

Samsung Techwin Samsung Server

Device Driver Specification. DYNAMICALLY GENERATED; DO NOT MODIFY.

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1 Document Versions

Version	Date	Name	Change
1.0	2017-01-25	AB	Document Created.

2 Referenced Documents

Document	Version	Description
Driver Project Requirements (DDK-PR)	1.0	The Samsung Techwin Samsung Server driver must conform to all the requirements detailed in this document.
Driver Connection and Online States Requirements (DDK-DC)	1.0	The Samsung Techwin Samsung Server driver must conform to all requirements in this document detailed in the section: Device Connection and Online States
Driver Video Requirements (DDK-VID)	1.0	The Samsung Techwin Samsung Server driver must conform to all requirements in this document detailed in the section: Video

3 Manufacturer

Name Samsung Techwin



SAMSUNG TECHWIN



SAMSUNG TECHWIN



Website <https://www.hanwhasecurity.com/>

Description Hanwha Techwin's world leading imaging technology plays an important role in protecting the safety and happiness of people by providing a comprehensive range of products and complete solutions ranging from city surveillance to the protection of streets, airports, ports, industrial facilities and military installations.

4 IPSecurityCenter Versions

The driver must be compatible with the following IPSecurityCenter versions:

IPSecurityCenter Version	Supported
4.9	<input checked="" type="checkbox"/>

5 Operating Systems

5.1 Client Side Functionality

Operating Systems	Supported
Windows 7 64 bit	<input checked="" type="checkbox"/>

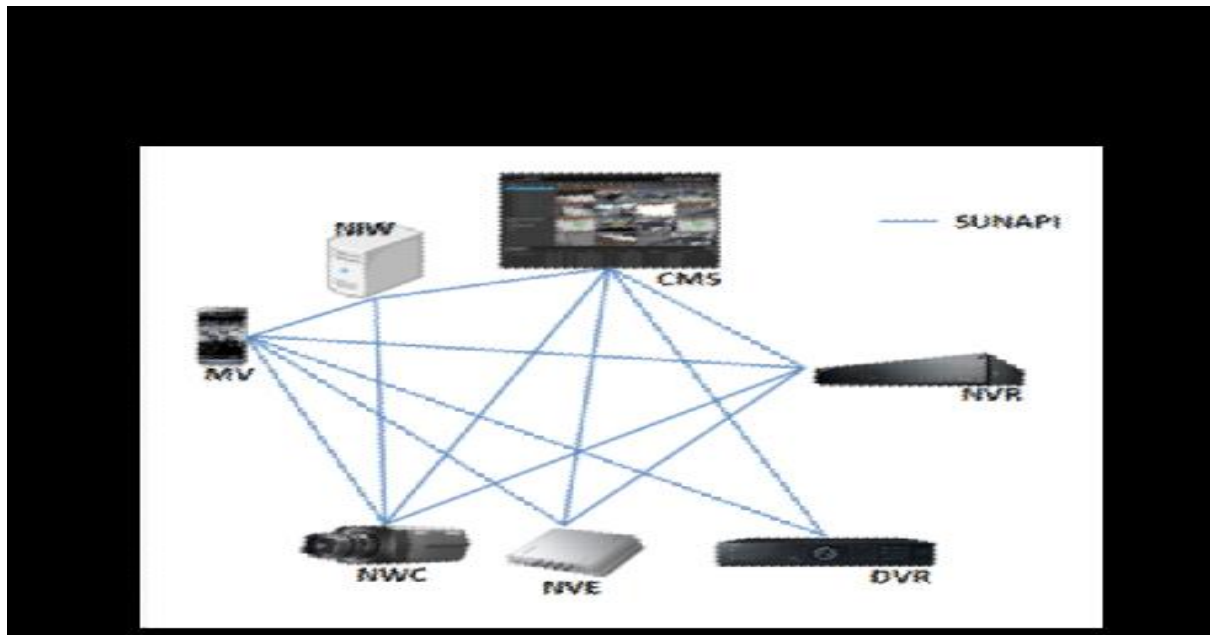
5.2 Server Side Functionality

Operating Systems	Supported
Windows Server 2008 R2	<input checked="" type="checkbox"/>
Windows Server 2012	<input checked="" type="checkbox"/>

6 Models / Firmware Versions

Model	Versions	SDK
Samsung SRN-873S	SUNAPI 2.4.0	SUNAPI 2.4.0

7 Hardware Configurations



8 Driver Package

The driver package is named: CNL.IPSecurityCenter.Driver.Samsung.Nvr [BUILD-VERSION].ipsc

9 Driver Features

9.1 Samsung Server

9.1.1 Device Connection and Online States

The full requirements for these features can be found in the [Device Connection and Online States Requirements](#)

Feature	
DC1.0 Device Online Status	None
DC2.0 Authentication	None

9.1.2 Video

This device does not support video.

9.1.3 Properties

General requirements for properties can be found in [Driver Project Requirements](#).

Name	Type	Description	Default Value & Ranges
Poll Interval	int	The interval in milliseconds at which to poll the events through API	Default: 5000 Min: 0 Max:
Rtsp port	int	Port number for the Rtsp playback video streaming.	Default: 558 Min: 0 Max:
Snapshot Folder Path	string	Folder path to save the snapshot image taken during Motion events.	Default: Min: Max:
FFMPEG path	string	The path to the FFMPEG.exe, used for Video Export	Default: Min: Max:

9.1.4 Methods

General requirements for methods can be found in [Driver Project Requirements](#).

9.1.4.1 Alarm Reset

Resets the alarm input .

Returns bool.

Performance

The method must complete within 2 seconds.

Parameters

Name	Type	Description	Default Value and Ranges
------	------	-------------	--------------------------

9.1.5 Events

General requirements for events can be found in [Driver Project Requirements](#).

9.2 Samsung Camera

9.2.1 Device Connection and Online States

The full requirements for these features can be found in the [Device Connection and Online States Requirements](#)

Feature	
DC1.0 Device Online Status	None
DC2.0 Authentication	None

9.2.2 Video

The full requirements for these features can be found in the [Driver Video Requirements](#).

Feature	
VID1.0 Camera Population	<input checked="" type="checkbox"/> None
VID2.0 Live Video	
VID2.1 Display Live Video	<input checked="" type="checkbox"/>
VID2.2 Snapshot	<input checked="" type="checkbox"/>
VID2.3 PTZ	<input checked="" type="checkbox"/>
VID2.4 Set Preset	<input type="checkbox"/>
VID2.5 Get Preset	<input type="checkbox"/>
VID3.0 Recorded Video	
VID3.1 Display Recorded Video	<input checked="" type="checkbox"/>
VID3.2 Seek	<input checked="" type="checkbox"/>
VID3.3 Pause	<input checked="" type="checkbox"/>
VID3.4 Snapshot	<input checked="" type="checkbox"/>
VID3.5 Fast Forward/Rewind	<input type="checkbox"/> <i>Play Speeds:</i> 1
VID3.6 Slow Motion	<input type="checkbox"/> <i>Play Speeds:</i> 0
VID3.7 Time Bar Population	None
VID4.0 Video Export	<input type="checkbox"/>
VID5.0 Web Client Support	<input type="checkbox"/>

9.2.3 Properties

General requirements for properties can be found in [Driver Project Requirements](#).

Name	Type	Description	Default Value & Ranges
IP Address	string	IP address of the camera device.	Default: Min: Max:
User Name	string	User name for the authentication of camera.	Default: Min: Max:
Password	string	Password required to authenticate.	Default: Min: Max:
Port	int	Default camera port .	Default: 0 Min: 0 Max:

9.2.4 Methods

General requirements for methods can be found in [Driver Project Requirements](#).

9.2.4.1 *Save Snapshot*

Takes a snapshot from the samsung camera.

Returns byte[] .

Performance

The method must complete within 2 seconds.

Parameters

Name	Type	Description	Default Value and Ranges
------	------	-------------	--------------------------

9.2.5 Events

General requirements for events can be found in [Driver Project Requirements](#).

9.2.5.1 Motion Detection Event

Raised when motion is detected in configured area.

Performance

The driver must be able to handle 4000 events per hour.

Event Properties

Name	Type	Description
Snapshot Url	string	Url of the image snapshot

9.2.5.2 Video Analytics Event

Raised when video analytics event occurs.

Performance

The driver must be able to handle 4000 events per hour.

Event Properties

Name	Type	Description
Event Type	Enums.SamsungEventType	Type of the analytic event.
Snapshot Url	string	Url to the Image snapshot

9.2.5.3 Face Detection Event

Raised when face is detected in video stream.

Performance

The driver must be able to handle 4000 events per hour.

Event Properties

Name	Type	Description
Snapshot Url	string	Url to the image snapshot

9.2.5.4 Audio Detection Event

Raised when sound above the preconfigured volume is detected.

Performance

The driver must be able to handle 4000 events per hour.

Event Properties

Name	Type	Description
------	------	-------------

9.2.5.5 *Tamper Event*

Raised if it is detected that someone is interfering with the camera.

Performance

The driver must be able to handle 4000 events per hour.

Event Properties

Name	Type	Description
------	------	-------------

9.3 SamsungAlarmOutput

9.3.1 Device Connection and Online States

The full requirements for these features can be found in the [Device Connection and Online States Requirements](#)

Feature	
DC1.0 Device Online Status	None
DC2.0 Authentication	None

9.3.2 Video

This device does not support video.

9.3.3 Properties

General requirements for properties can be found in [Driver Project Requirements](#).

Name	Type	Description	Default Value & Ranges
Alarm Index	int	Unique Alarm output Identification index.	Default: Min: Max:

9.3.4 Methods

General requirements for methods can be found in [Driver Project Requirements](#).

9.3.4.1 *On*

Set the state of the alarm output device to On.

This method is exposed as an operator action.

Returns bool.

Performance

The method must complete within 2 seconds.

Parameters

Name	Type	Description	Default Value and Ranges
------	------	-------------	--------------------------

9.3.4.2 *Off*

Set the state of the alarm output device to Off.

This method is exposed as an operator action.

Returns bool.

Performance

The method must complete within 2 seconds.

Parameters

Name	Type	Description	Default Value and Ranges
------	------	-------------	--------------------------

9.3.4.3 *Set Duration*

Sets the alarm output duration.

This method is exposed as an operator action.

Returns bool.

Performance

The method must complete within 2 seconds.

Parameters

Name	Type	Description	Default Value and Ranges
duration	int	Duration of a alarm output.	Default: 10 Min: 0 Max:

9.3.5 Events

General requirements for events can be found in [Driver Project Requirements](#).

9.3.5.1 Output Alarm

Alarm output device is in Alarm state or not

Performance

The driver must be able to handle 4000 events per hour.

Event Properties

Name	Type	Description
In Alarm	bool	Output alarm device is in input state or not

9.4 SamsungAlarmInput

9.4.1 Device Connection and Online States

The full requirements for these features can be found in the [Device Connection and Online States Requirements](#)

Feature	
DC1.0 Device Online Status	None
DC2.0 Authentication	None

9.4.2 Video

This device does not support video.

9.4.3 Properties

General requirements for properties can be found in [Driver Project Requirements](#).

Name	Type	Description	Default Value & Ranges
Alarm Index	int	Unique Alarm input Identification index.	Default: Min: Max:

9.4.4 Methods

General requirements for methods can be found in [Driver Project Requirements](#).

9.4.4.1 *On*

Set the state of the alarm input device to On.

Returns bool.

Performance

The method must complete within 2 seconds.

Parameters

Name	Type	Description	Default Value and Ranges
------	------	-------------	--------------------------

9.4.4.2 *Off*

Set the state of the alarm input device to Off.

Returns bool.

Performance

The method must complete within 2 seconds.

Parameters

Name	Type	Description	Default Value and Ranges
------	------	-------------	--------------------------

9.4.5 Events

General requirements for events can be found in [Driver Project Requirements](#).

9.4.5.1 Input Alarm

Alarm Input device is in Alarm state or not

Performance

The driver must be able to handle 4000 events per hour.

Event Properties

Name	Type	Description
In Alarm	bool	Input device is in input state or not

10 Installation

10.1 Prerequisites

Install the SDK on all machines running the following services / software:

- Client
- Video Export Server
- Connection Manager

10.2 Driver Installation

- Start the IPSecurityCenter™ client and any supporting services
- Open the Device Driver Manager from the System Configuration
- Click the ***Install*** button
- Select the Samsung Techwin Samsung Server Driver Package in the Open file dialog
- Wait for the driver to be uploaded

The driver packages should be listed in the Device Driver Manager.

Additional Installation Details

10.2.1 Device Configuration

- Right click in a folder (e.g. Devices) in the System Configuration: **New → Device On → Server**
- Click **Next** on the introduction
- Select **Samsung Techwin** in the **Device Manufacturer** list
- Select **Samsung Server** in the Available Devices list
- Click **Next** to enter the device details: Enter the Samsung Techwin Samsung Server hostname or IP address, the port (use 0 to use the default port), and user name and password if integrated security is not being used.
- Click **Next** and **Finish** to add the device.
- Enable the device to bring it online.

Additional Configuration Details

Samsung NVR network settings :

- When you run the Samsung NVR for the first time it starts the initialization screen.
- After Initialization a “Easy Setup” screen appears where you can add your network credentials.
- If the Samsung NVR is already configured then ask your network administrator for the credentials.
- To view the network setting through Web viewer , Open Internet explorer and add the Samsung NVR IP address in the URL. Provide correct username and password in the Login form.
- Go to Setup option and check all the settings related to network , camera , Port , Events and others.

Samsung NVR driver limitations:

- As per the architecture driver will be directly talking to the Samsung (DVR/NVR) device, Hence we are making SUNAPI request to NVR device
But some of the SUNAPI commands are only for network camera for e.g. Getting the Auxiliary and User input device On /Off state and returns “Submenu not found” when the request is made on Samsung NVR device. So in order to populate these devices the user has to bring the Samsung camera in network where it can be accessed by the web client.

In this driver I have added IP address , Username and password field in camera device which will be used to make SUNAPI request to commands that works only on Network cameras.

1.9.1 Live video	
Digital Zoom	Not supported by the SDK.
360 De-warp	Not supported by the SDK.

Audio Volume , Audio Mute , Start Audio , Stop audio	Created a custom button to enable and disable the audio output device (No direct method in SDK for the audio volume ,start audio , sop audio)
1.9.2 Playback	
PTZ	PTZ supported only for live video
Fast Forward / Rewinding	No direct Web SUNAPI command in the SDK.
Slow Moton	No command found for the slow motion.
Video Export	Not supported by the SDK.
Digital Zoom	Not supported by the SDK.
360 De-warp	Not supported by the SDK.
Audio Volume , Audio Mute , Start Audio , Stop audio	Same explanation as for the live video.
HTTPS/SSL	Not supported by SUNAPI.
Tamper event on Server	No SUNAPI to find tamper on server, Available on individual cameras.

Camera profiles:

“The default profile cannot be deleted or renamed, and its encoding type cannot be altered. For devices that support MPEG and H.264, Profile 1 and 2 are the default profiles; and Profile 1, 2 and 3 are the default profiles when MPEG, H.264, and MPEG4 are supported.”

Other Limitations:

- It was noted that in Some Samsung NVR , It is not possible to have multiple playback streaming at the same time. They only support single playback video at a time .
- In some NVR devices it cannot play more than 8 video feeds at the same time.
- Video export is not supported by the SUNAPI Sdk.
- Video frame is not displayed when user display the camera in Playback Pause mode (only VLC icon is displayed)
- The driver uses VLC, so time bar population does not supporting display of recording chunks.
- If Playback is not available certain period Video Frame is freezing and video footage doss not jump to next available playback time.
- Video export – only a single export may be performed at a time

Information :

- Added a new Input Alarm event in AlarmInput device with a InAlarm Boolean property.

10.2.2 Driver Compatibility

The following devices are known to be incompatible with the Samsung Techwin Samsung Server.

Model
Samsung SRN_472S