

Model: CR4025ET-

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
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2.2.0 General

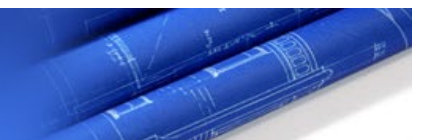
2.2.1 Product Description

CR4025ET ET Series (HD-TVI DVR) is a HD over Coaxial Recording System designed and manufactured by Costar Video Systems. ET Series utilizes existing coaxial cable to leverage analog infrastructure for seamless upgrade to 1080P surveillance solution. The ET Series is a hybrid system which supports 1080P and backward compatible with multi standard analog camera. The ET Series is 4 Channel unit, and it supports up to 120ips (images per second) Full HD recording with H.264/H.265 compression and Intelligent Codec. The ET Series supports up to 5MP recording resolution and UHD Display with HDMI output.

The ET Series is equipped with 4 Channel BNC ports, 2 internal HDD ports. The ET Series is an integrated security system, capable of time division multiplexing and real time recording of multiple cameras and storing their digitized and compressed images on embedded hard disk drives for fast search and retrieval either locally at the unit, or from a remote workstation using a Graphical User Interface (GUI). The ET Series is fully compatible with Costar Video products across different platforms such as StarNET and StarNET Pro Video Management Systems.

2.2.2 General Specification

1. The ET Series shall be a Linux embedded unit with 4 Channel BNC (Multi-standard Analog) video recording capability.
2. The ET Series shall be equipped with 1 network port, 4 BNC ports.
3. The ET Series shall have 2 internal SATA ports.
4. The ET Series shall have 1 HDMI output and 1 VGA output.
5. The ET Series shall have 4 alarm inputs, 1 alarm relay output.
6. The ET Series shall have 4 RCA audio inputs, 1 RCA audio output and 1 HDMI audio output.
7. The ET Series shall have 2 USB 2.0 ports.

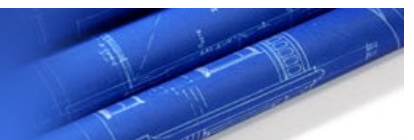


8. The ET Series shall have 1 RS-232, 1 RS-485 terminal block.
9. The ET Series shall have 1 internal buzzer.
10. The ET Series shall support up to live 120ips (Image per Second).
11. The ET Series shall support simultaneous live view, record, play back, data transmission in real time.
12. The ET Series shall support recording frame rate: 120ips@1080P, 72ips@3MP, 60ips@4MP, 40ips@5MP.
13. The ET Series shall support H.264/H.265 compression codec and Intelligent Codec.
14. The ET Series shall provide Graphical User Interface (GUI) with multi lingual support.
15. The ET Series shall support 2X – 7X digital zoom in live view mode & playback mode.
16. The ET Series shall provide time lapse, event, time lapse + event, pre/post-event, panic recording schedule.
17. The ET Series shall adjust Multi Standard Analog camera's configuration.
18. The ET Series shall support alarm, audio, motion, video loss, video blind, text-in, system event triggering, fan error, record failure, storage related alerts and alarm in error.
19. The ET Series shall support Email (attach clip (cbf, mp4, jpeg)), Callback to Remote S/W, Push notification (StarNET Mobile +).
20. The ET Series shall provide Time-lapse, Event log, Text-in search options.
21. The ET Series shall support 4 channels 1080P synchronous playback.
22. The ET Series shall be equipped with Chained-Fingerprint™, SSL, Password encryption options.
23. The ET Series shall support FEN service (A name resolution service equivalent to DDNS).
24. The ET Series shall be compatible with StarNET, StarNET Pro, StarNET Mobile + and Webguard.
25. The ET Series shall be compatible with network accessory: Network Keyboard, Network Switch, etc.
26. The ET Series shall be controlled by Mouse, IR Remote Control, Front Button and Network Remote Keyboard.

2.3.0 Technical Specification

2.3.1 Video Specification

1. Analog Video Inputs: up to 4 Multi Standard Analog cameras
 - A. Built-in 4 channels BNC Switch



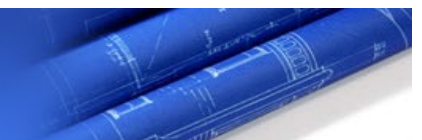
2. Supported Camera type: 5MP20, 5MP12, 4MP30, 4MP15, 3MP30, 3MP18, 1080P30, 1080P25, 720P30, 720P25, CVBS(NTSC/PAL)
3. Video Outputs: 1 HDMI, 1 VGA
4. Display Resolution:
 - A. HDMI: 3840 x 2160, 1920 x 1080, 1280 x 1024
 - B. VGA: 1920 x 1080, 1280 x 1024
5. Maximum Live Display Speed: Up to 120ips
6. Live Digital Zoom: x2 ~ x7
7. PTZ Control and Setup
 - A. The ET Series shall allow control of PTZ cameras to authorized users and be used to maneuver a PTZ camera using Built-in GUI PTZ control; Pan, Tilt and Zoom, Focus Near / Far, Set / Move to Preset, Advanced PTZ capabilities. When PTZ capable camera is connected, this function shall be enabled automatically.
 - B. Network Keyboard shall be supported with USB mouse.
8. Image Authentication: Chained Finger Print
9. Additional Information
 - A. The ET Series shall support the following features: Sequence Monitoring, Screen Freeze, Covert cameras, Privacy Masking, and Color Control (Brightness, Contrast, Saturation, Hue).

2.3.2 Audio Specifications

1. Audio Input: (line level)
 - A. ET Series: 4 RCA
2. Audio Output
 - A. ET Series: 1 RCA + 1 HDMI
 - B. Audio signal can be transferred to the audio output devices such as a speaker via RCA or HDMI port.
3. Audio Codec Format: G.726
4. Audio Data Size: 64 Kbps (per channel)
5. Two-way (Bidirectional) Audio: Yes

2.3.3 Recording Specifications

1. Recording Frame Rate
 - A. 120ips@1080P, 72ips@3MP, 60ips@4MP, 40ips@5MP
2. Recording Resolution: Up to 5MP (Camera specific)



3. Recording Resolution: 5MP, 4MP, 3MP, 1920x1080, 1280x720, 960x480, 720x480, 640x360, 960x240, 720x240 480x240, 360x240
4. Video Compression Codec: H.265, H.264, Intelligent Codec
5. Recording Schedule
 - A. The ET Series shall allow camera-by-camera configuration of the following recording modes:
 - i. Time Lapse Recording (Continuous), Event-Based Recording, Time Lapse with Event-based Recording, Panic Recording, Pre / Post Event Recording
 - B. The ET Series shall allow the user to create and edit video recording schedules for each connected camera
 - i. Basic Schedule
 - ii. Advanced Schedule which includes different profiles and dwell timer per each occurred event
 - C. The ET Series shall include the ability for Pre-Event recording, which records video for a specified time before an event or alarm has occurred.

2.3.4 Playback Specifications

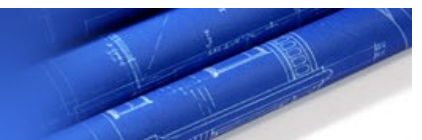
1. Performance
 - A. The ET Series shall support 4 channels 1080P synchronous playback.
2. Display Format
 - A. The ET Series shall offer multi-screen playback (single-screen, quad), series display (displaying images from one camera image by image), and full-screen display.
3. Search Mode: Time-lapse, Event log, Motion, Text-in.
 - A. The ET Series shall provide various search filters for fast retrieval; Calendar Search, Go to Search, Record table search, Search by Event, Motion, Text-in, Bookmark Search.
4. Playback Digital Zoom: x2 ~ x7

2.3.5 Storage Specifications

1. HDD: Internal SATA x2 (Up to 6TB capacity for each disk)
2. Total Capacity: 12TB = 6TB x 2
3. Data Export
 - A. Device: USB Storage Device (USB HDD, USB Memory)
 - B. Data Export with Audio: Supported
 - C. Multichannel Data Export: Supported

2.3.6 Network Specifications

1. Network Connection: Fast Ethernet (Client) x 1 port



- A. Network connection is used for connecting the remote client software in LAN or WAN environment
- 2. Remote Data Export: Clip Player, AVI, JPG, BMP
 - A. The still or moving images can be captured using remote client software as a JPG, AVI, BMP or EXE file format. (Dynamic remote application)
 - B. File Printer Interface: PDF file printer
- 3. Remote Client Viewer application: StarNET, StarNET Pro, StarNET Mobile +, Webguard
 - A. StarNET: Windows and Mac OS (Note: Mguard for Mac OS is limited in functionality)
 - i. StarNET (for Windows only) supports simultaneous firmware upgrade on multiple ET Series
 - B. StarNET Pro: Windows OS
 - C. Star Mobile +: iOS, Android
 - D. Webguard works with ET Series embedded web server using a Web Browser with ActiveX plug-in.
- 4. Maximum Client Connections
 - A. Remote connection: Admin: 2 / Watch: 10 / Search: 2

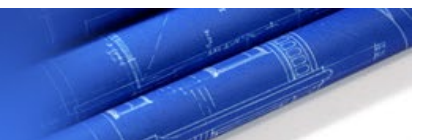
2.3.7 Alarm and Event Specifications

- 1. Alarm Input / Output (terminal block)
 - A. 4In / 1 Relay Out
 - B. Alarm Input Type: 4TTL, NC / NO Programmable, 2.4V(NC) or 0.3V(NO) threshold, 5V DC
 - C. Alarm Output Type: 1 relay output, 2A@125V AC, 1A@30V DC
- 2. Internal Buzzer: Yes (78dB at 10cm)
- 3. Trigger Events: Alarm in, Motion detection, Video loss, Text-in
 - A. The ET Series shall support alarm sensor trigger in and relay out functions in such event of motion detection and video loss detection.
 - B. Maximum Channels of Text Input: 4
- 4. Event Notification: Email (attach clip cbf, mp4), Callback to Remote S/W, Push notification (StarNET Mobile +).

2.3.8 External Interface Specifications

- 1. Serial Interface: RS232, RS485 (Terminal Block)
- 2. User Control Interface: Mouse, IR Remote Control, Front Buttons, Network Remote Keyboard
- 3. USB Interface: USB 2.0 x 2

2.4.0 Mechanical Specifications



1. Operating System: Embedded Linux
2. Unit Dimensions (W x H x D): 300mm x 67mm x 243.6mm (11.8" x 2.6 x 9.6")
3. Unit Weight: 3.0 kg (6.6lb) (with 2 2TB HDD)

2.5.0 Environmental Specifications

1. Working Temperature: 0°C to 40°C (32°F ~ 104°F)
2. Operating Humidity: 0% ~ 90%

2.6.0 Electrical Specifications

1. Power Input: Input: 100-240V AC, 50/60Hz, 1.5A, Output: 12V DC, 5A
2. Power Consumption: 12V=, 1.7A, 20.4W
3. Regulatory Approvals:
 - A. Electrical: FCC, CE, KC

Version History

Version	Writer	Revision Date	Remarks
1.0	TS Team	June. 30, 2021	Initial release

