



ioi box

Intelligent Video Encoder Series

The ioibox series from ioimage includes a range of intelligent video encoders that enhance standard security cameras and systems by infusing powerful video analytics that automate indoor and outdoor video surveillance, scenario detection, and alarm event responses.

Each ioibox is a DSP-based device with built-in self-sustained video analytics for powerful automated detection and autonomous tracking of intruders, suspicious baggage, stopped vehicles, removed items and more. Providing hybrid connectivity,



ioiboxes convert analog audio and video into MPEG-4 streaming multimedia over IP, as well simultaneously outputs analog video with graphical overlay features.

Whether inserted in a camera case, on a shelf, or rack mounted, ioiboxes are designed for simplicity, and can be installed and configured within minutes.

Securing nuclear power sites and national infrastructures, the ioibox computerized-detection provides high-security, yet is so versatile and easy-to-use it is ideal for any security site.

rule-driven video analytics



intrusion detection

automatically detects and alarms on forbidden directional movement in controlled areas and perimeters, including human and vehicle detection



unattended baggage detection

automatically detects and alarms on the abandonment of baggage or objects in controlled areas



stopped vehicle detection

automatically detects and alarms on the presence of a stopped vehicle in an area where parking/standing is a violation



object removal detection

automatically detects and alarms on the sustained removal of objects or products from their given location











autonomous ptz tracking

self-driven vision-guided tracking of a person or vehicle by commanding the pan tilt and zoom of a PTZ camera to assure a constant visual on the target without the assistance of additional stationary cameras

Advantages

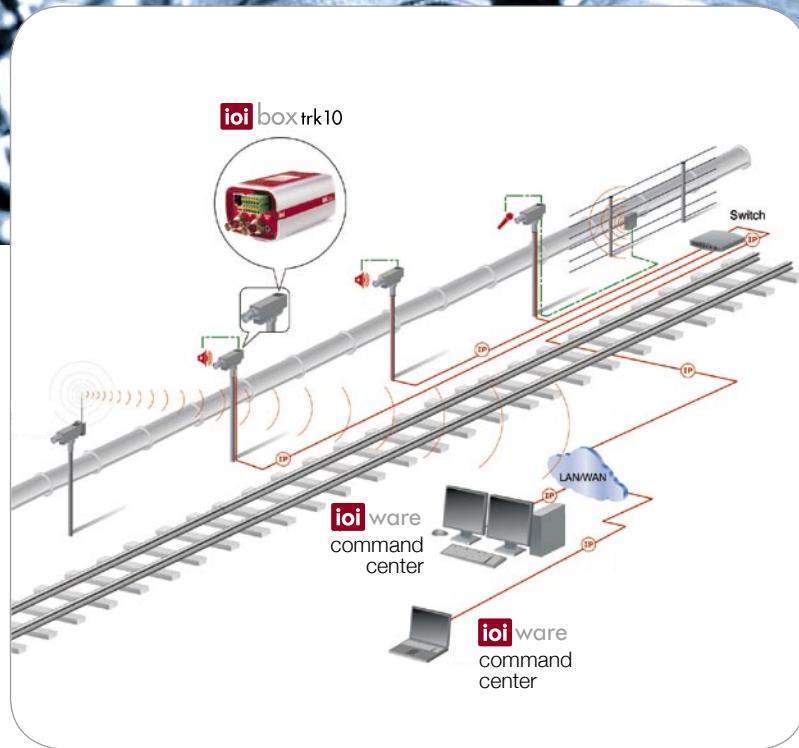
- Creates invisible fence capabilities without the costs of fence installation and hardware or the degradation of aesthetics
- Provides wide-area detection that can alert security of suspicious behavior inside and outside of the perimeter
- Provides PTZ camera uninterrupted tracking and automatic camera handoff that follows moving objects
- Provides better coverage than straight-line detectors or point sensors, such as PIR, fence sensors, ground sensors, smart fences, etc.
- Provides instant video confirmation and additional information for assessment of an alarm event
- Can be used on a wireless network reducing deployment and infrastructure costs
- Automatic responses provide instant deterrent and remediation capabilities that can prevent escalation
- Built-in stand-alone video analysis out-performs high-maintenance network dependant solutions that share processing resources, use up bandwidth, and suffer from network latency
- On-alarm video-display reduces the need for fulltime displaying and constant watching of unchanging video

ioi box series

		Channels*	Max Res (full-FR, per ch)	Ethernet 10/100	RS232/ RS485	Alarm Inputs DC	Relay Outputs DC	Power Source
ioi box trk10		1	CIF	1	1:1	1	1	12VDC/24VAC
ioi box trk10d		1	4CIF	1	1:1	1	1	12VDC/24VAC
ioi box trk100		1	CIF	2	2:1	4	2	12VDC
ioi box trk100d		1	4CIF	2	2:1	4	2	12VDC
ioi box trk200		2	CIF	2	2:1	4	2	12VDC
ioi box trk4000		4	CIF	1	4:2	4	4	100-240VAC
ioi box trk4000d		4	4CIF	1	8:4	8	8	100-240VAC
ioi box trk8000		8	CIF	1	8:4	8	8	100-240VAC

* Each channel includes a Video In, Video Out, RCA Jack Audio In, and RCA Jack Audio Out (Mini Jacks for trk10/d)

Power Consumption	Mounting	Size
4.2W	Camera Housing	53.4×72.64×117.49mm 2 3/32×2 7/8×4 5/8"
6.5W	Camera Housing	53.4×72.64×117.49 mm 2 3/32×2 7/8×4 5/8"
4.8W	Shelf	33×187.86×164.21mm 1 5/16×7 13/32×6 15/32"
7.2W	Shelf	33×187.86×164.21mm 1 5/16×7 13/32×6 15/32"
7.2W	Shelf	33×187.86×164.21mm 1 5/16×7 13/32×6 15/32"
18.2W	19" Rack with adapter	222×44×305mm 8 3/4×1 23/32×12"
36.5W	19" Rack	483×44×325mm 19×1 23/32×12 13/16"
36.5W	19" Rack	483×44×325mm 19×1 23/32×12 13/16"





Simplicity

- Easy to install, sets up in minutes - intelligent video detection is configured using a web browser or optional control software
- Automatically adjusts for best detection at all times – no ongoing configuration required
- Fully-embedded stand-alone units – no PC required

Performance

- High probability of detection while maintaining a remarkably low false alarms rate
- Detects intruders under harsh weather conditions, low visibility and poor lighting
- Detects camouflaged intruders, extremely slow progression (as slow as 1 ft/5 min), and burst movements
- Superior non-flat detection sees objects in 3D-scape and at great distances for reliable detection
- Supports pre-alarm recording for capturing the moments before an alarm

Reliability

- Certified by the Israeli Defense Forces and by leading testing laboratories
- Field-proven with thousands of units deployed since 2003 protecting nuclear facilities, government sites, petrochemical factories, airports and sea-ports
- Robust DSP-based Intelligent video edge device, no central PC processing required
- Ignores false alarms generated by small animals, swaying branches, cloud shadows, light changes, rain, snow and trivial movements in the scenery

Highlights

- Intelligent video and network video encoder in one, operates both as a stand-alone unit or as part of an integrated network configuration
- Built-in high-performance self-sustained video analytics
- High resolution low-latency MPEG4 audio and video streaming
- Hybrid support for both analog and IP network streaming MPEG-4 architectures –includes audio, video and indication of the cause of an alarm with on screen display overlays
- Integrated with existing stationary and Pan/Tilt/Zoom (PTZ) cameras
- Two-way audio capabilities
- On-alarm recording to any network PC featuring continuous, event driven and scheduled recording
- Performs predefined actions upon detected events
- Built-in HTML web server for access, configuration, and viewing through a network via a standard web browser
- Maintains Quality of Service (QoS): automatically optimizes network quality of service for one or more units, adjusting audio and video streams to bandwidth, traffic characteristics and priority
- Supports remote field-deployment with easy configuration and software upgrades over a network
- Non-PC based processing provides better system reliability and avoids network latency that slows detection

ioi box specifications

Analog Video Inputs

- Standard – NTSC/PAL
- Physical Connectors – BNC 75Ω, Composite 1Vp-p

Analog Video Outputs

- Standard – NTSC/PAL
- Physical Connectors – BNC 75Ω, Composite 1Vp-p
- Includes Graphical Overlay

Analog Audio Inputs

- Unbalanced RCA Jacks (Mini Jack for trk10/d)
– Audio Impedance 10kΩ

Analog Audio Outputs

- Unbalanced RCA Jacks (Mini Jack for trk10/d) – Audio Impedance 10kΩ
- Audio Gain Control: -73dB- +6dB

Digital Video Output

- MPEG-4 (ISO/IEC 14496) and MJPEG at 4CIF and CIF Resolutions (model-dependant) with up to 30 fps
- User Defined Image Frame Rate 1 fps – 30 fps
- 128Kbps – 4Mbps User Defined
- CBR/VBR User Defined

Digital Audio Output

- Standard – ADPCM (G.729)
- 16kbps

Serial I/O

- RS-232/RS-485

Discrete I/O Interface

- IN – Dry Contacts (max. 12VDC 50mA)
- OUT – Relay Out (max. 24VDC 1A, 24VAC 0.5A)

Software

- Integrated Web Server
- Application Programming Interface (API)
- NVR Recording to Network PC

Network

- Ethernet Port RJ45 10/100
- Services and Protocols: TCP/IP, UDP IP, HTTP, SMTP, DHCP, DNS, NTP
- Audio and Video – RTP/RTSP Unicast/Multicast
Alarms and Commands - HTTP

Environmental

- Ambient Operating Temperature: -10°C - 50°C (0-50°C for trk4000/d and trk8000)
- Ambient Operating Humidity: Less Than 90% (non condensing)

Disclaimer: Specifications are subject to change without prior notice. ioimage is not responsible for network performance and/or other manufacturer products that reside on the network.