

HE-1101

Architectural and Engineering Specifications

Version 1.0
(July. 13, 2018)

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

PART 2: PRODUCTS

Division 27 – Communications

Level1 27 20 00 – Data Communications

Level2 27 24 00 – Data Communications Peripheral Data Equipment

Level3 27 24 23 – Audio – Video Devices

2.1.0 Manufacturer

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2.2.0 General

2.2.1 Product Description

HD-1101 is an Encoder designed and manufactured by IDIS. This Encoder allows operators to view and control multiple applications all from a single monitor, keyboard, and mouse by simply connecting hardware and systems that have a VGA or HDMI output. This Encoder supports Full HD (1920x1080) resolution at 30ips (image per second) with H.265, H.264 and MJPEG compression. This Encoder is equipped with PoE (IEEE 802.3af Class 2), and 3.5mm Audio I/O.

2.2.2 General Specification

1. HDMI/VGA Video Encoder shall be equipped with 10/100 Base-T, RJ45 Ethernet connection.
2. HDMI/VGA Video Encoder 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.
3. HDMI/VGA Video Encoder shall deliver maximum video resolution of 1920x1080 at rates up to 30ips (Images per second).
4. HDMI/VGA Video Encoder shall provide direct network connection using H.265, H.264 and M-JPEG** compression (** IDIS Protocol only).
5. HDMI/VGA Video Encoder shall support Quadruple Streams.
6. HDMI/VGA Video Encoder shall conform to the ONVIF** Profile S.
7. HDMI/VGA Video Encoder shall be equipped with embedded web server (IDIS Web**) which works independently using a Web Browser with ActiveX plug-in (** IDIS Protocol only).
8. HDMI/VGA Video Encoder shall have network bandwidth limitation and MAT (Motion Adaptive Transmission) features for more efficient use of network bandwidth.
9. HDMI/VGA Video Encoder shall have Event Trigger: Motion & Audio Detection, Active Tampering Alarm, Trip-zone, Video Loss and System Event.
10. HDMI/VGA Video Encoder shall upload the .jpg image of the event detected to a FTP server.

11. The IP camera shall have Easy network access via UPnP (Universal Plug and Play) function and embedded mDNS (Multicast DNS) protocol.

2.2.3 Protocol Specification: DirectIP and IDIS protocol

1. HDMI/VGA Video Encoder shall have 2 protocol modes, DirectIP and IDIS protocol. DirectIP is set as main protocol by default.
2. The protocol modes shall be selectable between DirectIP and IDIS protocol mode to meet specific needs with IDIS Discovery tool.
 - DirectIP Protocol
 - A. DirectIP protocol shall provide easy connection to DirectIP NVR for automatic discovery and video streaming configuration.
 - B. DirectIP protocol shall provide Quadruple streams.
 - C. The bitrate shall be automatically adjusted by recording profile of DirectIP NVR.
 - D. DirectIP protocol shall support H.265 and H.264 only as primary compression.
 - IDIS Protocol
 - A. IDIS protocol shall provide the compatibility with IDIS Solution Suite VMS or ONVIF for third-party software solutions.
 - B. IDIS protocol shall provide Quadruple streams.
 - C. IDIS protocol shall support H.265, H.264 and MJPEG compression.

2.3.0 Technical Specification

2.3.1 Supported Input Resolution

1. Video Resolution:
 - A. HDMI (14ea): 1920x1080, 1600x1200, 1600x900, 1440x900, 1366x768, 1360x768, 1280x960, 1280x800, 1280x768, 1280x720, 1024x768, 800x768, 720x480
 - B. VGA (9ea): (VESA) 1920x1080, (VESA) 1600x1200, (VESA) 1440x900, (VESA) 1360x768, (VESA) 1280x1024, (VESA) 1280x800, (VESA) 1280x720, (VESA) 1024x768, (VESA) 800x600
2. Scanning Mode: Progressive Scan
3. Input Frame Rate: 60 fps (Only 30 of 60 frames are encoded)

2.3.2 Encoding Specification

1. Video resolution:
 - A. DirectIP protocol mode: 1920x1080, 1280x720, 704x480, 640x360, 352x240
 - B. IDIS protocol mode: 1920x1080, 1280x720, 704x480, 640x360, 352x240
2. Maximum Resolution: 1920x1080
3. Maximum Frame Rate: 30ips @ 1920x1080

4. Video Compression : H.265, H.264, M-JPEG** (** IDIS Protocol only)
5. Video Compression Level: Basic, Standard, High, Very High
6. Multi-Video Streaming:
 - A. DirectIP Protocol Mode: Quadruple streams
 - B. IDIS Protocol Mode: Quadruple streams
7. Video In/Out: 1 HDMI and 1 VGA / 1 HDMI (Input Bypass) and 1 VGA (Input Bypass)
8. HDMI/VGA Video Encoder shall support IP camera protocol for DirectIP, IDIS protocol, and ONVIF.
9. Intelligent Video Analytic: Video Motion Detection, Active Tampering Alarm

2.3.3 Audio Specification

10. Audio Compression Algorithm: G.726 (16KHz), G.711 u-Law (8KHz), and ADPCM (16kHz)
11. Audio Input / Output: Line-in 1ea (3.5mm) / Line-out 1ea (3.5mm)

2.3.4 Network Specification

1. Port: RJ-45 10/100 Base-T 1 port
2. Network Protocols:
 - A. DirectIP Protocol Mode: DirectIP Protocol
 - B. IDIS Protocol Mode: RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/UDP, RTSP/TCP, HTTP, HTTPS, FTP, SNTP, SMTP, FEN, mDNS, uPNP
3. Streaming Mode: Quadruple Streaming

2.3.5 Security Specification

1. DirectIP Protocol Mode: SSL Encryption
2. IDIS Protocol Mode: Multi-User Authority, IEEE 802.1x, IP Filtering, HTTPS, SSL Encryption
3. Maximum User Access:
 - A. DirectIP protocol mode: Direct access is unavailable
 - B. IDIS protocol mode: 10 (Live+Admin), 1 (Recording), and 1 (Search).
 - i. Live and Admin shares the access values and it's up to 10.

2.3.6 Event Specification

1. Trigger Events: Motion detection, Audio detection, Tampering, Trip Zone, Video Loss, and System Event.
2. Event Notification: Remote Software, Email (with Image), FTP (upload with Image)
 - A. Encryption type: SSL, STARTTLS

2.4.0 Environmental Specification

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

2.5.0 Electrical Specification

1. Power Source: 12VDC, PoE (IEEE 802.3af class 2)
2. Power Consumption: 5.52W
3. Regulatory Approvals: FCC, CE, KC

2.6.0 Mechanical Specification

1. Dimensions (W x H x D): 200mm x 44mm x 153mm (7.9" x 1.7" x 6.0")
2. Unit Weight: 780g (0.89 lb)

Version History

Version	Writer	Revision Date	Remarks
1.0	Suji Park	July. 13, 2018	Initial Release