XCU3 COMPACT THERMAL

XCU3 Compact 316L intelligent thermal camera

DESCRIPTION

Rugged thermal imaging camera for demanding environments. Thermal cameras can be used 24/7 for al sorts of monitoring or detection purposes. The XCU3 Compact Thermal is fitted with a radiometric thermal module and video analytics to actively help with perimeter surveillance, fire detection, and hotspot detection. The XCU and its accessories are double protected against corrosion; they are entirely made of powder-coated 316L stainless-steel. The housing is hermetically sealed against water and dust, which makes it ideal for harsh environments like traffic, tunnels, marine, offshore, heavy industry, waste management, etc.

FEATURES

- Uncooled radiometric thermal imager
- Compact, robust, and corrosion free
- powder-coated 316L stainless steel housing
- Choice of lenses
- Plug & Play
- Built-in analytics
- Water and dust tight: IP66 & IP67
- ONVIF Profile S conformant



Description

The XCU3 Thermal is designed to operate in harsh and aggressive environments. Typical applications are found in the heavy industry, traffic, tunnels, waterways, waste treatment and even in marine environments. The XCU3 Compact Thermal is fitted with an uncooled thermal imager with a choice of lenses.

Plug & Play
Installing and commissioning IP cameras has become easy. The XCU3 Compact slides into place with its versatile mounting accessories and is operational by plugging in the external connector. No need to open the unit; all connections can be prepared in advance.

Night Vision and Hot spot detection
The XCU3 Compact Thermal is fitted with a highly sensitive uncooled microbolometer for thermal imaging. It detects temperature differences as small as 35 mK and can spot heat sources invisible to the naked eye. When the darkness obscures the vision of an ultra-low light CCTV camera, the thermal camera gives a clear overview of what is going on.

Multi-streaming and multicasting
The XCU3 Compact Thermal has multi-streaming capabilities for simultaneous transmission of one or more H.265 or H.264 streams. This guarantees interoperability with existing VMS systems. Multiple combinations of resolution and frame rate can be configured to satisfy different live-viewing and recording scenarios. In addition, multicasting is supported for complex, multi-user video networks.

Open standards
Out of the box, the XCU3 integrates with the common VMS systems. Being ONVIF Profile S conformant the camera is supported by most video management systems. When needed, the camera can be controlled through a comprehensive HTTP API (Siqura Programming Interface). This specifically enables deployment in projects with custom requirements.

Built-in video analysis
The XCU3 Compact Thermal is fitted with on-board analytics for intrusion detection, flare monitoring, and hotspot detection.

Export restrictions (Dual Use)

The Slow thermal modules (XCU3-C-Txx**S**yX limited to 9Hz frame rate) are not export controlled. They can be exported to all countries except terrorist supporting countries (Country Group E:1), unless otherwise prohibited. Note: Special regulations (EAR, ITAR) apply in the U.S.

Fast thermal modules (XCU3-C-Txx**F**yX 25/30 fps) are controlled for export, This product is controlled for export under Regulation (EU) 2021/821 and Export Control Classification Number (ECCN) 6A003.b.4.b applies.

(c) 20260911

Camera housing				
Body material	316L stainless steel			
Finishing	Powder coated (RAL9016)			
Sunshield	316L powder coated, (RAL9016)			
Heater/Demister	Standard			
Window	Diamond Like Coated (DLC) germanium			
Ingress protection	IP66, IP67			
Corrosion Class	C5 (ISO 12944)			
Impact rating casing	IK10			
Solar radiation test	MIL-STD-810, method 505.4 (p.4)			
Shock test (transportation)	MIL-STD-810, method 516.5			
Vibration (IEC 50068-2-6)	10 Hz to 150 Hz, 0.5g, all 3 axes, 1 oct/min, 1 sweep			
Max wind velocity	240 km/h (150 mph)			
Operating temperature	-40 °C to +74 °C (-40 °F to 165 °F) - per Nema TS-2			
- Continuous (sheltered, air temp)	-30 °C to +55 °C (-22 °F to 131 °F)			
- Cold start	-30°C (-22 °F)			
Relative Humidity	5% to 100%			
Dry heat test	+75 °C, 24 hours			
Storage conditions				
- Ambient temperature storage	-50°C to +85 °C (-58 °F to 185 °F),			
- Relative humidity storage	10% to 90%			
Weight	2.0 kg (2.5 kg incl. packaging)			

Thermal imager/lens (Txxyzz)				
- xx = Focal Length	09; 13; 19; 25			
- y = Max frame rate	S= 8.3 fps; F= 30 fps			
- zz = Resolution	3X= 384x288; 6X= 640x512			
Imager type	T09y3X	T13y3X	T19y3X	T25y3X
- Focal length	9.1 mm	13 mm	19 mm	25 mm
- Pixel size	17µm	17µm	17µm	17µm
- Resolution	384x288	384x288	384x288	384x288
- Field of view	39.5°x30.1°	28.2°x21.3°	19.5°x14.7°	14.9°x11.2°
- Min focus distance	1.5 m	3 m	6 m	10 m
- f-number	f/1.0	f/1.0	f/1.0	f/1.1
Imager type	T09y6X	T13y6X	T19y6X	T25y6X
- Focal length	9.1 mm	13 mm	19 mm	25 mm
- Pixel size	12µm	12µm	12µm	12µm
- Resolution	640x512	640x512	640x512	640x512
- Field of view	48.0°x38.4°	32.9°x26.6°	22.9°x18.4°	17.4°x14.0°
- Min focus distance	2 m	5 m	10 m	16 m
- f-number	f/1.0	f/1.0	f/1.0	f/1.0
Lens type	Fixed focus, athermalized			
Imager	uncooled micro-bolometer (VOx)			
Spectral bandwidth	7.5 µm to 13.5 µm (LWIR)			

Specs

Thermal imager/lens (Txxyzz)	
Nominal NETD	< 35 mK @ f/1.0
Radiometric	Yes
Flat field correction	Yes
Time to image	< 60 s
Digital zoom	No
Color palette	7 color palettes; 1 isotherm palette with adjustable temp. levels
Radiometric	yes (Isotherm color palette)
Video stream	
Number of streams	2x
Aspect ratio	5:4
Compression algorithm(s)	AVC/H.264 (MP), HEVC/H.265, MJPEG
Supported output resolutions	Output images are up- or down-scaled
	720x576 (D1); 704x576; 640x480; 480x576, 352x576;
	704x288; 352x288; 320x240, 176x144
Compression bit rate control	Variable bit rate (VBR)
Output bit rate (per stream)	Up to 6Mb/s
Number of video output streams	Up to 20 (RTSP) per input
Total output data rate (max)	50Mb/s
Video overlay	3x Text lines, analytics overlay
Analytics	
PID	Intrusion detection. Free form zones or detection lines
- Detection line	Touch, Cross (directional sensitive), Cross
- Detection zone	Touch
Hotspot detection	in two zones
- Measuring range	-20°C to 150°C or 0°C to 550°C
- Accuracy*	+/- 2°C (typical below 100 °C); +/- 3% (over 100°C)
Flare monitoring	Flare-on, Flare-off, Flare-too-large
Event time	0 to 10 s
Event output	generic ONVIF, SPI
Local recording	
Edge recording	Yes
Recording media	RAM or SD card
Recording mode	event driven or continuous
Replenishment support	Yes (according ONFIV Profile G)
SD card	micro SDHC (up to 32 GB)
Electrical	
Supply voltage	24 Vac 50/60 Hz or 24 Vdc (Galvanic isolated)
PoE	IEEE802.3af or IEEE802.at type I
Power consumption	7 W nominal; 12 W max

Specs

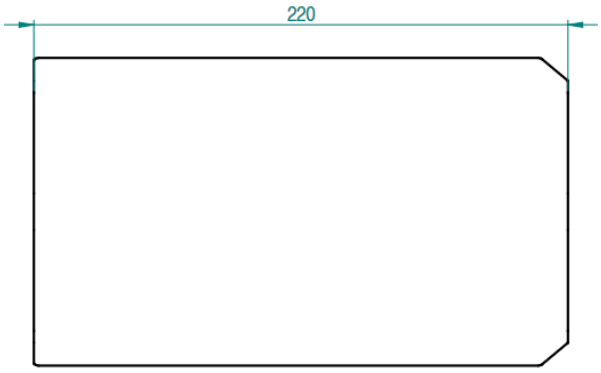
Electrical	
Power connector	3-pin 7/8" Conec
Network connector	Conec IP67 RJ45

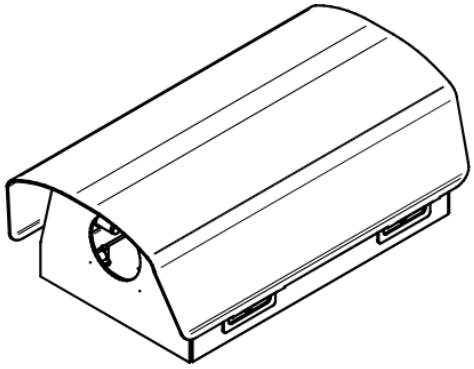
Network	
Interface(s)	100/1000 Mb Ethernet, auto negotiating, MDI/MDX
- Singlemode fiber optional	GBE Singlemode SFP: "SFP SM 1310 20km 1Gb", dual LC (1310nm, 20km, 1GBE)
- Multimode fiber optional	GBE Multimode SFP: "SFP MM 1310 2km 1000Mb", dual LC (1310, 2km, 1GBE)
Protocols	IPv4, TCP/IP, UDP, RTP, RTSP, RTCP, HTTP, HTTPS, ICMP, FTP, SMTP, DHCP, UPnP,
	IGMP, SNMP, QoS, ONVIF, TLS1.2, TLS1.3
Password levels	Viewer, Operator and Administrator
Supported browsers	Edge, Chrome, Firefox, Safari
User accounts	20

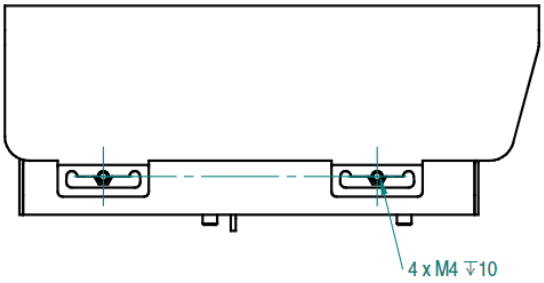
Ordering information	
XCU3-C-T09S3X	XCU3 Compact 316L intelligent thermal imager 384x288, 40°, 8.3fps
XCU3-C-T13S3X	XCU3 Compact 316L intelligent thermal imager 384x288, 28°, 8.3fps
XCU3-C-T19S3X	XCU3 Compact 316L intelligent thermal imager 384x288, 19°, 8.3fps
XCU3-C-T25S3X	XCU3 Compact 316L intelligent thermal imager 384x288, 15°, 8.3fps
XCU3-C-T09F3X	XCU3 Compact 316L intelligent thermal imager 384x288, 40°, 30fps
XCU3-C-T13F3X	XCU3 Compact 316L intelligent thermal imager 384x288, 28°, 30fps
XCU3-C-T19F3X	XCU3 Compact 316L intelligent thermal imager 384x288, 19°, 30fps
XCU3-C-T25F3X	XCU3 Compact 316L intelligent thermal imager 384x288, 15°, 30fps
XCU3-C-T09S6X	XCU3 Compact 316L intelligent thermal imager 640x512, 45°, 8.3fps
XCU3-C-T13S6X	XCU3 Compact 316L intelligent thermal imager 640x512, 33°, 8.3fps
XCU3-C-T19S6X	XCU3 Compact 316L intelligent thermal imager 640x512, 23°, 8.3fps
XCU3-C-T25S6X	XCU3 Compact 316L intelligent thermal imager 640x512, 17°, 8.3fps
XCU3-C-T09F6X	XCU3 Compact 316L intelligent thermal imager 640x512, 45°, 30fps
XCU3-C-T13F6X	XCU3 Compact 316L intelligent thermal imager 640x512, 33°, 30fps
XCU3-C-T19F6X	XCU3 Compact 316L intelligent thermal imager 640x512, 23°, 30fps
XCU3-C-T25F6X	XCU3 Compact 316L intelligent thermal imager 640x512, 17°, 30fps
For direct Fiber out	Contact TKH Security for availability
Cable connectors	included

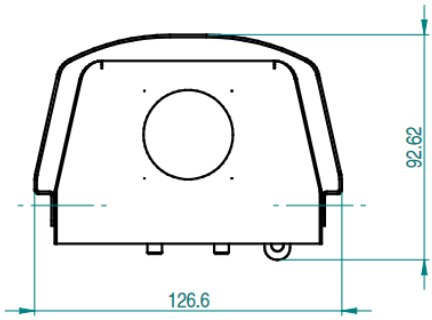
Mounting accessories	
XCUWM01	XCU 316L Wall/Pole mount with swivel, RAL9016
XCUCM01	XCU 316L Rugged ceiling mount, RAL9016
XCUSW01	XCU 316L Swivel Mount (swivel only), RAL9016

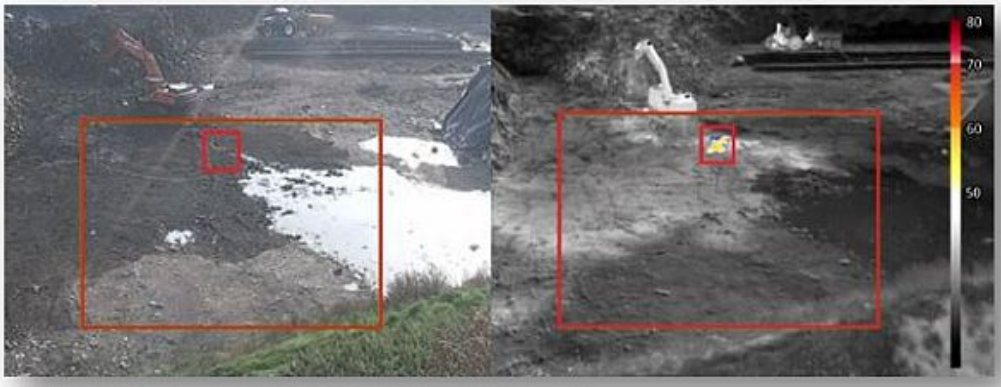
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*: Accuracy at a distance up to 5 m @ 25°C, RH 50% or less, 9mm lens


220




4 x M4 ↧10


92.62
126.6



FlameGuard: Hotspot detection at a waste management site



Flame Guard: Fire detection in a machine room

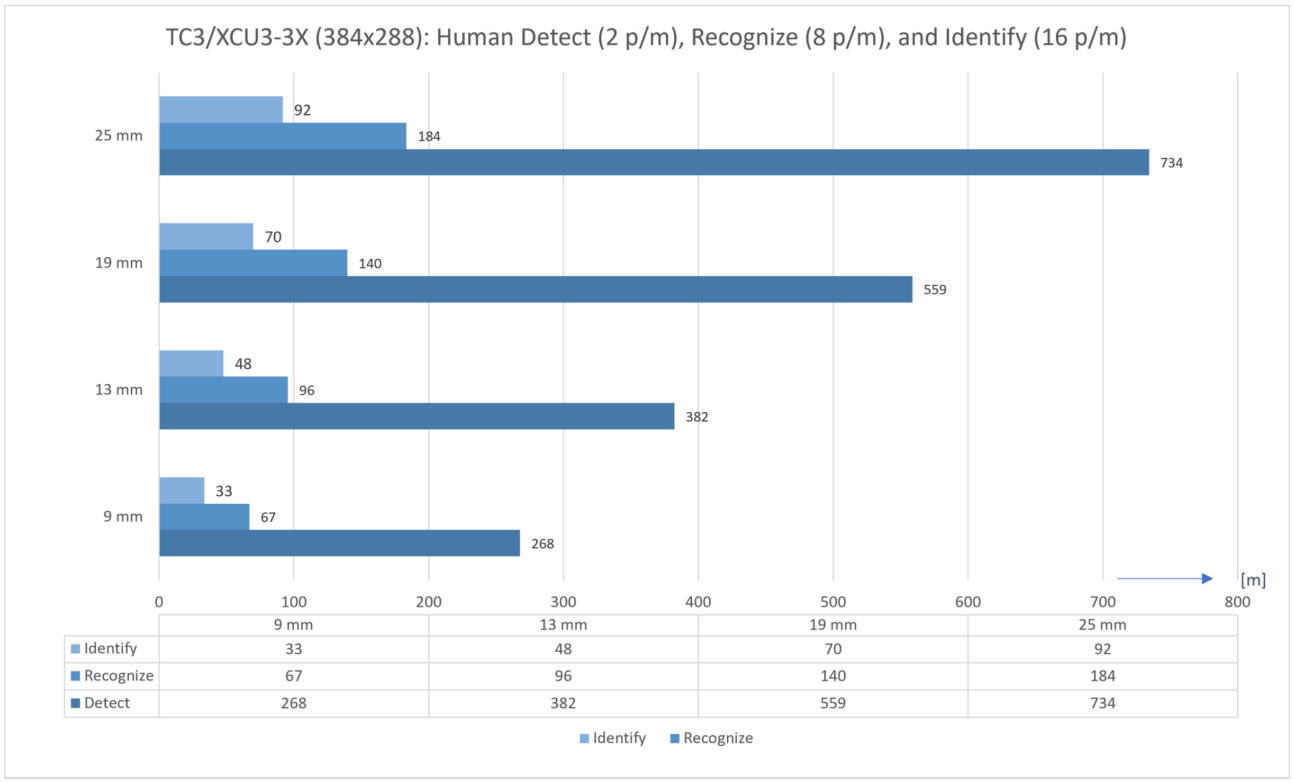


FenceGuard: Perimeter intrusion detection

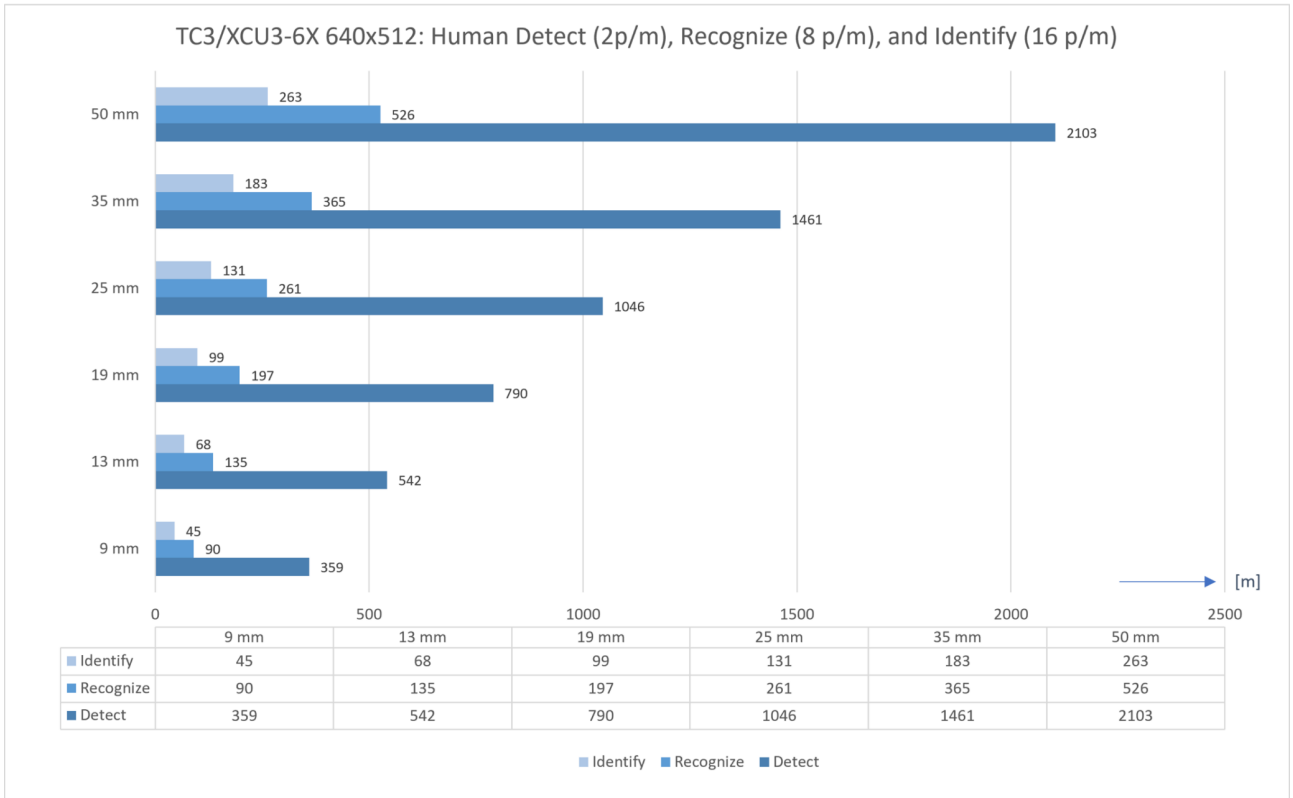


Fire detection, hot-spot and flare monitoring

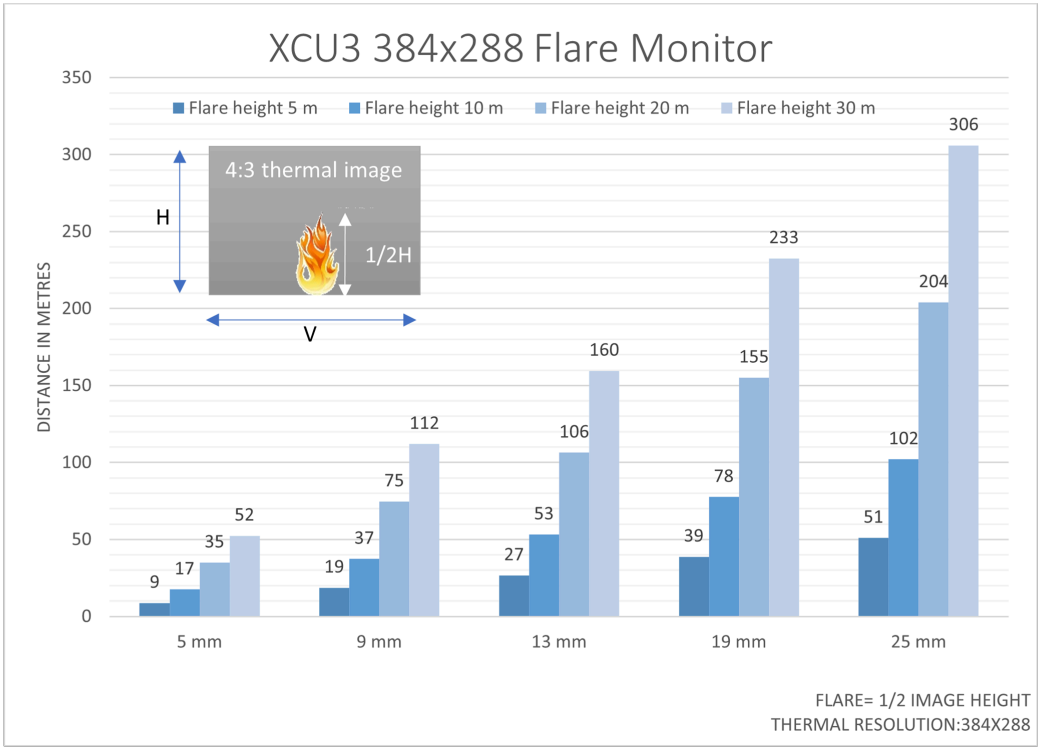
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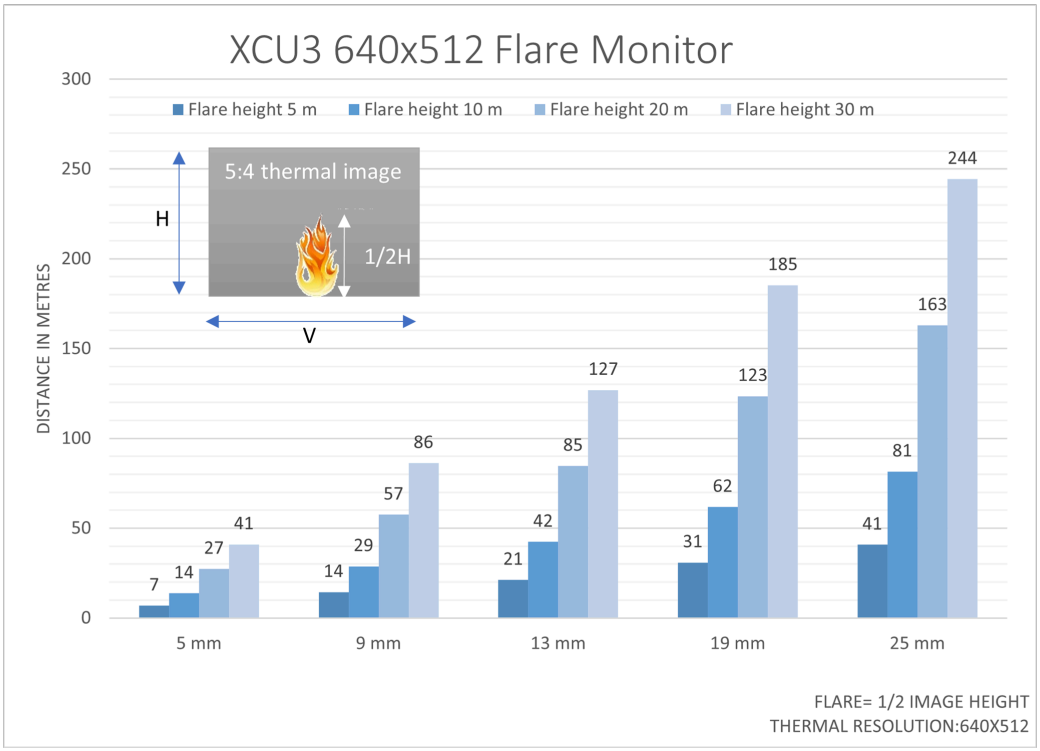


	9 mm	13 mm	19 mm	25 mm
Identify	33	48	70	92
Recognize	67	96	140	184
Detect	268	382	559	734



	9 mm	13 mm	19 mm	25 mm	35 mm	50 mm
Identify	45	68	99	131	183	263
Recognize	90	135	197	261	365	526
Detect	359	542	790	1046	1461	2103


XCU3 384x288 Flare Monitor
Flare height 5 m
Flare height 10 m
Flare height 20 m
Flare height 30 m
4:3 thermal image
H
1/2H
V
DISTANCE IN METRES
350
300
250
200
150
100
50
0
9
17
35
52
19
37
75
112
27
53
106
160
39
78
155
233
51
102
204
306
5 mm
9 mm
13 mm
19 mm
25 mm
FLARE= 1/2 IMAGE HEIGHT
THERMAL RESOLUTION:384X288


XCU3 640x512 Flare Monitor
Flare height 5 m
Flare height 10 m
Flare height 20 m
Flare height 30 m
5:4 thermal image
H
1/2H
V
DISTANCE IN METRES
300
250
200
150
100
50
0
7
14
27
41
14
29
57
86
21
42
85
127
31
62
123
185
41
81
163
244
5 mm
9 mm
13 mm
19 mm
25 mm
FLARE= 1/2 IMAGE HEIGHT
THERMAL RESOLUTION:640X512

RELATED

	**Siqura XCUCM01** Ceilingmount for the XCU Fusion and Compact
	**Siqura XCUWM01** 316L Wall-Pole mount with swivel for the XCU Fusion and Compact