

# HYDRA

## Multi-channel Video Streamer / Server Platform



**Advanced Micro  
Peripherals**

THE EMBEDDED VIDEO EXPERTS

The HYDRA is a highly customizable rugged multi-channel video acquisition and network video server / streamer platform. The standard HYDRA unit can capture, encode and stream up to 12 channels of Video and an Audio channel over an Ethernet LAN using a variety of compression levels and streaming rates.



The platform is designed for video surveillance in harsh environments and is suitable for use in both static and vehicle installations.

The standard HYDRA unit produces an industry standard MPEG-4 video plus audio stream using a standard RTP/RTSP IP streaming protocol. The HYDRA platform can be customized with additional application software if required for specialist installations.

The HYDRA is remotely configured and controlled using an intuitive web interface. The control screens enable the user to optimize the compression settings to suit networks with different bandwidth capabilities.

### PRELIMINARY INFORMATION (Rev A.02)

Subject to change without notification

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Up to 12 channels  
of live video inputs

RTP/RTSP video/  
audio stream

Low Latency



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The HYDRA platform is a highly customizable rugged platform. It can be easily tuned to suit many applications in military, transportation, and high-security applications. The HYDRA is designed to be future-proof with room for upgrade, expansion and customization to suit particular user requirements. This versatility greatly reduces risks, costs and shortens time-to-deployment.



### Applications

Multi-channel Mission Video Recorder

Law Enforcement

Crime Scene Recording

Remote Video Surveillance

Multi-camera Security Application

Panoramic Viewing

Video Acquisition and Analytics

Highly

Customizable

Platform

Rapid Deployment

Proven Ruggedness

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## Customization Options

- Up to 12 channels of live video inputs (PAL/NTSC)
- MPEG-4 or H.264 video compression
- SD (standard PAL/NTSC) or HD (Hi Definition) inputs
- Up to full frame-rate encoding on all channels
- DVR functionality
- Military standard connectors

## Generic Features

- 9 – 40v DC powered with supply transient protection
- Industry standard RTP/RTSP video/audio stream
- Remote configuration management using web browser
- Single channel audio input
- Standard 10/100baseT Ethernet LAN port
- MIL-STD-810F environmental compliance
- Environmental protection – IP54
- EMC CE compliant
- STANAG 2338 infrared reflective paint finish.
- Wide operating temperature range (-20°C to +50°C).

HTML Configuration

Management

MIL-STD-810F

Environmental

Compliance

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**(Specification of Standard HYDRA-001-001 System)****Video Input**

Up to 12 channel composite video input channels  
Standard CCIR601-NTSC, CCIR-PAL,  
Software selectable brightness, contrast and saturation control.  
1V peak-to-peak (75Ω input impedance).

**Video Input**

MPEG-4 video compression.  
ISO/IEC 14496-2, MPEG-4 ASP @ LEVEL5.  
9 channel mode D1 size images at 1/3 frame rate.  
12 channel mode D1 size images at 1/4 frame rate.  
Programmable I-frame interval, quality level and bit rate.

**IP Stream Latency**

800ms (typ).  
Based on 12 PAL channel inputs with encoding at D1 resolution, 1/4 frame rate at 3Mbps /channel

**Audio Input**

Voice quality mono (1Vrms)  
Provides Audio/Video Synchronisation

**Audio Compression**

8bit 8KHz u-Law 64Kbps.

**Ethernet Port**

IEEE802.3 10/100baseT.

**Power**

9 to 40v DC.  
1.2A at 24v (typ.) or 2.0A at 12v (typ.) ≈ 30W.  
Protected against reverse voltage, over voltage and transients.

**Environment**

-20°C to +50°C.  
Passive cooling (no fans).

**Physical Aspects**

260mm (length), 165mm (high), 180mm (wide) (Weight : 4.05Kg)  
Anodized aluminium alloy extrusion enclosure  
Rubber base-plate and stainless steel fixings  
End plates sealed with rubber gasket.  
STANAG 2338 compliant Infrared Reflective Paint.

**Compliance specifications**

EMC Immunity:	EN61000-6-1:2007 – Generic immunity tests for Information Technology Equipment including: EN61000-4-3 RF field immunity EN61000-4-6 RF common mode immunity EN61000-4-4 Fast transient EN61000-4-2 ESD
EMC Emissions:	EN55022: 2006 A1 (Class B) – Conducted / radiated emission tests for Information Technology Equipment
Vehicle Immunity:	ISO7637-2:2004 – Electrical transient conduction on vehicle power lines (Pulses 1, 2a, 2b, 3a, 3b and 4)
Vibration:	MIL-STD-810F Test method 514, Procedure I for General Vibration (Category 20: Ground vehicles)
Thermal Shock:	MIL-STD-810F Test method 503, Procedure I.
Enclosure sealing:	IP54 (compliant against ingress of dust and water spray – assuming supplied connector covers are used on un-used video/audio and Ethernet ports).

**Ordering Information**

HYDRA-001-001	Standard AMP 9/12 channel video streamer system.
HYDRA-SD12-HS	Standard AMP 12-channel, 300fps/360fps H264 video streaming system.
HYDRA-SD12-MS	Standard AMP 12-channel, 300fps/360fps MPEG-4 video streaming system.
HYDRA-xxx-yyy	Customer defined application-specific system configurations for the multi-channel HYDRA system.



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