

SNC-EP520/EP521
SNC-ER520/ER521
Release Note

Ver. 1.82.01

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DIG, Sony Corporation

Release Note

Modification history

#	Release date	Version	Content of major change and comment
1	2011/06/30	1.40	First release
2	2011/07/26	1.41	The audio output level problem was only corrected.
3	2011/08/09	1.42	Network connection problem after certain specified operation was only corrected.
4	2011/08/24	1.51	<ul style="list-style-type: none"> •Add: New Function •Update: Functional Restriction •Update: Known issues
5	2012/03/23	1.70	<ul style="list-style-type: none"> •Add: New Function •Add: Corrected Problem
6	2012/05/28	ditto	<p>Only description of this release note is revised.</p> <ul style="list-style-type: none"> •The version of SNC toolbox is specified in “2. The Upgrade of firmware”. •Add: Known issues (10.8. and 10.9.)
7	2012/7/11	1.74.01	<ul style="list-style-type: none"> •Add: New Function and Corrected Problem for Ver.1.74.01 •Add: 7.11, 11.13, and 12.10.
8	2012/11/05	1.76	<ul style="list-style-type: none"> •Add: New Function and Corrected Problem for Ver.1.76 •Add: 14.10
9	2012/12/28	1.77.02	Add: New Function and Corrected Problem for Ver.1.77.02
10	2013/01/31	1.78	Add: New Function and Corrected Problem for Ver.1.78
11	2013/09/27	1.80	Add: New Function and Corrected Problem for Ver.1.80
12	2014/02/27	1.82.01	Add: New Function and Corrected Problem for Ver.1.82.01

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1. About this release version

1.1. General Information

This version is Ver. 1.82.01. This firmware can be applied to following models.

- SNC-EP520 (UCJ)
- SNC-EP521 (CE, CN)
- SNC-ER520 (UCJ)
- SNC-ER521 (CE, CN)
- SNC-ER521C (AR)

This release note describes the detailed information about this version.

1.2. System Requirements

The following computer environment is necessary for the computer to display images and the controls of the camera.

- OS
 - Microsoft Windows XP
 - Windows Vista (32bit version only)
 - Windows 7 (32-bit version, 64-bit version)
 - Windows 8 (32-bit version, 64-bit version)
 - Authorized editions:
 - Windows XP: Professional
 - Windows Vista: Ultimate, Business
 - Windows 7: Ultimate, Professional
 - Windows 8: Pro
 - Microsoft Direct X 9.0c or higher
- Web Browser
 - Microsoft Internet Explorer Ver. 6.0, 7.0, 8.0 or 9.0
 - Microsoft Internet Explorer Ver. 10.0 (Windows 8 Desktop Mode only)
 - Firefox Ver.3.5 (Plug-in free viewer only)
 - Safari Ver.4.0 (Plug-in free viewer only)
 - Google Chrome Ver.4.0 (Plug-in free viewer only)
- CPU
 - Intel Pentium 4, 2.4 GHz or higher, or Intel Core 2 Duo, 1.8 GHz or higher
- Memory
 - 1 GB or more
- Display
 - 1280 × 1024 pixels or higher

1.3. Compatibility

This version changes recording data format of Edge Storage in the media. Please refer to section 10.6 to use Edge Storage. But there is no change on CGI command, RTSP, other network protocols and the streaming format. It is compatible with Ver. 1.80 about connectivity between the external network devices and the camera.

2. The Upgrade of firmware

When upgrading the firmware, you should use the SNC toolbox of Ver. 1.3.4.0 or later. Refer to the release note of the SNC toolbox for the details of cameras supported by the SNC toolbox.

See "Using the SNC toolbox" in the User's Guide for the usage.

3. Newly Added Functions in Ver. 1.82.01

3.1. ONVIF Ver. 13.06 support

Conformance testing has been passed with ONVIF Device Test Tool Version 13.06.

4. Newly Added Functions in Ver. 1.80

4.1. Windows 8 IE10 support

This version supports Internet Explorer 10 (IE10) in Desktop User Interface Mode on Windows 8. But it does not support IE10 launching from Start Screen in Windows 8 and it has no evaluations of IE10 for Windows 7.

4.2. ONVIF Ver. 12.12 support

Conformance testing has been passed with ONVIF Device Test Tool Version 12.12.

4.3. Additional function of RTP stream with user data

Additional function of RTP stream with user data is installed in this version. New CGI category is added as 'userdata.cgi', and this function is available to change its parameter 'RTPUserData' value from default setting 'off' to 'on' as shown below.

http://ip_adr/command/userdata.cgi?RTPUserData=on

For details regarding this function, refer to the instructions for the CGI Command Manual.

5. Newly Added Functions in Ver. 1.78

5.1. Motion detection when Image 2 Codec is used

Motion detection function is activated even when Image 2 Codec is used. In this case, superimposing on Image 2 is not available.

5.2. RFC3551 format support for G.726

RFC3551 besides ITU-T formats are supported for G.726 audio codec. Generally RFC3551 format is selected on ONVIF connection.

These two formats are specified by streaming request URI as below.

- ITU-T format
rtsp://ip_adr/media/video1
or
rtsp://ip_adr/media/video1?g726=itu-t
- RFC3551 format
rtsp://ip_adr/media/video1?g726=rfc3551

The following CGI parameter specifies audio streaming port number for RFC3551.

- Unicast: RTSPUcAudioG726RfcPort (default 51004)
- Multicast: RTSPMcAudioG726RfcPort (default 61004)

6. Newly Added Functions in Ver. 1.77.02

6.1. ONVIF Profile S support

ONVIF Profile S is supported. Conformance to Profile S is validated with ONVIF Device Test Tool version 12.06.

7. Newly Added Functions in Ver. 1.76

7.1. CGI command setting for WS-Discovery

The following CGI command disables WS-Discovery protocol for ONVIF connection. At this time the multicast join message packet to 239.255.255.250 is not sent at startup.

`http://ip_adr/command/system.cgi?WsDiscovery=off`

For details, refer to the CGI Command Manual.

8. Newly Added Functions in Ver. 1.74.01

8.1. Supported Web Browser

Microsoft Internet Explorer Ver.9.0 is newly supported.

The verification test is executed for Windows 7.

9. Newly Added Functions in Ver. 1.70

9.1. The number of Privacy masking area

The maximum number of privacy mask area turns from 8 to 12.

[Note]

You can set 12 privacy masks. However, up to eight privacy masks can be displayed in the screen at one time. When nine or more privacy masks are set, masks will be displayed by number in ascending order.

Please use ver. 1.2.6.0 or later when you set 9 or more areas by the SNC toolbox,

9.2. Stabilizer

Stabilizer function is supported. Its setting can be changed from "Installation" tab. When Stabilizer is set to on, the camera image vibration will be reduced on the place where this unit is installed with vibration.

Please use ver. 1.2.6.0 or later when you change Stabilizer setting by the SNC toolbox,

[Note]

- When Stabilizer is set to on, the shooting angle of view will be narrowed by 20%.
- If Stabilizer is set to on, the compensation will not be effective depending on vibration.
- It will take some time before the effect of the compensation appears after operating the camera's pan, tilt or zoom functions.

9.3. Multicast address setting per video or audio instance

It is possible to set and request different multicast address respectively for image1, image2 and audio.

For details, refer to the CGI Command Manual.

[Note]

This function can't be used by ActiveX viewer, setting menu and the SNC toolbox.

10. Newly Added Functions in Ver. 1.51

10.1. NTCIP

NTCIP (National Transportation Communications for ITS protocol) is the protocol for the transportation monitoring standardized in the U.S.A. The registration and calling of the preset and PTZ control are working with the VidShield software by VidSys in the U.S.A.

There is no setting item regarding this function in the Administrator menu.

10.2. Connection List

This is a function to acquire information regarding the delivery destination of the streaming. This is used to recognize which client is receiving the streaming.

It is possible to acquire the IP address, port number, protocol using HTTP or UDP, and detailed information, such as media type for H.264, etc., for every session.

This is supported by the CGI command. There is no setting item regarding this function in the Administrator menu.

For details regarding this function, refer to the instructions for the CGI Command Manual.

10.3. Advanced Auto mode in White Balance setting

"Advanced Auto" mode is added to White Balance setting. In this mode, automatically adjusts the color to be closest to the image you are viewing. When performing photography under a high-pressure sodium vapor lamp, the unit automatically switches to Sodium vapor lamp mode.

10.4. SD memory card in trouble sending tab of e-mail (SMTP) menu

"SD memory card" is added to trouble sending tab of e-mail (SMTP) menu. If this item is checked, alarm mail will be sent when recording to or reading from an SD memory card is not performed correctly.

11. Function changed and Problems corrected in Ver.1.82.01

11.1. Enhanced error correction capability for the firmware data stored in the memory

Some defect data in a part of the memory's area may cause the problem which is camera may not launch or some particular function may not work correctly after power-on or after rebooting. Therefore error correction capability was enhanced for the improvement to them.

(Problem from Ver.1.40)

12. Function changed and Problems corrected in Ver.1.80

12.1. Support ONVIF Profile which includes Audio only

When ONVIF profile which includes Audio only is created, previous version returns BadRequest to GetStreamUri command. This version fixed the problem by returning URI.

(Problem from Ver.1.77)

12.2. 802.1x authentication failure after reboot

The problem of 802.1x authentication failure had been found in connection with 802.1x authentication PoE Hub. This version improved this problem.

(Problem from Ver.1.40)

12.3. Several Time Zone settings will be available by using ONVIF command

CET-1, IDLW time zone settings had been unavailable by using ONVIF command. This version improved this problem and supported a setting of offset hours from GMT (e.g. 'GMT-5' is meaning to Eastern Time of USA and Canada, but it does not support offsets of minutes and seconds).

(Problem from Ver.1.40)

12.4. No update of Port number after changing HTTP's port setting by using ONVIF command

Even though HTTP's port number was changed from default value, there would be no update of new port number in Device Service Address of ONVIF command. This version improved this problem.

(Problem from Ver.1.40)

12.5. Improved some Video Encoder Configuration's problems of ONVIF

Some problems have been found on getting and setting Image2's parameter in Video Encoder Configuration of ONVIF. These problems occur under the restriction of camera performance because image2's parameter depends on Image1's setting. And so this version improved them in accordance with the condition.

And some format (e.g. PTxxHxxMxxS) of RTSP session time out setting is available from this version. (Maximum period of time out is 600 seconds, and the value more than it will be limited to 600 seconds.)

(Problem from Ver.1.40)

12.6. Improvement of Edge Storage's recording performance

It has been found some defaults in the recording to memory media of Edge Storage, and it would cause media error and make irregular stop. This version improved the cause of defaults by changing data format and structure in the media.

(Problem from Ver.1.40)

Caution

- The old data recorded in the media cannot be transformed into new format.
- Depending on media, it has possibilities to produce a condition unrecordable for about 1 second infrequently under using this version.

Edge storage function needs updating Ver. 1.79 to avoid media error.

Please follow the procedure to update firmware as below.

- 1) Stop Edge Storage or Image memory function.
- 2) Back up the data in memory media. (Refer to the explanation below.)

- 3) Update camera firmware.
- 4) Format the memory media by camera. (All of data recorded in the media will be deleted.)
- 5) Restart Edge Storage or Image memory.

Please back up the data in memory media by one of following procedures.

- a) By using Recorder which can receive RTSP streaming, play back the data in the media and record it.
- b) Validate camera's FTP server, and get the data recorded in the media to FTP clients.
[Note]
- c) After power-off, remove the media from the camera, and copy the data recorded in the media to computer. [Note]

[Note]

SNC video player is available to play back the image data (*.maf files) which are backed up by the procedure b) or c).

When firmware is updated before backup of the old data in the media, please return to a previous version and back up according to the above-mentioned procedure. Updated firmware will detect old data format, will show the message "FORMAT MEDIA PLEASE" on display and will record a message which requests to format the media to system log. In this condition, camera cannot restart Edge Storage function.

12.7. Add RTP-Info Header in the Information of response to PLAY over RTSP
Over RTSP, RTP-Info Header has not included in the information of response to PLAY command. This version is able to add the information by using CGI command as shown below.

http://ip_addr/command/camera.cgi?RTPInfo=on (default setting is 'off')

For details regarding this function, refer to the instructions for the CGI Command Manual.
(Problem from Ver.1.40)

13. Function changed and Problems corrected in Ver.1.78

13.1. Edge Storage on time change

There was a problem that Edge storage recording may stop when time change occurs by events such as daylight savings. This problem has been fixed.

(Problem from Ver.1.40)

13.2. Parameter setting for ONVIF command SetImagingSettings

There was a problem that the camera returned the "HTTP/1.1 400 Bad Request" to ONVIF SetImagingSettings command with Brightness and ColorSaturation parameter expressed by decimals.

This problem has been fixed.

(Problem from Ver.1.40)

14. Function changed and Problems corrected in Ver.1.77.02

14.1. Improvement of streaming video performance over SSL

The frame rate of SSL streaming video is improved.

(Problem from Ver.1.40)

14.1. Correction of MPEG-4 SDP data

The extraneous last four bytes of SDP(Session Description Protocol) data for MPEG-4 in RTSP streaming are removed.

(Problem from Ver.1.40)

15. Function changed and Problems corrected in Ver.1.76

15.1. Improvement of accuracy for Area zoom operation

Positioning accuracy is improved more than ever in Area zoom mode.

(Problem from Ver.1.40)

15.2. Connectivity with other vendors' client software

There was a problem that connections with Omnicast client software provided by Genetec may be lost. This problem has been fixed.

(Problem from Ver.1.40)

15.3. Preset registration when using other vendors' client software

There was a problem that the preset position cannot be saved when using NICE client software. This problem has been fixed.

(Problem from Ver.1.40)

15.4. alarmdata.cgi sending when SSL is on

There was a problem that alarmdata.cgi could not be sent when SSL is enabled. This problem has been fixed.

(Problem from Ver.1.40)

15.5. Incorrect return value by alarmdata.cgi during continuous motion detection

There was a problem that alarmdata.cgi returned 1 and 0 (which indicate motion is detected and not respectively) repeatedly even though motion was detected continuously. This problem has been fixed.

(Problem from Ver.1.40)

15.6. Throughput degradation in full-duplex transmission

When 10Mbps or 100Mbps full-duplex mode is specified by CGI command, Ethernet throughput may be degraded. This problem has been fixed.

(Problem from Ver.1.40)

16. Problems corrected in Ver. 1.74.01

16.1. Improvement of responsiveness in multicast streaming

The CGI command responsiveness has been improved in multicast streaming.

(Problem from Ver.1.40)

16.2. Effectiveness of RtpExpire value

There was a problem that the changed value of CGI parameter RtpExpire had not been effective without reboot. It is no longer required to reboot for changing this value from this version.

(Problem from Ver.1.40)

16.3. Incorrect response to GetVideoSourceConfigurationOptionsRequest ONVIF command

When both Config and Profile are not specified on

GetVideoSourceConfigurationOptionsRequest, VideoSourceTokenAvailable field is missing on GetVideoSourceConfigurationOptionsResponse. This problem has been fixed.

(Problem from Ver.1.40)

16.4. Error response to ONVIF command SetVideoEncoderConfiguration

There was a problem that the camera may return the "HTTP/1.1 500 Internal Server Error" to ONVIF SetVideoEncoderConfiguration request.

This problem has been fixed.

(Problem from Ver.1.40)

17. Problems corrected in Ver. 1.70

17.1. Improvement of video codec mode update

It used to take about 3 seconds to update a frame rate or a bit rate of the video codec. By improvement of this version the duration is reduced by approximately 90 percent.

(From Ver. 1.40, Improved in Ver.1.70)

17.2. Landscape mode display of Smartphone viewer

The lower part of the video may not be displayed in landscape mode of Smartphone viewer. This problem has been fixed. The blank image on the both horizontal side of the video may be displayed so that the whole video is displayed on the display area keeping the image aspect ratio.

(Problem from Ver. 1.40, Corrected in Ver. 1.70)

17.3. Streaming problem in Smartphone viewer

When HTTP port number is set to a number other than 80(default) in the Network menu, the streaming data could not be received in the Smartphone viewer. This problem has been fixed.

(Problem from Ver. 1.40, Corrected in Ver. 1.70)

17.4. Incorrect value in Fragment Offset of JPEG RTP packet header

The value of Fragment Offset in JPEG RTP packet header differs from the correct one defined by RFC 2435. This problem has been fixed. For the client software which wants to use the former incorrect value to keep compatibility, the following CGI command is provided.

http://ip_adr/command/camera.cgi?RTPMJPEGOOffset=off

For details regarding this function, refer to the instructions for the CGI Command Manual.

(Problem from Ver. 1.40, Corrected in Ver. 1.70)

17.5. Reconnection problem on audio upload authentication error

When a network connection for audio upload from a client software causes authentication error, the camera does not close its connection. If the client tries to reconnect by using the same connection, it fails to reconnect. This problem has been fixed by closing the failure connection from the camera. SNC audio upload tool close the failure connection from the client and has no problem.

(Problem from Ver. 1.40, Corrected in Ver. 1.70)

17.6. Play operation problem of Edge Storage

Play operation of Edge Storage may not start depending on the specified start time and end time. This problem has been fixed.

(Problem from Ver.1.40, Corrected in Ver.1.70)

17.7. Continuous sending of abnormal sending in E-mail setting

There was problem that alarm on SD memory card will be sent only once when abnormal state is detected even if "continuous sending" is set to on. This problem has been fixed.

(Problem from Ver.1.51, Corrected in Ver.1.70)

17.8. Default setting of multicast address

The default setting of multicast address was 224.0.0.200 which is assigned as "Local Network Control Block" by RFC3171. This value has been changed to 239.192.0.200.

(Problem from Ver.1.40, Corrected in Ver.1.70)

17.9. Display position of privacy masking

There was problem that the privacy mask might be displayed at incorrect position after rebooting system when auto flip is on. This problem has been fixed.(Problem from Ver.1.40, Corrected in Ver.1.70)

17.10. Preset position call immediately after stopping preset tour

There was problem that camera might not move to the correct position when preset position is called immediately after stopping preset tour. This problem has been fixed.(Problem from Ver.1.40, Corrected in Ver.1.70)

17.11. Zoom operation failure with ONVIF protocol connection

With ONVIF protocol connection Tele-zoom operation does not work properly after another Tele-zoom is done. The same problem occurs in case of Wide-zoom operation. This problem has been fixed.

(Problem from Ver. 1.40, Corrected in Ver. 1.70)

18. Problems corrected in Ver. 1.51

There is no problem which is fixed in this version.

19. Problems corrected in Ver. 1.42

19.1. Network connection after certain specified operation

There was a problem that network connection might not be done correctly after factory setting by using the reset switch or changing network connection speed. This problem has been fixed.

(Problem from Ver. 1.40, Corrected in Ver. 1.42)

[Further note]

- With this modification, the link status of Ethernet port will not down if these operations are done.
- Connection speed of Ethernet port can be changed by setting PhySpeed parameter of network.cgi command.

20. Problems corrected in Ver. 1.41

20.1. Audio output level

There was a problem that audio output level might be reduced if audio is output from line output terminal. This problem has been fixed.

(Problem from Ver. 1.40, Corrected in Ver. 1.41)

21. Functional Restrictions

21.1. SNC video player

When the last character of folder name which stored a playing file is number, on occasion SNC video player doesn't play properly.

At that time, please use the last character of folder name excluding number.

21.2. Motion Detection

The motion detection function has been stopped while you control PTZ or move to the preset position. The motion detection function restarts after it waits for a while after the PTZ control stopped or the camera moved to preset position.

21.3. Thumbnails in the Preset Position Panel

Firmware upgrade does not take over the thumbnails for the registered preset positions.

21.4. RTSP Streaming

The following settings are recommended on the RTSP Streaming, because the RTSP has restriction of the performance.

As follows when H.264 or MPEG4 is used

- The number of sessions in which HTTP and RTP can be connected at the same time is 2.
- Total connected bit rate is 4Mbps or less

As follows when JPEG is used

- The number of sessions in which HTTP and RTP can be connected at the same

time is 1.

- Frame rate: 10fps or less
- Image quality: Level 4 or less
- Image size is VGA or less.

21.5. Edge Storage

The Edge Storage recording may stop when you change the setting while recording.

Please don't use Image Memory and FTP client when you use the Edge Storage function.

- Image Memory: Please turn off the Image memory of the Common Tab, turn off the Alarm recording of the Alarm recording Tab, and turn off the Periodical recording of the Periodical recording Tab.
- FTP client: Please turn off the FTP client function of the Common Tab, turn off the Alarm sending of the Alarm sending Tab, and turn off the Periodical sending of the Periodical sending Tab.

Please don't use File attachment of e-Mail function when you use the Edge Storage function.

- Please turn off the File attachment of the Alarm sending tab, and turn off the Periodical sending of the Periodical sending tab.

The following settings are recommended on the Edge Storage, because the Edge Storage has restriction of the performance.

- Image 2 of video codec tab is OFF.
- Image size is VGA or less.
- As follows when H.264 or MPEG4 is used
 - Bit rate: 2Mbps or less
 - Frame rate: 15fps or less
- As follows when JPEG is used
 - Frame rate: 10fps or less
 - Image quality: Level 4 or less
- Camera tampering detection is OFF
- Motion detection is OFF

Up to 500 video clips can be stored in an SD memory card. When the overwrite setting is set to OFF, no recording can be performed once the number of entries reaches 500. When the overwrite setting is set to ON, the oldest entry is overwritten after the number of entries reaches 500.

21.6. Camera Tampering Detection

The following settings are recommended on the Camera Tampering Detection, because the Camera Tampering Detection has restriction of the performance.

- As follows when H.264 or MPEG4 is used
 - ✧ Bit rate: 2Mbps or less
 - ✧ Frame rate: 15fps or less
- As follows when JPEG is used
 - ✧ Frame rate: 10fps or less
 - ✧ Image quality: Level 4 or less

- Edge Storage is OFF
- Motion detection is OFF

[Note]

The item "Image size is VGA or less" was removed.

21.7. Motion Detection

The following settings are recommended on the Motion Detection, because the Motion Detection has restriction of the performance.

- As follows when H.264 or MPEG4 is used
 - ✧ Bit rate: 2Mbps or less
 - ✧ Frame rate: 15fps or less
- As follows when JPEG is used
 - ✧ Frame rate: 10fps or less
 - ✧ Image quality: Level 4 or less
- Edge Storage is OFF
- Camera tampering detection is OFF

[Note]

The item "Image size is VGA or less" was removed.

21.8. Image Memory

The following settings are recommended on the Image Memory, because the Image Memory has restriction of the performance.

- As follows when H.264 or MPEG4 is used
 - ✧ Bit rate: 2Mbps or less
 - ✧ Frame rate: 15fps or less
- As follows when JPEG is used
 - ✧ Frame rate: 10fps or less
 - ✧ Image quality: Level 4 or less

[Note]

The item "Image size is VGA or less" was removed.

21.9. DynaView (WDR)

If DynaView is set to ON, picture adjustment using exposure compensation cannot be performed. To use exposure compensation, set DynaView to OFF. Also, when the shutter speed is set slower than 1/30 seconds, DynaView function is not performed even if it is set to ON. To enable the DynaView function, set the shutter speed to 1/30 seconds or faster.

21.10. Setting of image 2 of video codec

To use image 2 of video codec, set the frame rate of image 1 video codec to 15 fps or less.

21.11. The Restriction of Frame Rate

Due to the codec processing capability, an actual frame rate might be lower than the set

frame rate depending on the use conditions such as the number of streams.

21.12. Bandwidth control for JPEG streaming

Bandwidth control function for JPEG streaming is effective for TCP connection only.

21.13. Motion detection area setting

When a detection area has 180 degrees or more interior angles by CGI command setting, motion detection function may not work correctly. Please set every interior angle under 180 degrees as in the case of setting menu.

22. Known issues

22.1. About Safari

The usage of memory may increase and Safari may stop with an error when using JPEG as a streaming method with the Plug-in free viewer by Safari 4 or 5.

Please use JPEG Flash as a streaming method or use other browsers when continuous playback for a long time.

22.2. Edge Storage

When the settings are more than recommended setting, video and audio might not be able to stream.

The playback might catch up with the recording when playback while recording. At that time, the playback will stop.

Video and audio might not be synchronized when the file that is recorded video and audio was replay.

22.3. RTSP

The equipment may restart when used with the setting larger than the recommended one.

22.4. Camera Tampering Detection

The equipment may restart when used with the setting larger than the recommended one.

22.5. Motion Detection

The equipment may restart when used with the setting larger than the recommended one.

22.6. Long-time Viewing with Smartphone viewer

If a large image size is set for the video codec of the camera, the viewer may stop if the viewer is open for a long time. In such a case, restart the viewer.

22.7. Simultaneous pressing of multiple buttons with Smartphone viewer

With Xperia™ arc, pressing more than one PTZ button simultaneously may cause the PTZ operation of the camera to continue working. To stop the operation, press one of those buttons again.

22.8. Firmware upgrade by SNC toolbox of the versions 1.2.4.0 or before

The SNC toolbox of the versions 1.2.4.0 or before cannot upgrade the firmware from Ver.1.70 or later to another version. To upgrade the firmware, please use the SNC toolbox of Ver.1.2.5.0 or later.

22.9. Panorama creation by SNC toolbox of the versions 1.2.4.0 or before

The SNC toolbox of the versions 1.2.4.0 or before cannot create a panorama image for the firmware of Ver.1.70 or later. To create a panorama image for the firmware of Ver.1.70 or later, please use the SNC toolbox of Ver.1.2.5.0 or later.

22.10. Firmware upgrade by SNC toolbox of the versions 1.2.5.0

The version 1.2.5.0 cannot keep all of User names and Passwords which have been changed from the default parameter, so these will be reset to the factory default setting after updating of camera's firmware.

To upgrade the firmware, please use the SNC toolbox of Ver.1.2.6.0 or later.