DC-D6831WRA

Architectural and Engineering Specifications

Version 1.0

(May. 02, 2025)

**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-D6831WRA is an outdoor dome type IP Camera followed by NDAA Compliance designed and manufactured by IDIS. This camera provides 8MP (3840 x 2160) resolution at 30ips (images per second) with H.265, H.264, and M-JPEG compression. This camera is equipped with Motorized Vari-focal lens, IR LEDs (LightMaster NIR), True Day/Night, PoE (IEEE 802.3af Class 3), Alarm I/O, Audio I/O, microSD/SDHC/SDXC card backup (up to 512GB), Vandal-proof dome enclosure design (IK10), IP67 rated and provides continuous operation in subzero temperature.

### General Specification

1. The IP camera shall be equipped with 8 Megapixel 1/1.8" CMOS Sensor.
2. The IP camera shall be equipped with 4.3 ~ 9.8mm motorized vari-focal lens, F1.6 ~ F2.6.
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 (120 dB).
5. The IP camera shall be equipped with 6ea Infrared LED with range up to 60m(196.9ft).
6. The IP camera shall support P-Iris.
7. The IP camera shall utilize 2DNR/3DNR (Dynamic Noise Reduction) technology to reduce the bitrate and storage requirements by removing noise artifacts.
8. The IP camera shall be vandal proof and IP rating 67 complied dome enclosure design.
9. The IP camera shall be equipped with 10/100 Base-T, auto-sensing, half/full duplex, RJ-45 Ethernet connection.
10. The IP camera shall support industry standard Power over Ethernet (PoE) IEEE 802.3af, Class 3 to supply power to the camera over the network and 12VDC input.
11. The IP camera shall have video out feature (NTSC/PAL).
12. The IP camera shall have on board microSD/SDHC/SDXC card backup storage slot as a safeguard against data loss during network interruptions. (Up to 512GB)
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 3840 x 2160 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/T/M.
18. The IP camera shall be equipped with embedded web server (IDIS Web) which works independently using a Web Browser with ActiveX plug-in.
19. The IP camera shall have FIPS 140-3 Level 3, Digest authentication, Password Protection, Brute force delay protection, User access log, IP Filtering, IEEE802.1x(EAP-TLS), Chained Fingerprint, SSL Encryption, HTTPS Encryption 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):

* A-cut Support
* Object Metadata: Human, Vehicle, Face
* Object Attribute: Human[Gender, Age, Bag, Hat, Colors], Vehicle[Car, Truck, Bus, Bike(Bicycle, Motorcycle), ETC, Colors], Face[Gender, Age, Glasses, Hat, Mask]
* IDLA: Object Detection, Intrusion, Loitering, Line Crossing, Face Detection
* IDLA Pro: Crowd Detection, Abandoned Object Detection, Removed Object Detection, Fall Detection, Violence Detection
* ETC: Video Motion Detection, Active Tampering Alarm

### 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 as 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.

※ The integration between this model and the NVR will be supported in the next version of the NVR firmware, scheduled for the second half of 2025.

## Technical Specification

### Video Specification

1. Image Sensor: 1/1.8" CMOS
2. Maximum Resolution: 3840 x 2160
3. Scanning Mode: Progressive Scan
4. Lens Type: Motorized Vari-focal (f=4.3 ~ 9.8mm, F1.6 ~ F2.6)
5. Iris Control: P-Iris
6. Angular Field of View (H: Horizontal, V: Vertical, D: Diagonal):
   1. Wide : 110.4º(H) 57.8º(V) 133.8º(D)
   2. Tele : 45.0º(H) 25.2º(V) 51.8(D)
7. Pan/Tilt/Rotate Range : Pan: -180° ~ 180°, Tilt: -45° ~ 80°, Rotate: -143° ~ 203°
8. Minimum Illumination:
   1. COLOR : 0.13 lux @ F1.6
   2. B/W : 0 lux (IR LED ON)
9. S/N Ratio: More than 45 dB
10. Maximum Frame Rate: 30ips : 3840 x 2160(WDR)
11. Video Resolution: 3840 x 2160, 1920 x 1080, 1280 x 720, 640 x 360
12. Video Compression : H.265, H.264, MJPEG
13. Video Compression Level: 4 levels: Basic, Standard, High, Very High
14. Intelligent Codec is supported.
15. Multi-Video Streaming: Quadruple streams
16. Dynamic Range: 120dB
17. True Day & Night: Yes (ICR)
18. IR Distance (The number of LEDs, IR wavelength): 60m / 196.9ft (6ea)
19. Image Stabilizer: Yes(EIS)
20. Privacy Masking: 8 Zones
21. Intelligent Video Analytic:

* A-cut Support
* Object Metadata: Human, Vehicle, Face
* Object Attribute: Human[Gender, Age, Bag, Hat, Colors], Vehicle[Car, Truck, Bus, Bike(Bicycle, Motorcycle), ETC, Colors], Face[Gender, Age, Glasses, Hat, Mask]
* IDLA: Object Detection, Intrusion, Loitering, Line Crossing, Face Detection
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* ETC: Video Motion Detection, Active Tampering Alarm

1. Video Out : 1 CVBS

### Audio Specification

1. Audio Compression Algorithm: Opus, 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(Audio Alarm): Yes

### Network Specification

1. Port: RJ-45 10/100 Base-T 1 port
2. Network Protocols: DirectIP 2.0 Protocol, IPv4, IPv6, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP,

RTP/UDP RTSP/TCP, HTTP, HTTPS, FTP, SNTP, SMTP, FEN, mDNS, uPNP, SNMPv2

1. Streaming Mode: Quadruple Streaming

### Security Specification

1. FIPS 140-3 Level 3, Digest authentication, Password Protection, Brute force delay protection, User access log, IP Filtering, IEEE802.1x(EAP-TLS), Chained Fingerprint, SSL Encryption, HTTPS Encryption
2. Maximum User Access: 10 (Live), 1 (Recording), 1 (Search), 2 (Admin)

### Alarm and Event Specification

1. Alarm Input / Output: 1 / 1
   1. Alarm Input: 1 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: 1 TTL open collector, 30mA @ 5 VDC
2. Trigger Events: Motion Detection, Alarm in, Audio detection, Tampering, Object Detection, Intrusion, Loitering, Line Crossing, Face Detection, Crowd detection, Abandoned object detection, Removed object detection, Fall detection, Violence detection
3. Event Notification: Remote S/W, Email (with Image)
   1. Encryption Type: SSL

## Environmental Specification

1. Operating Temperature: -40°C ~ +55°C (-40°F ~ +131°F)

\*Starting up at above -20°C (-4°F)

1. Operating Humidity: 0% to 90% non-condensing
2. Vandal-proof Enclosure: IK10
3. Outdoor Ready: IP67, NEMA4X

## Electrical Specification

1. Power Source: 12VDC, PoE, IEEE 802.3af(Class 3)
2. Power Consumption: 12VDC, 1.1A, 13.2W / PoE, IEEE 802.3af(Class3), 57VDC, 12W
3. Regulatory Approvals: FCC, CE, KC

## Mechanical Specification

1. Dimensions (Ø x H): Ø160 x 120mm(Ø6.3” x 4.72”)
2. Unit Weight: 1.1kg (2.4lb)

Version History

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| --- | --- | --- | --- |
| **Version** | **Writer** | **Revision Date** | **Remarks** |
| 1.0 | TS Team | Feb. 27. 2025 | Initial Release |