

# FW 5.1.0 Build 2 Release Notes – Minor Release

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The CHeKT Video Control Panel Firmware release notes include new features and bug fixes added since FW version 5.0.0 Build 6. This firmware update is designed to enhance current CHEKT Dealer and Monitoring Portal features, while others are designed to support new features and future portal development.

## Notes for Dealers

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Dealers should anticipate the firmware update process to take between 5 and 10 minutes, depending on the download bandwidth available on the site. If you notice the process is taking longer, we advise you to allow your video control panel at least one hour before attempting a power cycle or reboot.

## Firmware Update Notes

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### ADDED Support

1. ADDED: Logic to support ITX Brand NVRs missing `<?xml ?>` in the header
2. ADDED: Logic to support ITX Brand NVRs that don't return MAC information with ONVIF API. Created a routine to fill MAC information from the local ARP table when MAC is missing.
3. ADDED: Logic to retry all auth methods if GetServices api fails.
4. ADDED: Support for VideoAnalyticsToken following the ONVIF Spec.
5. ADDED: Support for new CKB416v1 Bridge manufacturing processes.
6. ADDED: Support for Axis camera audio, supporting 2-way audio functions.
7. ADDED: Support for Hikvision method of supporting 2-way audio functions.
8. ADDED: New CKB API Proxy client for setuser and getuser
9. ADDED: APIs for Dealer Portal to display Active/Inactive cameras quicker
10. ADDED: `vd_summary` for getting event receiving summary at once.
11. ADDED: `vd video_devices_reports --ids` to get `id_tokens` of mounted cameras (`vd`)
12. ADDED: Download playback video from SD card with Audio when supported by the camera.
  - a. MJPEG(RTSP) video will always have audio if there is audio.
  - b. H264(RTSP) video will always have audio if there is audio.
  - c. H265(RTSP) video will always have audio if there is audio only when playback video is less than 20 seconds.
  - d. H265(RTSP) video will not have audio if the playback video is more than 20 seconds long. (it is transcoding performance issue)
  - e. MJPEG/H264/H265(via MP4 HTTP) is not supported.

### BUG FIXES

1. FIXED: Failed to decode URLs ending with % characters.
2. FIXED: Not playing audio on Uniview cameras w\speakers.
3. FIXED: Mounting Axis Companion cameras with HTTP video URL missing fps.

4. FIXED: Checking audio codec was case sensitive. Speco cameras w\Speaker returned lowercase pcma as the response.
5. FIXED: Digest Auth failure after trying WS-UsernameToken.
6. FIXED: Creating alarm events on all channels from a Dahua NVR only when Digest Auth method had failed after trying WS-UsernameToken.
7. FIXED: Not trying other discovery methods when ONVIF discovery gives an empty result.
8. FIXED: Automation Rules not working for Intercom Zone Types.
9. FIXED: AI Report results not uploaded delayed by System Alarm timers.
10. FIXED: Incorrect current time of camera in Profile G (vd)
11. FIXED: Creating double event stats in VCABox when only 2 channels are registered.
12. FIXED: VCABox creates events on both channels when only 2 channels are registered
13. FIXED 2m10s event video when mounted w/ MJPEG stream (streamer)
  - a. If JPEG doesn't have p-frame, so when seeking for i-frame of p-frame considering only H26x, it give the beginning of the video in MyMediaBufferItems.findKeyIndexBeforeAndAfter() this is the temporary solution to skip the item before the start time for MJPEG stream
14. FIXED: Cloud AI failure w/ MJPEG stream because no event snapshots (streamer)
15. FIXED: ArmingModeEvent is not reported sometimes when the Bridge is rebooted or power-cycled
16. FIXED: Cannot access the local admin page on some network schemas
  - a. It used to only allow 192.168.x.x, 172.x.x.x, 10.x.x.x range.
  - b. ADD logic to allow access from same local subnet addresses, its own network subnet.
17. FIXED: Issue curl http://localhost:80 doesn't work, it is fixed by allowing IPv6's localhost FIX Axis 2-way audio intermittent not-playing issue (vd)
18. FIXED: Failure to analyze video in the mounting step for old Dahua NVR/DVR (vd, streamer)
  - a. it now wait for the intial video packet for 60 seconds at maximum which was about 5 seconds before.
19. FIXED Dahua PTZ Preset doesn't work (vd)
  - a. The issue was Dahua official HTTP API document has a wrong information about SetPreset and GotoPreset
  - b. preset\_index should be in arg1, not arg2.
  - c. found out this issue in Dahua Camera's web interface.
20. FIXED: Unnecessary warn log when closing is expected. (vd, streamer)
  - a. e.g. after checking capabilities via RTSP while analyzing RTSP stream
21. FIXED: Failure to generate 2 minutes playback w/ Foscam RTSP (streamer)
  - a. It fails because it takes more than 32 seconds to generate 2 minutes playback video when RTSP stream is H265.
  - b. Currently CKB uses two different Raspberry Pi model RPi3(slower) and RPi4(faster).
  - c. 720p@8fps@8gop@H265 now takes about 9 seconds to generate 2 minutes playback video. (tested in CKB304V2)
  - d. CKB is always generating H264 video which is any-OS-friendly.
  - e. Changed SPECS are below (both for event/playback video)
22. FIXED: Failure to connection old Dahua NVR/DVR frequently (streamer)
  - a. This kind of Dahua NVR/DVR sends the initial video packet slowly (randomly)
  - b. Sometimes within 10 seconds or sometimes within 30 or 40 seconds.
  - c. Applied logic to gradually increase initial\_video\_packet timeout from 10 seconds to 60 seconds on each try (10 tries in total)
  - d. It is only about the initial video packet, not the following video packet.
  - e. For following video packet, when it reaches 10+ seconds w/o any video, CKB will cut the connection and reconnect.
23. FIXED: Potential panic issue when using api/v1/client/connection\_status (streamer)

- a. H264 -> H264: everything stays the same.
  - b. H265 -> H264 (20s-): any resolution to 360p(max), audio stays the same.
  - c. H265 -> H264 (20s+): any resolution to 360p(max), no audio, 4fps (only key frame).
  - d. MJPEG -> H264: any resolution to 360p(max), audio stays the same.
24. FIXED: Camera goes offline after about 5 minutes of the first offline. (streamer)
- a. This was caused by remaining watchdog from the previous connection stay alive waiting for 5 minutes timeout.
25. FIXED: Axis VideoAnalytics/MotionDetection doesn't create any event (ckb)
- a. It is a backward compatibility issue in FW v5.X.
  - b. It is about (videoanalytics\tnsaxis:motiondetection) has namespace of tnsaxis:
  - c. Applied RemoveNameSpaceInONVIFEvents in both GetConfiguration from ramdisk and from cloud.
26. FIXED: Passwords w/ '+' doesn't work. Issue: + is replaced by (space).

## CHANGE Functions

1. CHANGED: Changed FW update retry routine for downloading FW on slow internet connections.
2. CHANGED: Removed metadata stream support to stabilize cameras with connection resource limitation. (All Brands except Axis.)
3. CHANGED: Improved logic for uploading timelapse videos to prevent CPU and Network resource limitations. Files are staged and uploaded one by one each hour.
4. CHANGED: Improved logic for offline issue of Hanwha LNO series cameras using olde Hanwha firmware with CHeKT Bridge FW 5.x. Affect Hanwha Firmware:
  - a. 1.41.00\_20190909\_R102
  - b. 1.41.01\_20200212\_R117
  - c. 1.41.10\_20200521\_R129
  - d. 1.41.11\_20220114\_R134
5. CHANGED: Improving OOM killer issue by running more frequent GC (ckb, streamer)
6. CHANGED: Improving OOM killer issue by trying Transcode2 for 2 minute playback (streamer)
7. CHANGED: Increased /tmp size /chektSnapshotStreamBuffer is not used anymore.
8. CHANGED: Apply the Axis 2-way audio logic on all the other audio\_bc (because it improves the audio output quality) (streamer) this also prevents multiple concurrent 2-way audio issue.
9. CHANGED: Applying 10-retries on RTSP connection failure as well (streamer)
  - a. Each try has 1 - 10 seconds interval between retries, the interval increases on each try.
  - b. e.g. the interval before 10th try will be 9 seconds while the interval before 2nd try is 1 second.