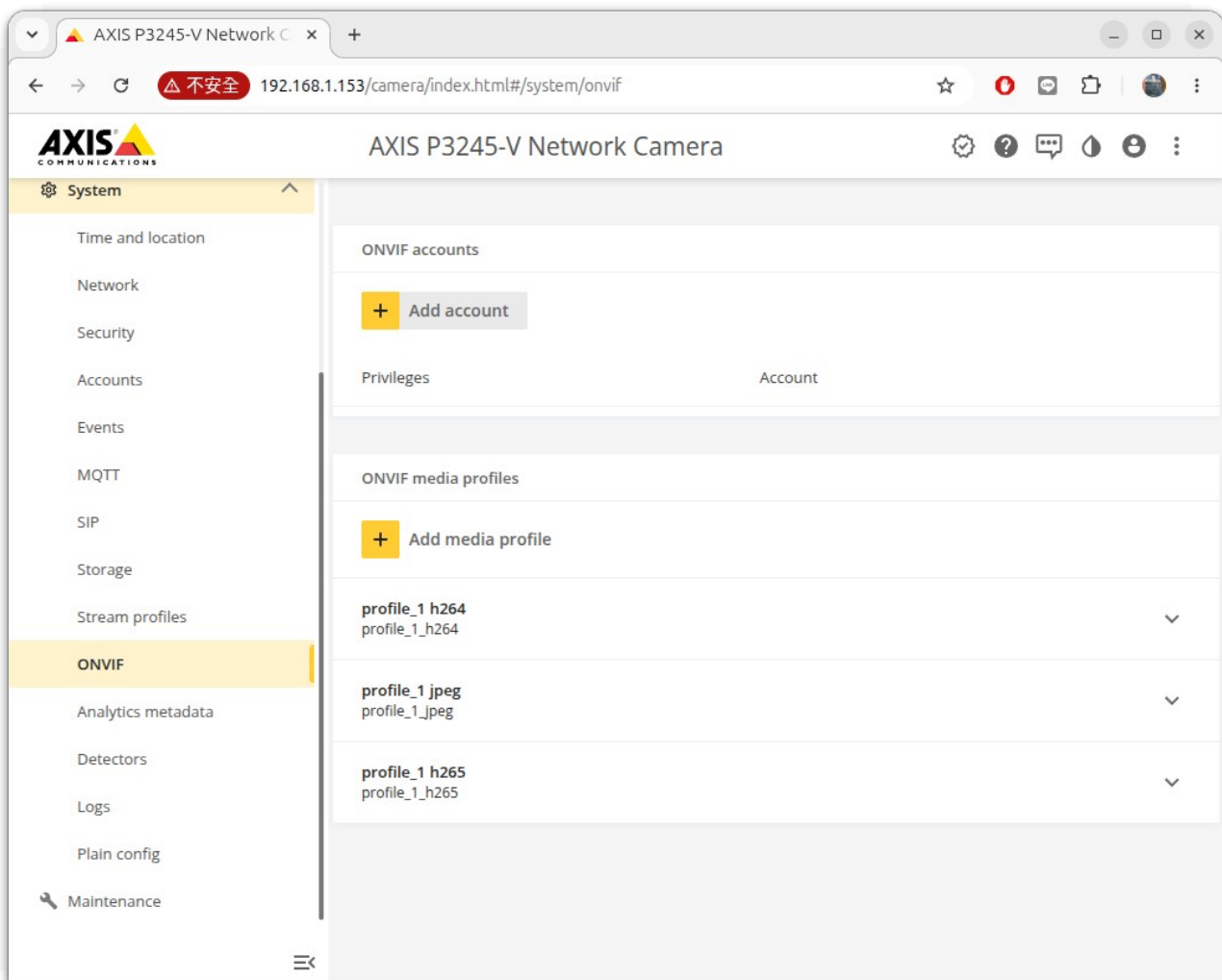
Quality

GOV length

Cancel

OK

7/p17



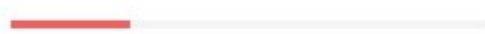
Add account

Account

New password



Repeat password



Privileges



Cancel

Save

3.3 Usage Imaging Settings, PTZ Service, Event Service, Relay Output

Login AXIS P3245-V via ONVIF account “admin”
[Imaging settings] : change “Saturation value”

Lingo Camera Tool 26.10-12

username password Logout Settings

Probe/Refresh

192.168.1.72
PTZIP202WX4IR

192.168.1.153
AXIS P3245-V

Add

AXIS P3245-V

Identification

Time settings

Maintenance

Network settings

User management

Relay output

Events

profile_1 h264

Live video

Video encoder

PTZ

Imaging settings

Profiles



Welcome

Lingo Camera Tool

Login failed. Please check ONVIF IP cameras settings:
1. Check IP Camera does "Synchronize with computer time".
2. Use ONVIF account. 3. Disable IPV6. 4. ONVIF Profile S.

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Lingo Camera Tool 26.10-12

username admin password ***** Logout

Settings

Probe/Refresh

192.168.1.72
PTZIP202WX4IR

192.168.1.153
AXIS P3245-V

Add

AXIS P3245-V

Identification

Time settings

Maintenance

Network settings

User management

Relay output

Events

profile_1 h264

Live video

Video encoder

PTZ

Imaging settings

Profiles



Imaging settings



Contrast 50

Saturation 40

Sharpness 50

Wide Dynamic Range Mode On

White Balance Mode Auto

Exposure Priority Frame rate

Exposure Mode Auto

Exposure Max Time -1

Exposure Min Time 1

Exposure Max Gain 91

Exposure Min Gain 0

Ir-Cut Mode Auto

Focus Mode Auto

Cancel OK

Imaging Settings: Saturation value 40

Lingo Camera Tool 26.10-12

username admin password ***** Logout

Settings

Probe/Refresh

192.168.1.72
PTZIP202WX4IR

192.168.1.153
AXIS P3245-V

Add

AXIS P3245-V

Identification

Time settings

Maintenance

Network settings

User management

Relay output

Events

profile_1 h264

Live video

Video encoder

PTZ

Imaging settings

Profiles



Imaging settings



Brightness 50

Contrast 50

Saturation 80

Sharpness 50

Wide Dynamic Range Mode On

White Balance Mode Auto

Exposure Priority Frame rate

Exposure Mode Auto

Exposure Max Time -1

Exposure Min Time 1

Exposure Max Gain 91

Exposure Min Gain 0

Ir-Cut Mode Auto

Focus Mode Auto

Imaging Settings: Saturation value 80

PTZ Service : Login PTZ PTZIP202WX4IR

Lingo Camera Tool 26.10-12

usernameadminpassword.....LogoutSettings

Probe/Refresh

192.168.1.86
Lingo VM

192.168.1.72
PTZIP202WX4IR

192.168.1.153
AXIS P3245-V

Add

PTZIP202WX4IR

Identification

Time settings

Maintenance

Network settings

User management

Relay output

Events

mainStream

Live video

Video encoder

PTZ

Imaging settings

Profiles

10-13-2026 Tue 16:55:39

↑

←

→

+

↓

−

Pan

Tilt

Zoom

Speed

Continuous

Absolute

Relative

Event Service

13/p17

Lingo Camera Tool 26.10-12

username

admin

password

.....

Logout

Settings

Probe/Refresh

192.168.1.72
PTZIP202WX4IR

192.168.1.153
AXIS P3245-V

Add

AXIS P3245-V

Identification

Time settings

Maintenance

Network settings

User management

Relay output

Events

profile_1 h264

Live video

Video encoder

PTZ

Imaging settings

Profiles



Events

	Time	Topic	Operation	Source	Data
1	2026-10...	tnsaxis:S...	initialized	disk_id=...	alert=0...
2	2026-10...	tns1:De...	initialized	Token=6	Failed=0
3	2026-10...	tns1:De...	initialized	port=29	active=0
4	2026-10...	tnsaxis:S...	initialized	disk_id=...	disrupti...
5	2026-10...	tns1:PT...	initialized	channel=1	ready=0
6	2026-10...	tns1:De...	initialized	Token=8	Failed=0
7	2026-10...	tns1:De...	initialized	port=6	active=0
8	2026-10...	tns1:De...	initialized	port=64	active=0
9	2026-10...	tns1:De...	initialized	port=41	active=0
10	2026-10...	tns1:De...	initialized		connect...
11	2026-10...	tns1:Vid...	initialized	VideoSo...	abr_erro...
12	2026-10...	tns1:Vid...	initialized	VideoSo...	abr_erro...
13	2026-10...	tns1:De...	initialized	disk_id=...	disrupti...
14	2026-10...	tns1:PT...	initialized	channel=8	ready=0
15	2026-10...	tns1:De...	initialized	Token=4	Failed=0
16	2026-10...	tns1:De...	initialized	port=18	active=0
17	2026-10...	tns1:De...	initialized	port=53	active=0
18	2026-10...	tns1:Vid...	initialized	VideoSo...	abr_erro...
19	2026-10...	tns1:Vid...	initialized	VideoSo...	abr_erro...

LingoCamera Tool 26.07-01

usernameadminpassword.....LogoutSettings

Probe/Refresh

192.168.1.86
Lingo VM

192.168.1.205
PTZIP202WX4IR

192.168.1.52
AXIS Q1604

Add

AXIS Q1604

Identification

Time settings

Maintenance

Network settings

User management

Relay output

Events

profile_1 h264

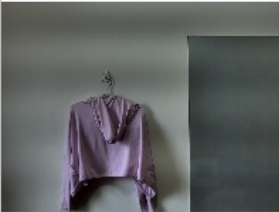
Live video

Video encoder

PTZ

Imaging settings

Profiles



Relay output

Digital outputs (relays)
1

Relay options

Token:1

Mode:bistable

Idle state:closed

Delay time:PT0S

Set

Relay state:

ActivateDeactivate

Relay output

4 、Login issues

If login fails, please check the camera settings:

ONVIF Media Service

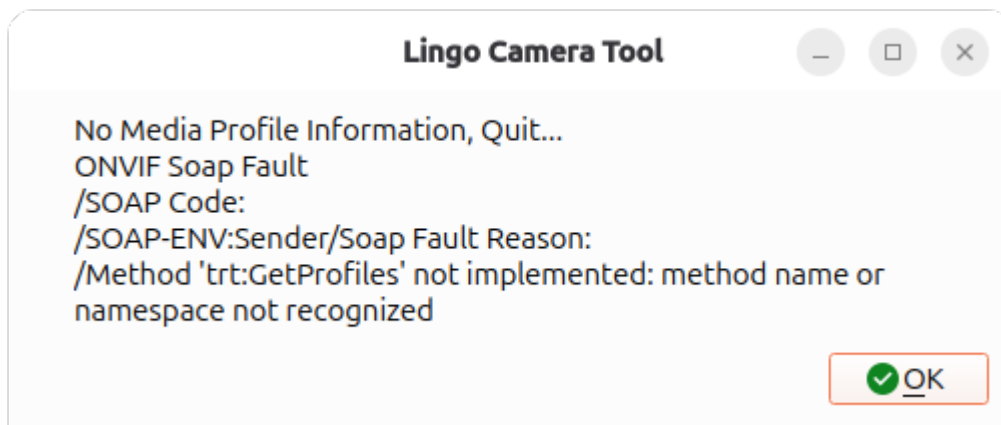
ONVIF Account

System Time (NTP server)

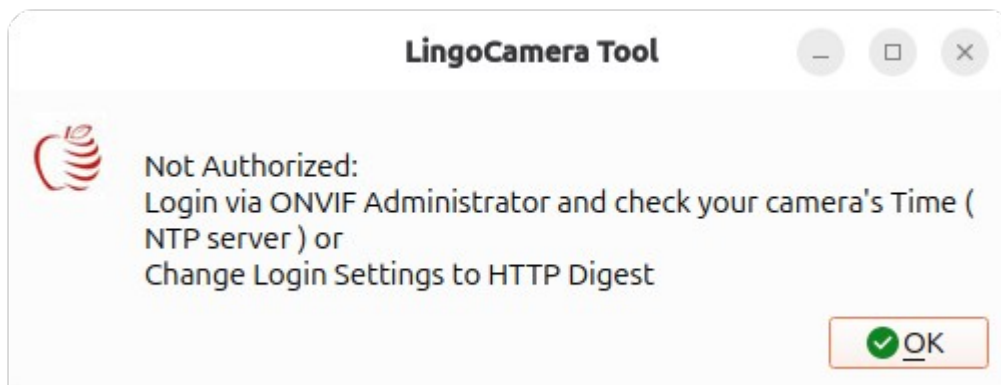
ONVIF Media Service :

ONVIF device has to support media services and one profile.

The selected device does not support the media service. The following message is shown:



Login failed due to a time synchronization issue, you may need to Check camera's System time and NTP server.



Check System time of IP Cameras

AXIS P3245-V Network Camera



Date and time

🕒 11:08 AM

📅 Monday, June 22, 2026

📍 Asia/Taipei (GMT +8)

☐ 24-hour clock

Synchronization

☐ Automatic date and time (manual NTP servers) ⓘ

☒ Automatic date and time (NTP servers using DHCP)

☐ Automatic date and time (manual NTP servers)

☐ Custom date and time

Fallback NTP servers

Max NTP poll time

1024 s ▼

Min NTP poll time

64 s ▼

Time zone

☐ DHCP: Not available

☒ Manual

Asia/Taipei (GMT +8) ▼