Features

- VGA Thermal IP camera
- Digital Thermal Imaging
- Built-in image analysis
  - Hot spot presence detection
  - Flare on/off monitoring
  - Flare too small / too large detection
  - Custom defined thermal graph
- Resolution 640x512
- Robust aluminium housing (IP66)
- ONVIF Profile S conformant

TC840R1
Intelligent Thermal Camera

Description

The Siqura TC840R1 is a thermal IP camera built in a rugged aluminium die-cast housing designed for use in harsh environments. The TC840R1 is a fully integrated solution for (industrial) hot-spot detection, fire detection, and flare stack and coal pile monitoring.

Thermal imaging

The Siqura TC840R1 is fitted with a highly sensitive uncooled microbolometer. It detects temperature differences as small as 50 mK. It can spot heat sources invisible to the naked eye, such as burning butane, hot spots in mechanical equipment or smouldering coal piles. The thermal image can be shown in ten different colour palettes. The thermal imager is "plug-and-play" and configuration is made easy by its self-explanatory web interface.
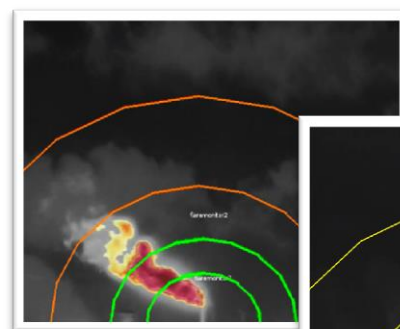
Analytics

Based on Siqura's own video analytics, the intelligent thermal camera automatically and instantaneously detects hotspots due to fire, smouldering dust or overheated machinery. The TC840R1 is also fitted with built-in flare on/off monitoring.
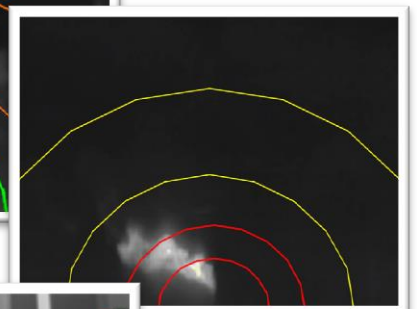
Lenses

The Siqura TC840R1 is available with a wide range of lenses.

Video management

The TC840R1 can be used in conjunction with the VDG Sense video management solution and is also designed to be compatible with most common video management systems. The thermal IP camera is conformant to ONVIF Profile S and therefore compatible with all Profile S video management systems.
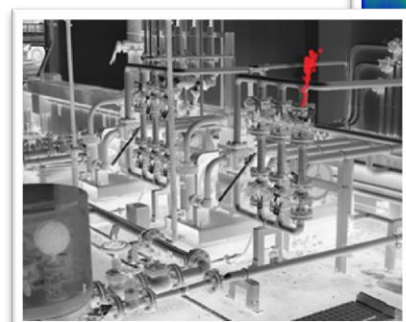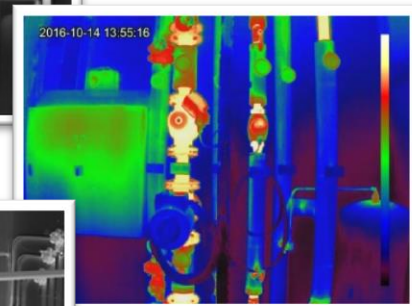

Flare monitoring

Hotspot detection

Colour palette

Flame detection

Thermal imager

Imager	Uncooled microbolometer
Pixel pitch	17 µm
Resolution	640x512 pixels

Focal length	7.5 mm	9 mm	13 mm	19 mm	25 mm	35 mm	50 mm	60 mm
Field of view	90°x69°	69°x56°	45°x37°	32°x26°	25°x20°	18°x14°	12.4°x9.9°	10.4°x8.3°
f-number	f/1.4	f/1.4	f/1.25	f/1.25	f/1.1	f/1.2	f/1.2	f/1.25

Spectral bandwidth	7.5 µm to 13.5 µm
Frame rate	8.3 fps – 9Hz (30 fps – 60 Hz optional)
Sensitivity (NEdT)	< 50 mK @ f/1.0
Time to image	Instantaneous
Digital zoom	No

Analytics

Freeform zones	2x in stand-alone, up to 8x with the VCA Configuration Server
Event type	"Hot object detected" or "Hot object disappeared"
Event time	0 to 10 s
Event output	Generic ONVIF, digital I/O, Siqura Programming Interface
Measuring range	-40 °C to 160 °C or -40 °C to 550 °C
Accuracy	+/- 5 °C (T< 100 °C) or +/- 5% (T> 100 °C)
Colour palette	Ten selectable colour palettes with freely adjustable temperature thresholds

Network

Interface(s)	100 Mb Ethernet (RJ-45)
Protocols	IPv4, TCP/IP, UDP, RTP, RTSP, HTTP, HTTPS, ICMP, FTP, SMTP, DHCP, UPnP, IGMP, SNMP, QoS, ONVIF
Access levels	Three user levels, user name / password protected
Supported browsers	Internet Explorer (9.0+), Chrome, Firefox, Safari
User accounts	20

Video

Number of video streams	2x H.264/MJPEG
Number of output streams	Up to 20 (RTSP)
Compression algorithm(s)	H.264 (H.264/MPEG-4 AVC), MJPEG
Encoder bit rate control	Constant bit rate (CBR), variable bit rate (VBR)
Output bit rate (per H.264 stream)	Up to 6 Mbit/s
Total output data rate	Up to 32 Mbit/s
Video overlay	3x Text, 1x bitmap (BMP, GIF); PID Object data (blue blob), event data (red box); palette (legend)

Electrical

Supply voltage	100 Vac to 240 Vac, 50/60 Hz
Power consumption	30 W maximum (heater), 10 W nominal

Mechanical

Body material	Aluminium
Finish	Epoxy polyester powder coat
Sunshield material	ABS
Colour	RAL 9002
Mounting options	Wall, pole, or ceiling
Dimensions (h x w x l)	160 x 176 x 514 mm (6.3 x 6.9 x 20.2 in.)
Operating temperature	-40 °C to +75 °C
Ingress protection rating	IP66/ IP67
Weight	4 kg

Ordering information

TC840R1 7.5-S	Intelligent Thermal IP Camera, 7.5 mm lens, 9 Hz, 640x512, 100-230 Vac
TC840R1 9.0-S	Intelligent Thermal IP Camera, 9 mm lens, 9 Hz, 640x512, 100-230 Vac
TC840R1 13-S	Intelligent Thermal IP Camera, 13 mm lens, 9 Hz, 640x512, 100-230 Vac
TC840R1 19-S	Intelligent Thermal IP Camera, 19 mm lens, 9 Hz, 640x512, 100-230 Vac
TC840R1 25-S	Intelligent Thermal IP Camera, 25 mm lens, 9 Hz, 640x512, 100-230 Vac
TC840R1 35-S	Intelligent Thermal IP Camera, 35 mm lens, 9 Hz, 640x512, 100-230 Vac
TC840R1 50-S	Intelligent Thermal IP Camera, 50 mm lens, 9 Hz, 640x512, 100-230 Vac
TC840R1 60-S	Intelligent Thermal IP Camera, 60 mm lens, 9 Hz, 640x512, 100-230 Vac
For full frame rate version	Please, contact Siqura. Export of 60 Hz / 30 fps versions is restricted.
WBOVA2	Wall bracket with internal cable channel. WBOVA2
OWBIP2	IP66/67 Sealing kit for WBOVA2
WFWCA	Column bracket (pendant) with joint. WFWCA
WMC3A	Ceiling bracket with ball joint. WMC3A
PM01 304	Stainless steel pole mount bracket
Siqura VCA Configuration Server	Configuration Server for built-in Siqura Analytics
VCA Configuration Server- 1-ch license	License for one Siqura Analytics device in the VCS, enabling full VCA and forensic search