

## the i-Volution i5110-ET Ruggedized Multi-Protocol Standalone Encoder

The i-Volution i5110-ET is Impath's new generation multi-protocol encoder. The i5110-ET introduces advanced features within a powerful and cost effective platform. The i5110-ET encoder delivers outstanding performance for advanced video surveillance applications required for combined high resolution and low resolution, full or reduced motion video. The i5110-ET encodes multi-stream video using H.264, MPEG-2, MPEG-4 and/or MJPEG compression, two serial data channels and audio for transport over a standards-based IP network.



### Applications

- Security Surveillance
  - Airports
  - Seaports
  - Military
  - Industrial Complexes
  - Unattended Sites
- Transportation
  - City Intersection Monitoring
  - Highways
  - Rail/Metro/Subway

### Features

- NEMA TS-2 Certified
- Optional OnBoard® analytics
- On board video buffering
- Fan less design
- Triple Streaming to full D1, 25/30 fps
- H.264, MPEG-2, MPEG-4, and MJPEG
- Multi-protocol support
- Auto-Start (Static) Video Streaming
- Terminal Server Mode Serial Ports
- Bi-Directional Audio
- Contact Sense / Contact Closure

### High Resolution - Full Motion – Advanced Compression

The i5110-ET provides high quality digitized video over standard IP Ethernet network. Every image is encoded in real-time and transmitted up to 25/30 (PAL/NTSC) frames per second. This provides full motion quality video for digital video surveillance applications using the most powerful video compression schemes available today.

### Triple Streaming

The i5110-ET encodes video up to full resolution and full frame rate (i.e. up to DVD quality). Multi- Streaming assures that a high quality video can be streamed to large monitors for optimal viewing while another stream is encoded at lower frame rate and resolution for lower bandwidth applications such as recording, wireless or Internet Streaming.

### Built Rugged

The i5110-ET is certified to NEMA TS-2 to provide high availability. The enclosure requires no cooling fans. This is an environmentally rugged version for operating over extended temperature ranges and is conformal coated to ensure maintenance free operation.

### ObjectVideo® OnBoard® Video Analytics

Optional OnBoard® module with powerful industry leading ObjectVideo® analytics with configurable detection zones and tripwires. Implement object detection and tracking with response control manager for start/stop streaming, TTL Output, and markup of JPEG images.



### On Board Storage and JPEG Capture

Optional memory is available as on-board video buffering for storing video clips to on-board flash memory with an integral FTP server. JPEG video images can be requested and forwarded to FTP servers for long term storage.

### Network Managed

The i5110-ET can be managed with standard browser locally or remotely via the embedded WEB Server (HTTP).

### Terminal Server Serial Ports

The socket addressable serial ports facilitate integration with existing control software.

### Auto-Start Streaming

Video can commence streaming towards the designated destination upon power up. This feature is sometimes referred to as Static or Auto-Start Mode.

### Decoding

The i5110-D multi-protocol decoder is the perfect complement to the i5110-ET series wherever hardware decoding is required.

# i-Volution i5110-ET

## Ruggedized Multi-Protocol Encoder

**Control Center**  
Large Video Display  
Monitoring



**Internet Streaming**



H.264 (or MPEG-2)  
Full Quality Pictures

Internet  
Streaming  
Server

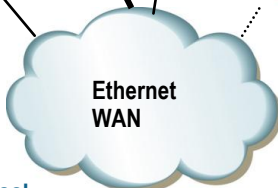
**Wireless**  
(Very Low Bandwidth)  
H.264  
Reduced fps  
and resolution



**Storage**



H.264  
Reduced  
fps and/or  
resolution

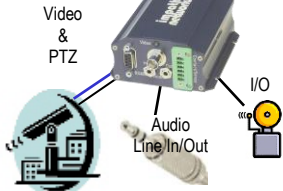


**Ethernet  
WAN**

On-Board  
Analytics



**Multi-Protocol  
Streaming**  
H.264, MPEG-2,  
MPEG-4 and MJPEG  
Video Streams



**Typical Application**

Model	Features
i5110-ET	Multi-Protocol H.264, MPEG-2, MPEG-4, MJPEG encoder
i5110-D	Multi-Protocol standalone decoder

### Video

Protocol

ITU H.264 (ISO MPEG-4 AVC Baseline),

MPEG-2, MPEG-4 and MJPEG

Resolution  
(D1/CIF/QCIF)

NTSC 720x480, 352x240, 176x120

PAL 720x576, 352x288, 176x144

Frame rate/Bit Rate

Constant and Variable to 30/25 fps configurable from 50kbps to 10Mbps

Multi-Stream

Triple Streaming up to D1, 30/25fps

Up to 10Mbps aggregate

Network Connections

User Configurable Unicast and Multicast

Video Input

Composite Video, 1.0Vp-p, 75 ohm, via BNC

De-Interlace

Selectable On/Off

Latency

Nominal latency 170msec

### Network Interface

LAN Interface

IEEE 802.3 Ethernet RJ-45, 10/100Base-T, Auto-Sense

Protocols

TCP, UDP, IPv4, IGMPv2, RTP, RTSP, NTP

### Serial Data

Format/Connectors

Serial, Asynchronous / 2 Ports via DB9

Interface Protocol

Port 1 - RS232, Port 2 - RS422/485 2W/4W

Data Rate

300bps to 115kbps

Modes

Terminal Server (Transparent) and Virtual Serial Port

### Audio

Interfaces

Line In/Out via 3.5mm mini-jacks, G.711

Mode

Bi-Directional Mono

### I/O

### Time Synchronization

2x TTL IN / 1 x Relay Out connections via TB

### OnBoard® Analytics

NTP/SNTP

Video Analytics Events,  
Response Handling

(Optional)  
Multi-rule detection with HTTP Post for response control event manager along with marked up images.

### On-Board Storage

(Optional)

Type

Micro SD up to 16GB for mp4 video clip storage

### JPEG Capture Management

Reset

JPEG pull transfer of images to FTP Server

Local Status

External Reset Button

Console

LED Status Display, Video and Link Status

Web Browser

Local via serial port

Security

Microsoft IE ver. 6.0 or higher

Firmware Upgrade

Multi-level - User Name & Password

Alarms

Remote Flash Upload

### Live View / PTZ View

Event Notification Via HTTP Post (i.e. Video Status)

Built-In viewing with PTZ control for common PTZ incl. Pelco and Vicon

### Environmental

Operating Temperature

-34 to +74C (-29 to +165F)

Relative Humidity

5% to 95% Non-Condensing

Protection

PCB Conformal Coating

RoHS Compliance

EU Directive 20002/95/EC

### Power Requirements

10 to 14 VDC / Approx 5W

### Physical

Dimensions (WxHxD)

9.1 x 4.37 x 11.92 cm (3.59" x 1.72" x 4.69")

Incl. Connectors

Weight

Approx. 0.3 Kg (10.6 oz)

### Regulatory Approvals

Emissions - EU

EN55022:1998 Class A, EN6100-3-2:1995 & EN6100-3-3:1995

North America

FCC47 C FR Part 15, Subpart B:1999 Class A EN55024

Immunity

Operating Voltage/Frequency: 2.1.2, 2.1.3;

NEMA TS-2

Power Interruption: 2.1.4;

Temperature & Humidity: 2.1.5;

Transients, Power Service: 2.1.6;

Transients, Input/Output Terminals: 2.1.7;

Non Destruct Transient Immunity: 2.1.8;

Vibration: 2.1.9;

Shock (Impact): 2.1.1



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