

## Features

- Cost-effective dual H.264 video encoder
- Built-in analytics for Perimeter Intrusion Detection
- Environmentally hardened (-40°C to +75°C)
- Motion Adaptive Deinterlacing (MAD)
- Image quality monitor
- Tamper detection
- PTZ control support
- Duplex audio, data, and I/O contacts
- Privacy masking
- Edge recording (µSDHC)
- ONVIF Profile S



## C620 E-PID

### H.264 Video encoder with Perimeter Intrusion Detection

#### Description

Siqura's C-series encoders are cut out for tough environments, such as oil and gas rigs, power plants and busy roads. The unique C620 E-PID is a dual-streaming video encoder with built-in video analytics for Perimeter Intrusion Detection. High availability and low operational costs lie at the heart of everything we design.

#### Perimeter Intrusion Detection

The embedded analytics for PID is derived from software which is certified by I-Lids® for primary sensor in a sterile environment. With two detection lines or two zones the PID analytics can be configured easily using the web interface. The quality of PID is determined by a number of external factors, such as lighting, field-of-view, camera mounting, shadows, etc. The C620 E-PID is suited for low-light analogue cameras and thermal cameras. When reliable detection is required you should contact Siqura for a list of preferred cameras, expertise, and configuration services.

#### Picture enhancement

Almost every analogue camera offers an interlaced signal (PAL or NTSC). This causes severe artefacts, such as comb edges on moving objects, on digital computer monitors. To remove these artefacts the video signal has to be deinterlaced. This can be done in the monitor, but also at the beginning – at the encoder side. The C620 E-PID is fitted with a motion adaptive deinterlacer (MAD). Siqura's MAD removes the interlacing artefacts on the moving objects only to preserve the vertical resolution of the image. In addition, the deinterlaced image is much easier to encode, saving bits for streaming and storage.

#### Open Streaming Architecture (OSA) and ONVIF

The C-series encoder range supports both the international standard ONVIF and Siqura OSA for remote control, configuration, video switching, and streaming. Siqura cameras have been approved for ONVIF Profile S for streaming, PTZ, and I/O. Siqura's OSA is a comprehensive HTTP RTSP based API, which - next to ONVIF - gives access to all controls and makes full integration easy.

#### Optional SFP: fiber and coax options

The C620 E-PID is available with an optional pluggable SFP slot. This offers unparalleled flexibility in connectivity. With fiber SFPs, you can connect over multimode or single-mode optical fiber cable covering distances from 100 m to 120 km or more. You can also connect over (existing) coax using the Siqura® ECO-plug for Ethernet over Coax.

#### Image quality monitor and tampering alarm

When the image from the camera becomes too poor, an image quality alert is raised. The built-in image quality monitor continuously monitors the camera image on contrast, exposure, sharpness, and noise. In addition, the built-in tamper detector monitors changes in the camera's position or field of view. The instant a camera's position is changed a tamper detect alert is raised.

## Dual H.264 streaming

The versatile C620 E-PID is capable of streaming two independent H.264 streams simultaneously. The H.264 implementation is based on dedicated hardware resulting in unparalleled video quality.

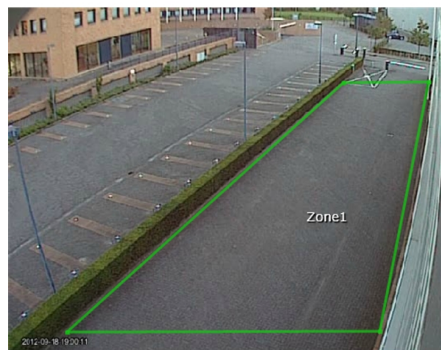
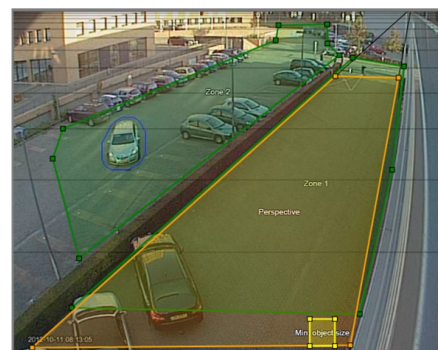
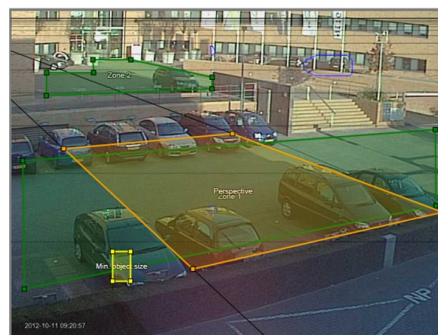
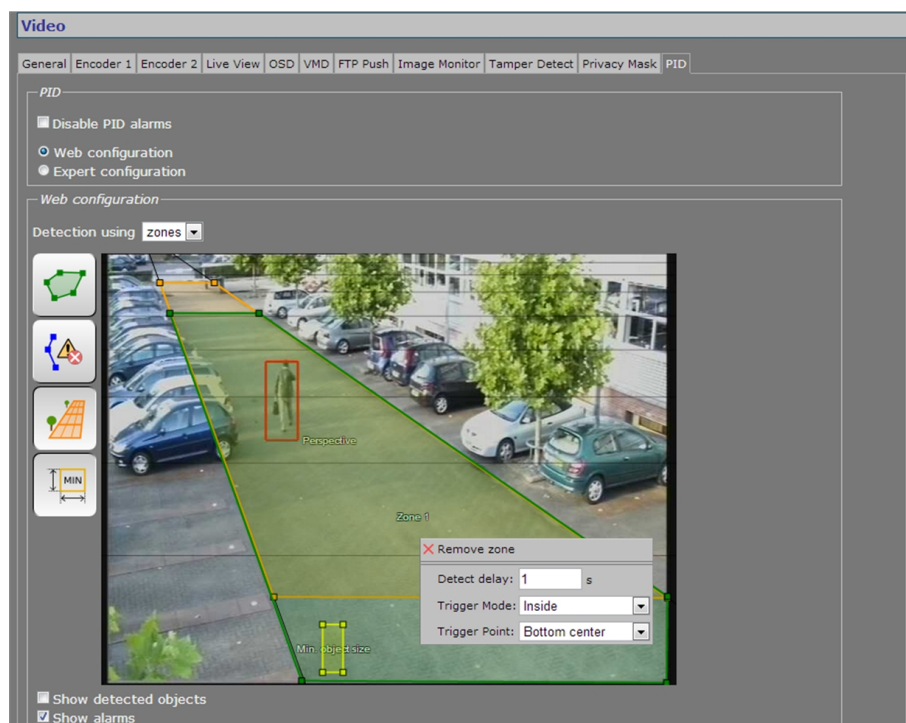
## Edge recording

The C620 E-PID offers edge recording when the connection with the NVR is lost. The recorded images are available as AVI and can easily be downloaded from the device. The recordings are stored on a single  $\mu$ SDHC card with a maximum capacity of 32 GB.

## Audio, data, and I/O contacts

By combining audio, programmable I/O contacts, and data with streaming video, the C620 E-PID provides all the interfaces necessary for any IP CCTV application. On the encoder module you will find two bidirectional audio channels (lip-synchronised), two digital inputs and outputs, and two serial data ports (RS-232 and RS-422/482). The RS-422/485 data port is combined with a built-in PTZ controller supporting a number of PTZ protocols.

## Technical Specifications



# Technical Specifications

## C620 E-PID

### Video

Number of channels per unit	1x CVBS PAL/NTSC (autodetect)
Input level	1 Vpp ( $\pm 3$ dB) at 75 $\Omega$
Video compression	H.264 BP/ MP (ISO/IEC 14496-10), MJPEG
Encoding latency	<130 ms typical
Resolution	D1, 2/3D1, 1/2D1, 4CIF, 2CIF, CIF, QCIF, VGA, QVGA
Frame rate	1 to 30 fps
GOP structure	I, IP selectable
Dual streaming	2x H.264 (each D1 at 30 fps)
Output data rate	Up to 20 Mb/s (CBR, Constant Quality)
Video parameters	Contrast, brightness, colour saturation, hue, sharpness
Video overlay (OSD)	
3x Text lines	Position, colour, border/outline colour, font, font size
1x Image	BMP, GIF, or JPEG format (configurable: position, scaling)
Live view encoder	(M)JPEG, HTTP, FTP pull, FTP push
Connector type	75 $\Omega$ BNC (gold-plated centre pin)

### Video analytics

Video motion detection	Yes (free-drawn ROI)
Privacy masks	10 (user-defined)
Image quality monitor	Focus, contrast, SNR, exposure
Tamper detector	Partially blocked view, cloaked, changed position
Intrusion detection (PID)	2x Detection zones, 2x detection lines
Detection zone	Entering, exiting, touch
Detection line	Directional crossing, touch
Additional features	Ignore line, minimum object size, perspective
Services	Parameter optimisation

### Audio

Number of channels	2 (stereo) full-duplex
Maximum bandwidth	20 Hz to 20 kHz
Sampling resolution	8/16-bits linear PCM or G.711
Input level	Adjustable, mic or line
Output level	Adjustable, 3 Vrms maximum
Input impedance	>20 k $\Omega$ or 600 $\Omega$ balanced
Output impedance	<100 $\Omega$ balanced
Connector type	RJ-45

### Data/PTZ

Number of channels	2 full-duplex
Interface	RS-232 and RS-422/485 (2- or 4-wire)
PTZ protocols	Pelco P, Pelco D, Bosch, Vicon, Samsung, Panasonic, etc.
Streaming options	TCP/UDP configurable
Data rate	300 b/s to 230.4 kb/s
Connector type	RJ-45

# Technical Specifications

## C620 E-PID

### Digital I/O (contact closures)

Number of channels	2x in, 2x out
Output	Fail-safe, potential-free
Connector type	RJ-45

### Edge recording

Number of channels	1 (2nd Encoder)
Maximum bit rate per channel	1 Mb/s (CIF @ 25 fps)
Export	AVI format, webpage, and API
Type of card	μSDHC, 32 GB max.

### Transmission interface

Number of interfaces	1
Interface(s)	10/100Base-TX Fast Ethernet, autonegotiating
SFP option	Empty SFP slot for 100 Mbps SFP device or ECO-plug
Protocols	H.264 BP/MP, (M)JPEG, RTP, RTCP, RTSP, TCP, UDP, IP, DHCP, IGMPv2, (S)NTP, MX/ IP, HTTP(s), SNMP v2, FTP, TelNet, DiffServ, SAP, UPnP, ONVIF
Connector type	RJ-45

### Management

LED status indicators	
DC	Power-on indicator (green)
NV	No video on input or output (red)
SYNC	All links are operational (green); failure in RX stream(s) (yellow); failure in TX stream(s) (red)
Ethernet port	Green LED: on = 100Mb, off = 10Mb; amber LED: on = link okay, flashes with activity
Network management and control	SNMP v2, MX™, HTTP API, HTML (password protected), ONVIF

### Powering

Power consumption	<5W
Rack-mount units	MC 10 and MC 11 power supply cabinets
Stand-alone units (/SA)	11 to 19 Vdc (PSA-UN12DC with ferrules or PSR-12DC)

### Environmental

Operating temperature	-40 °C to +75 °C (-40 °F to +167 °F)
Relative humidity	<95% with no condensation
MTBF (mean time between failures)	>200,000 hours
Safety and EMC	IEC/EN 60950-1, IEC/EN 60825, IEC/EN 61000, EN 50130-4, EN 50081-1, EN 55022, FCC part 15

### Mechanical

Dimensions (h x w x d)	128 x 34 x 190 mm (5.04 x 1.34 x 7.5 in)
Weight	450 g (15.80 oz)
Housing	Rack-mount or stand-alone

# Technical Specifications

## C620 E-PID

### Ordering information

Models	Description
C620 E-PID	H.264 video encoder with Perimeter Intrusion Detection
C620 E-PID-SFP	H.264 video encoder with Perimeter Intrusion Detection; empty 100 MB SFP slot
C620 E-PID.../SA	Stand-alone version of rack-mount models



The quality management system utilized in the development, production, sales, and support of this product is ISO 9001:2008 certified by LRQA.

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