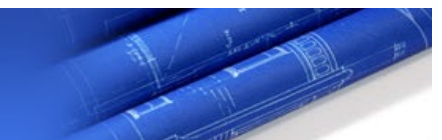


Model: CDI2D12FW

Architectural and
Engineering Specifications

Version 1.0



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

PART 2: PRODUCTS

Division 28 – Electric Safety and Security

Section 28 23 29 – Video Surveillance Remote Devices and Sensors

2.1.0 Manufacturer

1. Costar Video Systems
101 Wrangler Drive, Suite 201
Coppell, Texas 75019
Tel: 469-635-6800
Fax: 469-635-6822

2.2.0 General

2.2.1 Product Description

CDI2D12FW is Indoor Dome type IP Camera designed and manufactured by Costar Video Systems. This camera provides Full HD (1920 x 1080) resolution at 30ips (images per second) with H.265, H.264, and M-JPEG compression. This camera is equipped with Motorized Vari-focal lens, True Day/Night, PoE (IEEE 802.3af Class 2), Alarm I/O, microSD/SDHC/SDXC card backup.

2.2.2 General Specification

1. The IP camera shall be equipped with 2 Megapixel 1/2.8" CMOS Sensor.
2. The IP camera shall be equipped with 2.8mm - 12mm Motorized Vari-focal lens, F1.4(W)-F2.8(T).
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 support DC IRIS.
6. The IP camera shall utilize 2DNR/3DNR (Dynamic Noise Reduction) technology to reduce the bitrate and storage requirements by removing noise artifacts.
7. The IP camera shall be equipped with 10/100 Base-T, auto-sensing, half/full duplex, RJ-45 Ethernet connection.
8. The IP camera shall support industry standard Power over Ethernet (PoE) IEEE 802.3af, Class 2 to supply power to the camera over the network and 12VDC input.
9. The IP camera shall have on board micro SD/SDHC/SDXC, Smart Failover (Up to 256GB) backup storage slot as a safeguard against data loss during network interruptions.
10. Using Costar NLTSrec(Non-Linear Time Shifting recording) technology, the IP camera can store

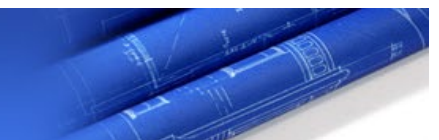


the recording data to the internal recording memory buffer (60MB) in camera if there is a delay in data transmission due to the instantaneous load of the recorder or network, and then transmits the stored data to Costar recorder safely.

11. The IP camera shall deliver maximum video resolution of 1920 x 1080 at rates up to 30ips (images per second).
12. The IP camera shall provide direct network connection using H.265, H.264 and M-JPEG compression.
13. The IP camera shall support Quadruple Streams in DirectNET 2.0 protocol mode.
14. The IP camera shall conform to the ONVIF ver.16.12.
15. The IP camera shall be equipped with embedded web server (Webguard) which works independently using a Web Browser with ActiveX plug-in.
16. The IP camera shall have IP filtering, HTTPS, SSL, IEEE 802.1X, and configurable Multi-user authority levels for greater security.
17. The IP camera shall have network bandwidth limitation and MAT features for more efficient use of network bandwidth.
18. The IP camera shall have Easy network access via UPnP (Universal Plug and Play) function and embedded mDNS (Multicast DNS) protocol.
19. The IP camera shall have Intelligent Video Analysis (VA): Motion Detection, Active Tampering Alarm and Trip Zone.

2.2.3 Protocol Specification: DirectNET 2.0

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



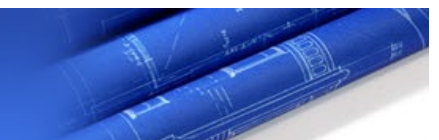
2.3.0 Technical Specification

2.3.1 Video Specification

1. Image Sensor: 1/2.8" CMOS
2. Maximum Resolution: 1920 x 1080
3. Scanning Mode: Progressive Scan
4. Lens Type: Motorized Vari-focal (f= 2.8 - 12mm, F1.4(W) - 2.8(T))
5. Iris Control: DC Iris
6. Angular Field of View (H: Horizontal, V: Vertical, D: Diagonal):
 - A. Wide: 98°(H), 51°(V), 116°(D)
 - B. Tele: 33°(H), 19°(V), 38°(D)
7. Pan/Tilt Range:
 - A. Pan: -175° ~ 175°
 - B. Tilt: 0° ~ 67°
 - C. Rotate: -177° ~ 177°
8. Minimum Illumination:
 - A. COLOR: 0.1 lux @ F1.4
 - B. B/W: 0 lux (IR LED ON)
9. S/N Ratio: more than 45 dB
10. Maximum Frame Rate: 30fps: 1920 x 1080(WDR)
11. Video Resolution: 1920x1080, 1280x720, 640x360, 352x240
12. Video Compression: H.265, H.264, M-JPEG
13. Video Compression Level: 4 levels: Basic, Standard, High, Very High
14. Multi-Video Streaming: Quadruple streams
15. Dynamic Range: 120 dB
16. True Day & Night: Yes (ICR)
17. Intelligent Video Analytic: Video Motion Detection, Active Tampering Alarm and Trip Zone

2.3.2 Network Specification

1. Port: RJ-45 10/100 Base-T 1 port
2. Network Protocols: DirectNET 2.0 Protocol, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/UDP RTSP/TCP, HTTP, HTTPS, FTP, SNTP, SMTP, FEN, mDNS, Upnp
3. Streaming Mode: Quadruple streaming



2.3.3 Security Specification

1. SSL Encryption, Multi-user Authority, IEEE 802.1x IP Filtering, HTTPS
2. Maximum User Access: 10 (Live), 1 (Recording), 1 (Search), 2 (Admin)

2.3.4 Alarm and Event Specification

1. Alarm Input / Output: 1 / 1
 - A. Alarm Input: TTL, NC/NO Programmable, 4.3V(NC) or 0.3V(NO) threshold, 5V DC
 - B. Alarm Output: 1 TTL open collector, 30mA @ 5 VDC
2. Trigger Events: Motion Detection, Alarm in, Tampering and Trip Zone
3. Event Notification: Remote S/W, Email (with Image)

2.4.0 Environmental Specification

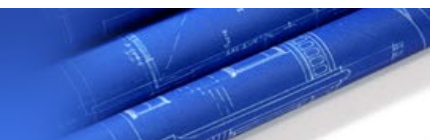
1. Operating Temperature: -10°C ~ +50°C (+14°F ~ +122°F)
 - * Starting up at above 0°C (32°F)
2. Operating Humidity: 0% ~ 90%

2.5.0 Electrical Specification

1. Power Source: 12VDC, PoE (IEEE 802.3af class 2)
2. Power Consumption:
 - A. 12V=, 0.38A, 4.6W
 - B. PoE, IEEE 802.3af (Class 2), 4.7W
3. Regulatory Approvals: FCC

2.6.0 Mechanical Specification

1. Dimensions (Ø x H): Ø122 x 103.4mm
2. Unit Weight: 0.35kg(0.77lb)



Version History

Version	Writer	Revision Date	Remarks
1.0	TS Team	Feb. 18. 2020	Initial release

