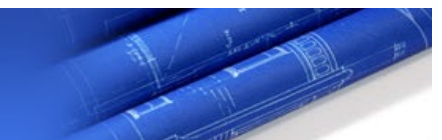


## **Model: CCI2D25R/CCI2D43R**

### 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

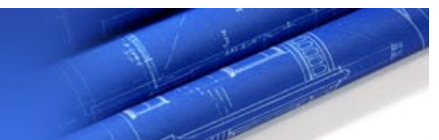
#### **2.2.0 General**

##### **2.2.1 Product Description**

CCI2D25R is an IP-based camera module and a main unit that compress and transmit video over Ethernet which is designed and manufactured by Costar Video Systems. This camera module provides Full HD (1920x1080) resolution at 30ips (images per second) with H.265/H.264/M-JPEG compression. This camera module is equipped with Fixed-focal lens (*CCI2D25R* f=2.4mm, *CCI2D43R* f=4.3mm), PoE (IEEE 802.3at Class 4), Audio I/O, and Alarm I/O.

##### **2.2.2 General Specification**

1. The IP camera module shall be equipped with 2 Megapixel 1/2.8" CMOS Sensor.
2. The IP camera module shall be equipped with
  - A. *CCI2D25R* f=2.4mm Fixed-focal lens, F2.0.
  - B. *CCI2D43R* f=4.3mm Fixed-focal lens, F2.0.
3. The IP camera module shall have True Wide Dynamic Range compensation for improved video quality in high-contrast situations (120dB).
4. The IP camera module shall utilize configurable 3DNR (Dynamic Noise Reduction) technology to reduce the bitrate and storage requirements by removing noise artifacts.
5. The IP camera main module shall include micro SD/SDHC/SDXC, Smart Failover (Up to 512GB)
6. The IP camera module shall be equipped with 10/100 Base-T, RJ45 Ethernet connection.
7. The IP camera module shall support industry standard Power over Ethernet (PoE) IEEE 802.3at, Class 4 to supply power to the camera over the network and 12VDC input.
8. The IP camera module shall have video out feature (NTSC/PAL).
9. Using 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

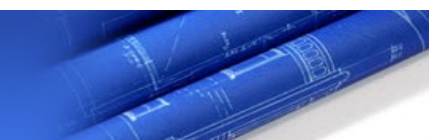


data transmission due to the instantaneous load of the recorder or network, and then transmits the stored data to Costar Video recorder safely.

10. The IP camera module shall deliver maximum video resolution of 1920x1080(WDR) at rates up to 30ips (Images per second).
11. The IP camera module shall provide direct network connection using H.265, H.264 and M-JPEG compression.
12. The IP camera module shall support Quadruple Streams.
13. The IP camera module shall conform to the ONVIF Profile S.
14. The IP camera module shall be equipped with embedded web server (Webguard) which works independently using a Web Browser with ActiveX plug-in.
15. The IP camera module shall have SSL Encryption, Multi-user Authority, IEEE 802.1x IP Filtering and HTTPS.
16. The IP camera module shall have network bandwidth limitation and MAT features for more efficient use of network bandwidth.
17. The IP camera module shall have Easy network access via UPnP (Universal Plug and Play) function and embedded mDNS (Multicast DNS) protocol.
18. The IP camera module shall have Intelligent Video Analysis (VA): Video Motion Detection, Active Tampering Alarm and Trip Zone.

### **2.2.3 Protocol Specification: DirectNET**

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



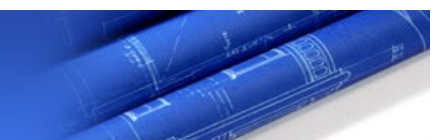
## 2.3.0 Technical Specification

### 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: Fixed-focal Board type
  - A. CCI2D25R f=2.4mm, F2.0
  - B. CCI2D43R f=4.3mm, F2.0
5. IRIS Control: Fixed-Iris
6. Angular Field of View (H: Horizontal, V: Vertical, D: Diagonal):
  - A. CCI2D25R f=2.4mm, 132.5°(H), 72.7°(V), 154.7°(D)
  - B. CCI2D43R f=4.3mm, 81.6°(H), 42.3°(V), 99°(D)
7. Minimum Illumination:
  - A. COLOR: 0.12 lux @ F 2.0
  - B. B/W: 0.12 lux @ F 2.0
8. S/N Ratio: More than 45dB
9. Maximum Frame Rate: 30ips @ 1920x1080 (WDR)
10. Video Resolution: 1920x1080, 1280x720, 640x360, 352x240
11. Video Compression: H.265, H.264, M-JPEG
12. Video Compression Level: Basic, Standard, High, Very High
13. Multi-Video Streaming: Quadruple streams
14. Dynamic Range: 120dB
15. Day & Night: Electrical D/N
16. Intelligent Video Analytic: Video Motion Detection, Active Tampering Alarm and Trip Zone
17. Edge Storage: micro SD/SDHC/SDXC, Smart Failover (Up to 512GB)

### 2.3.2 Audio Specification

1. Audio Compression Algorithm: 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



### **2.3.3 Network Specification**

1. Port: RJ-45 10/100 Base-T 1 port
2. Network Protocols: DirectNET Protocol, IPv4, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, /UDP RTSP/TCP, HTTP, HTTPS, FTP, SNTP, SMTP, FEN, mDNS, Upnp
3. Streaming Mode: Quadruple streaming

### **2.3.4 Security Specification**

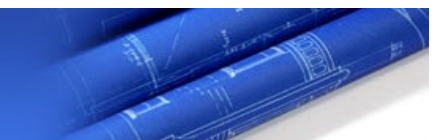
1. SSL Encryption, Multi-user Authority, IEEE 802.1x IP Filtering, HTTPS
2. Maximum User Access: 10 (Live), 1 (Recording), 1 (Search), 2 (Admin)

### **2.3.5 Alarm and Event Specification**

1. Alarm Input / Output
  - A. Alarm Input: 1 TTL, NC, NO Programmable, 2.4V (NC) or 0.3V (NO) threshold, 5 VDC, Terminal Block
    - i. Choose between an NC (Normally Closed) type or an NO (Normally Open) type  
Connect a mechanical or electrical switch to the alarm in port and the GND (ground) connector.
    - ii. Alarm in range is 0V to 5V. In order to detect alarm input, the signal must be higher than 2.4V from an NC switch or less than 0.3V from an NO switch and must last for longer than 0.5 seconds.
  - B. Alarm Output: 1 relay out, 0.03A @ 125Vac, 1A @30Vdc, Terminal Block
    - i. Connect a mechanical or electrical switch to the NO and the COM connector
2. Trigger Events: Motion Detection, Alarm in, Audio detection, Tampering and Trip Zone.
3. Event Notification: Remote Software, Email (with Image)
  - A. Encryption type: SSL

### **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%

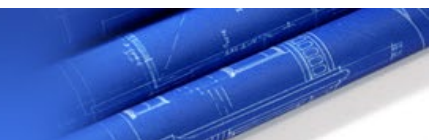


## **2.5.0 Electrical Specification**

1. Power Source: 12VDC, PoE (IEEE 802.3at class 4)
2. Power Consumption:
  - A. 12V=, 0.49A, 5.04W
  - B. PoE, IEEE 802.3at (Class 4), 6.3W
3. Regulatory Approvals: FCC, CE, KC

## **2.6.0 Mechanical Specification**

1. Dimensions (W x H x D)
  - A. DC-V4212XJ 2.4mm:
    - i. Main module: 153mm x 36.5mm x 132.7mm (6.02" x 1.44" x 5.22")
    - ii. Camera module:
      1. Body Only: 37(W) x 37(H) x 30.5(D) mm
      2. With Bracket: 58(W) x 45(H) x 59.5(D) mm
  - B. DC-V4212XJ 4.3mm:
    - i. Main module: 153mm x 36.5mm x 132.7mm (6.02" x 1.44" x 5.22")
    - ii. Camera module:
      1. Body Only: 37(W) x 37(H) x 26.3(D) mm
      2. With Bracket: 58(W) x 45(H) x 55.3(D) mm
2. Unit Weight:
  - A. Main Module: 0.474kg (1.045 lbs.)
  - B. Camera module: 0.58kg (0.128 lbs.)



## Version History

Version	Writer	Revision Date	Remarks
1.0	TS Team	May. 17, 2022	Initial Release

