DC-S6281HX

Architectural and Engineering Specifications

Version 1.0

(Apr. 28, 2023)

**PART 1: PLEASE REFER TO ATTACHED DOCUMENTS - OVERVIEW & FORMAT SAMPLES**

**PART 2: PRODUCTS**

**Division 28 – Electric Safety and Security**

**Level 1 - 28.20.00 – Video Surveillance**

**Level 2 - 28.21.00 – Surveillance Cameras**

**Level 3 - 28.21.13 – IP Cameras**

## Manufacturer

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## General

### Product Description

DC-S6281HX is an Outdoor Network WDR PTZ Camera manufactured by IDIS. This camera provides 2MP Full HD (1920x1080) resolution at 30ips with H.265, H.264, and MJPEG compression. This camera is equipped with 30x Auto Focus/Zoom lens, High-PoE, Alarm I/O, micro SD/SDHC/SDXC card backup, Vandal-proof dome enclosure with heater, and IP67 rated.

### General Specification

1. The IP camera shall be equipped with 2 Megapixel 1/2” CMOS Sensor.
2. The IP camera shall be equipped with 5.2mm ~ 156mm auto-focus zoom lens, F1.33 ~ F4.95.
3. The IP camera shall be a true day/night camera with a mechanical filter for low light performance.  
   The filter can be switched remotely, or automatically via a light level sensor or contact input (ICR).
4. The IP camera shall have wide dynamic range compensation (True WDR) for improved video quality in high-contrast situations (120dB).
5. The IP camera shall support wide pan (360o) and tilt (-10o ~ 180o) range as well as zoom up to 30x.
6. The IP camera shall utilize 2DNR or 3DNR (Dynamic Noise Reduction) technology to reduce the bitrate and storage requirements by removing noise artifacts.
7. The IP camera shall be IK10 complied vandal proof and IP rating 67 complied dome enclosure design.
8. The IP camera shall be equipped with 10/100Base-T, auto-sensing, half/full duplex, RJ-45 Ethernet connection.
9. The IP camera shall support industry standard High-PoE (Power over Ethernet) to supply power to the camera over the network, 24VAC input.
10. The IP camera shall have built-in heater for continued use in subzero temperature conditions and utilize PoE, 24VAC input to provide power.
11. The IP camera shall have video out feature (NTSC/PAL) to preview the image only.
12. The IP camera shall have on board microSD/SDHC/SDXC card backup storage slot as a safeguard against data loss during network interruptions.
13. Using IDIS NLTSrec(Non-Linear Time Shifting recording) technology, the IP camera can store the recording data to the internal recording memory buffer (60MB) in camera if there is a delay in data transmission due to the instantaneous load of the recorder or network, and then transmits the stored data to IDIS recorder safely.
14. The IP camera shall deliver maximum video resolution of 1920x1080 at rates up to 30ips (images per second).
15. The IP camera shall provide network connection using H.265, H.264 and MJPEG compression.
16. The IP camera shall support quadruple streams in DirectIP 2.0 protocol mode.
17. The IP camera shall conform to the ONVIF Profile S verified by ONVIF device test tool version 16.12.
18. The IP camera shall be equipped with embedded web server (IDIS Web) which works independently using a Web Browser with Activ-X plug-in.
19. The IP camera shall have IEEE 802.1X, IP filtering, HTTPS, SSL Encryption and configurable user authority levels for greater security.
20. The IP camera shall have network bandwidth limitation and MAT features for more efficient use of network bandwidth.
21. The IP camera shall have Easy network access via uPnP (Universal Plug and Play) function and embedded mDNS (Multicast DNS) protocol.
22. The IP camera shall have Intelligent Video Analysis (VA): Motion Detection, Active Tampering Alarm and Auto Tracking.
23. The IP camera shall have Digital Image Stabilization (DIS) to reduce the effect of camera shake or vibration.
24. The IP camera shall support Smart Failover feature that the camera’s SD card instantly begins recording and automatically transfers the data to the NVR or ISS after recovery, leaving no incident unrecorded, when the camera and NVR or ISS are disconnected.

### Protocol Specification: DirectIP 2.0

1. The IP camera shall have DirectIP 2.0 mode.
2. DirectIP 2.0 protocol shall provide easy connection to DirectIP NVR for automatic discovery and video streaming configuration.
3. DirectIP 2.0 shall provide the compatibility with IDIS Solution Suite VMS or ONVIF for third-party software solutions.
4. DirectIP 2.0 shall support camera can be linked to IDIS software solution such ad IDIS Center and IDIS Solution Suite, or 3rd party solution while it is being connected to a DirectIP NVR.
5. DirectIP 2.0 camera shall be compatible with DirectIP 1.0 NVR as well as DirectIP 2.0 NVR.
6. DirectIP 2.0 camera shall be unavailable for No-password login when connecting to DirectIP 2.0 NVR and IDIS Software Solutions.
7. DirectIP 2.0 protocol shall provide Quadruple streams.
8. DirectIP 2.0 protocol shall support H.264 and H.265 and MJPEG compression.

## Technical Specification

### Video Specification

1. Image Sensor: 1/2” CMOS
2. Maximum Resolution: 1920 x 1080
3. Scanning Mode: Progressive Scan
4. Lens Type: AF(Auto Focus) Optical Zoom Lens, IR Corrected Lens
   1. f=5.2mm ~ 156mm
5. F1.33 ~ F4.95
6. Iris Control: DC Auto Iris with hall sensor
7. Angular Field of View (H: Horizontal, V: Vertical, D:Diagonal):
   1. Wide: 58.9º(H), 34.4º(V), 66.3º(D)
   2. Tele: 2.7º(H), 1.5º(V), 3.1º(D)
   3. Pan Range, Speed: 360°, 0.02 ~ 180°/sec (preset 420°/sec)
   4. Tilt Range, Speed: 100° (-10° ~ 90°), 0.02 ~ 180°/sec (preset 420°/sec)
   5. Zoom Range: x30
8. Minimum Illumination:
   1. Color: 0.1 lux @ F1.33
   2. B/W: 0.1 lux @ F1.33
9. S/N Ratio: more than 45dB
10. Maximum Frame Rate: 30ips @1920x1080, 30ips @1920x1080 (WDR)
11. Video Resolution: 1920x1080, 1280x720, 704x480, 640x360, 352x240
12. Video Compression : H.265, H.264, MJPEG
13. Video Compression Level: 4 levels: Basic, Standard, High, Very High
14. Video Bitrate Control: H.264 - CBR / VBR, H.265 - CBR / VBR
15. Intelligent Codec: Off (Default) / On
16. Motion Adaptive Transmission (MAT): Off (Default) / On
17. Multi-Video Streaming: Quadruple streams
18. Dynamic Range: 120dB (True WDR)
19. Electronic Shutter Speed: Auto / Manual (1/30 ~ 1/10000), Anti-Flicker, Slow Shutter (1/7.5, 1/15)
20. True Day & Night: Yes (ICR)
21. Image Setting: Configurable Exposure, White Balance, Sharpness
22. Digital Noise Reduction: Configurable 2DNR/3DNR
23. Backlight Compensation: On / Off / HSBLC
24. Mirroring / Pivot : Horizontal / Vertical
25. Image Stabilizer: Yes (EIS)
26. Privacy Masking: 8 Zones
27. Intelligent Video Analytic: Video Motion Detection, Active Tampering Alarm, Trip Zone
28. Auto Tracking: Yes
29. Analog Video Output: 1 Terminal Block
30. Advanced PTZ options: 256 presets

### Audio Specification

1. Audio Compression Algorithm: ADPCM 16K, G.726, G.711 u-Law, G.711 a-Law
2. Audio Input / Output: Line-in 1ea / Line-out 1ea
3. Two-way Audio Communication: Yes
4. Pre-recorded Voice Alert: Yes

### Network Specification

1. Port: RJ-45, 10/100Base-T, 1 port
2. Network Protocols: DirectIP 2.0 Protocol, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/UDP RTSP/TCP, HTTP, HTTPS, FTP, SNTP, SMTP, FEN, mDNS, uPNP
3. Security: Multi-user Authority, IEEE 802.1x, IP Filtering, HTTPS, SSL Encryption
4. Remote Access Client: DirectIP NVR Connection, IDIS Web, IDIS Mobile, IDIS Solution Suite
5. Recording Session Buffer (NLTSrec): Up to 60MB
6. Edge Storage: micro SD/SDHC/SDXC, Smart Failover (Up to 512GB)

### Security Specification

1. Multi-user Authority, IEEE 802.1x, IP Filtering, HTTPS, SSL Encryption
2. Maximum User Access: 10 sessions for (Admin, Watch, etc.), 1 session for Recording, 1 session for Searching the recorded data in SD card

### Alarm and Event Specification

1. Alarm Input / Output: 4 / 2
   1. Alarm Input: 4 TTL, NC/NO Programmable, 4.3V(NC) or 0.3V(NO) threshold, 5V DC
   2. Mechanical or electrical switches can be wired to the Alarm-In and GND connectors. The maximum voltage should not exceed 5V.
   3. Alarm Output: 2 TTL open collector, 30mA @ 5 VDC
2. Trigger Events: Motion Detection, Alarm in, Tampering, Trip Zone
3. Event Notification: Remote S/W, Email (with Image)
4. Pre-recorded Voice Alert: Off (Default) / On

## Environmental Specification

1. Operating Temperature: -40°C ~ +55°C, starting up at above -20°C (-4°F)
2. Operating Humidity: 0% to 90%
3. Vandal-proof Enclosure: IK10
4. Outdoor Ready: IP67, Heater

## Electrical Specification

1. Power Source:24VAC, PoE IEEE 802.3at (Class 4)
2. Power Consumption: Max 17.6W (Heater On)
   1. Heater Off
      1. 24V~, 0.8A, 13.8W, 50/60Hz
      2. PoE IEEE 802.3at (Class 4) 13.6W
   2. Heater On
      1. 24V ~ 1.0A, 17.6W, 50/60Hz
      2. PoE IEEE 802.3at (Class 4) 17.2W
3. Regulatory Approvals: FCC, CE (50130-4), KC

## Mechanical Specification

1. Dimensions (Ø x H): Ø200mm x 201mm (Ø7.88" x 7.91")
2. Unit Weight: 2.54kg (5.60 lb)

## Software Specification

1. Supported Language: English, French, German, Italian, Spanish, Dutch, Polish, Portuguese, Hungarian, Czech, Russian, Danish, Swedish, Finnish, Turkish, Croatian, Korean, Japanese, Chinese-PRC, Chinese-Taiwan

# Version History

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| --- | --- | --- | --- |
| **Version** | **Writer** | **Revision Date** | **Remarks** |
| 1.0 | TS Team | Apr. 28, 2023 | Initial Release |