

Technical Specifications**Thermal Image Bullet IP Camera****FOR INTERNAL/EXTERNAL APPLICATIONS**

- 17 μm uncooled Vox microbolometer
- 320x240 / 640x480 Resolutions
- 30 fps or 9fps versions for global commercial applications
- Image Contrast Enhancement (ICE™) features
- Flexible input power options: AC, DC, PoE
- 802.3af (PoE) simplified installation over a single standard cable
- Two – way audio
- Embedded VCA Technology video analytics
- Embedded Storage and Edge Recording
- IP and analog connectivity
- Indoor/Outdoor (IP66)



CAMERA MODULE (Pixel Array)	
Array Size (Resolution)	VCA6500TCQD: 320x240 VCA6500TCVD: 640x480
Detection Type	Uncooled Vanadium Oxide Microbolometer
Sensor Pixel Size	VCA6500TCQD / VCA6500TCVD: 17 μm
Spectral Response	8-14 μm
Sensitivity (NETD)	< 50 mK at f/1.0
Lens (FOV)	VCA6500TCQD: 6°, 9°, 16°, 24°, 42°, 60° VCA6500TCVD: 12°, 18°, 25°, 37°, 50°
Scanning System	Progressive Scan

VIDEO	
Video Compression	H.264 Baseline, Main, High profile(MPEG-4 Part 10/AVC), MJPEG(Motion JPEG)
Video Streaming	Dual Stream, Configurable streams in H.264, MJPEG H.264: Controllable frame rate, bandwidth(VBR/CBR) MJPEG: Controllable frame rate, JPEG quality
Resolutions	VCA6500TCQD: 640x480 (VGA, Scaled-up), 320x240 (QVGA), 160x120 (QQVGA) VCA6500TCVD: 640x480 (VGA), 320x240 (QVGA), 160x120 (QQVGA)
Frame Rate	Configurable up to 30 FPS or 9 FPS*
Image Settings	Configurable brightness, contrast, and sharpness
Image Orientation	Flip / Mirror / Corridor Mode(-90°, +90°)
Motion Detection	Supported
Video Stabilization	Supported
Burnt-in Text	Supported
Privacy Mask	4 configurable regions
Image Processing	Image Contrast Enhancement (ICE™)

Gain / Level Control	Automatic
Smart Bitrate Control	Supported
Analog Output	NTSC / PAL

AUDIO	
Audio Streaming	Two-way
Audio Compression	G.711-uLaw
Audio Input / Output	Supported

NETWORK	
Ethernet Standard	10 / 100 Base-T
IP	IPv4, IPv6
Protocol	QoS Layer3 DiffServ, TCP/IP, UDP/IP, HTTP, HTTPS, FTP, RTSP, RTCP, RTP/UDP, RTP/TCP, mDNS, UPnP™, SMTP, DHCP, DNS, DynDNS, NTP, SNMP v2c/v3(MIB-II), IGMP, ICMP, SSLv2/v3, TLS, SRTP, RTMP
Security	HTTPS(SSL), SRTP, IP Filtering, Multi-level access with password protection
Users	Live viewing for up to 10 clients

INTEGRATION	
Application Programming Interface	Software Development Kit(SDK) available
ONVIF Compliance	Profile S, Profile G
Event Sources	Sensor(DI); Alarm(DO); Video Motion Detection; Tamper Detection; Video Content Analytics(VCA); Network Loss/Detect; Network Setting Change; Time(Recurrence/Schedule); Storage Error

Technical Specifications

Event Actions	File upload: E-mail, FTP Notification: E-mail, FTP, HTTP, TCP Trigger-Alarm(DO) Recording Event Log Saving
Event Metadata Streaming (RTSP/RTP)	Video Motion Detection(MD); Video Content Analytics(VCA)

GENERAL	
Material	Poly-carbonate, Aluminum
External I/O Terminals	1x Alarm In, 1x Alarm Out, RS-485
Language on Webpage	Korean, English, Chinese
Power Source / Consumption	DC 12V, AC 24V, PoE / max 10W@12VDC, 24VAC, PoE
Operating Conditions	Humidity up to 85% RH (non-condensing) -40°C ~ 60°C (-40°F ~ 140°F)
Weight	Approx. 1.2kg (2.65lb)
Approvals	FCC, CE, IP66, UL (all in progress)
Dimensions (W x H x D)	3.7" x 3.9" x 11.5" (95 x 98 x 293 mm)

EDGE STORAGE	
Storage	microSDHC memory card embedded (optional)
Recording Types	Continuous Recording or Event Recording
Continuous Recording	Instant recording; Search & Download
Event Recording	Search of Event Logs; Playback; Download

VIDEO ANALYTICS	
High Performance	Advanced tracking algorithm, low false alarm rate
Easy to Use	Intuitive web browser interface
Detection Zones	Multi-segment polygons and lines
On-screen Display	Real-time display of tracking data and events
Tamper Detection	Detect camera tampering
Presence Filter	Detect presence of an object
Detection Behavior	Direction and Dwell filters
3D Behavior	Perspective corrected size, speed filters and calibration

VIDEO ANALYTICS (OPTIONAL FEATURES)	
Detection Behavior	Enter, Exit, Appear, Disappear, Stop, Tailgating filters
Logical Rules	Extends standard rules to allow various combinations of the inputs
Counting Line	High accuracy people and vehicle counting
Counter	20 counters in total
Counting Report	Generates counter reports based on the counter database
Meta Data	Plain XML Format

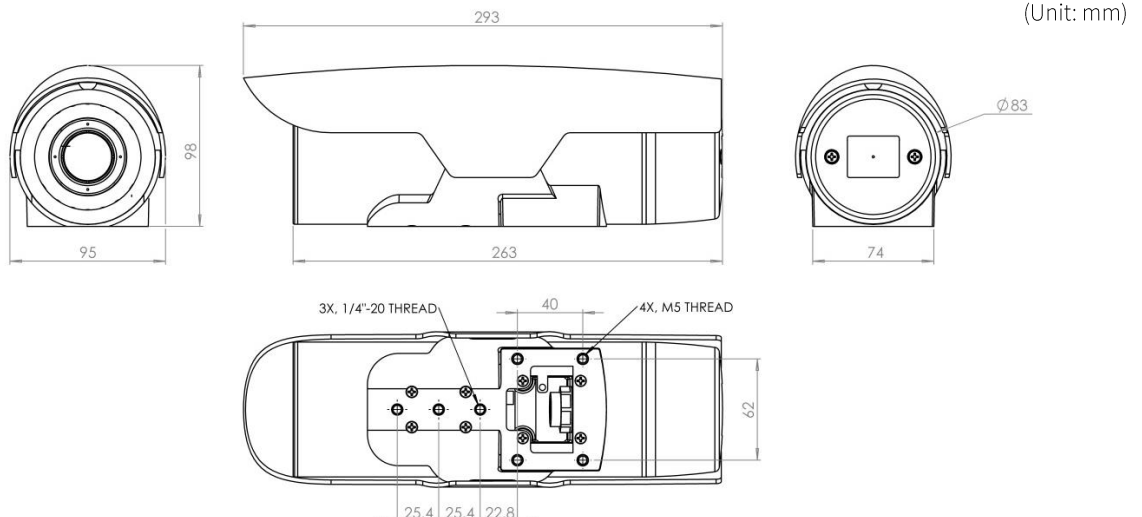
Models by Resolution

320 x 240 Resolution			
Model	FPS	FOV	Standard
VCA6500TCQD-30A06	30	6.2 x 4.6	QVGA
VCA6500TCQD-30A09	30	9 X 6.7	QVGA
VCA6500TCQD-30A16	30	16 X 12	QVGA
VCA6500TCQD-30A24	30	24 X 18	QVGA
VCA6500TCQD-30A42	30	41.8 X 31.4	QVGA
VCA6500TCQD-30A60	30	60 X 45	QVGA
VCA6500TCQD-9A06	9	6.2 x 4.6	QVGA
VCA6500TCQD-9A09	9	9 X 6.7	QVGA
VCA6500TCQD-9A16	9	16 X 12	QVGA
VCA6500TCQD-9A24	9	24 X 18	QVGA
VCA6500TCQD-9A42	9	41.8 X 31.4	QVGA
VCA6500TCQD-9A60	9	60 X 45	QVGA

640x480 Resolution			
Model	FPS	FOV	Standard
VCA6500TCVD-30A12	30	12.4 X 9.3	VGA
VCA6500TCVD-30A18	30	17.6 X 13.2	VGA
VCA6500TCVD-30A25	30	24.8 X 18.6	VGA
VCA6500TCVD-30A37	30	37.5 X 28	VGA
VCA6500TCVD-30A50	30	49.8 X 37	VGA
VCA6500TCVD-9A12	9	12.4 X 9.3	VGA
VCA6500TCVD-9A18	9	17.6 X 13.2	VGA
VCA6500TCVD-9A25	9	24.8 X 18.6	VGA
VCA6500TCVD-9A37	9	37.5 X 28	VGA
VCA6500TCVD-9A50	9	49.8 X 37	VGA

*9 Hz models are export controlled by the U.S. Department of Commerce under ECCN 6A993.
30 Hz models are export controlled by the U.S. Department of Commerce under ECCN 6A003b.4.b.
The commodities described herein may require the U.S. Government authorization prior to export or re-export.

Dimensions



Technical Specifications

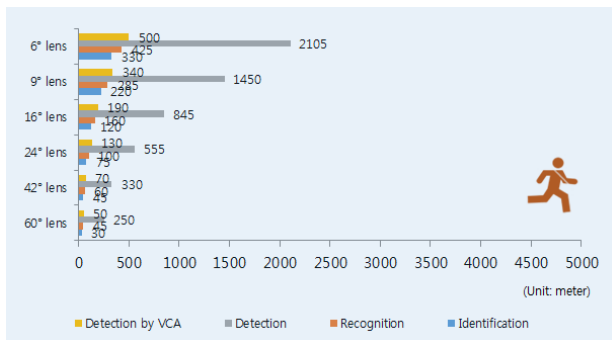
Detection Range

(Unit: m)

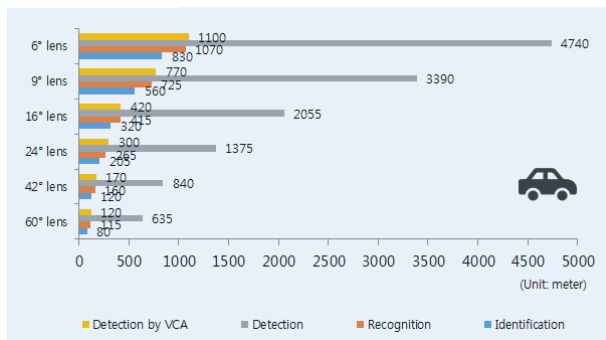
*The detection range is of the maximum values.

VCA6500TCQD					
Lens	Object	Identification	Recognition	Detection	Detection by VCA
6°	Person	330	425	2,105	500
	Vehicle	830	1,070	4,740	1100
9°	Person	220	285	1,450	340
	Vehicle	560	725	3,390	770
16°	Person	120	160	845	190
	Vehicle	320	415	2,055	420
24°	Person	75	100	555	130
	Vehicle	205	265	1,375	300
42°	Person	45	60	330	70
	Vehicle	120	160	840	170
60°	Person	30	45	250	50
	Vehicle	80	115	635	120

Person

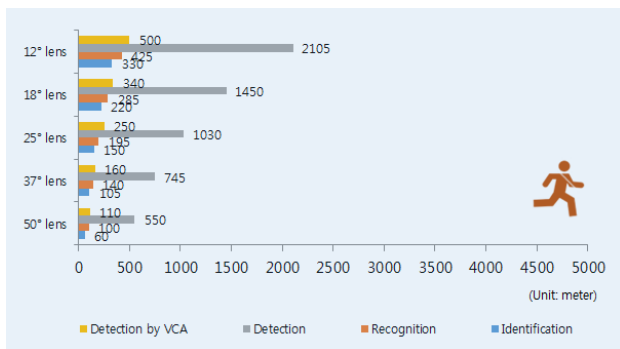


Vehicle

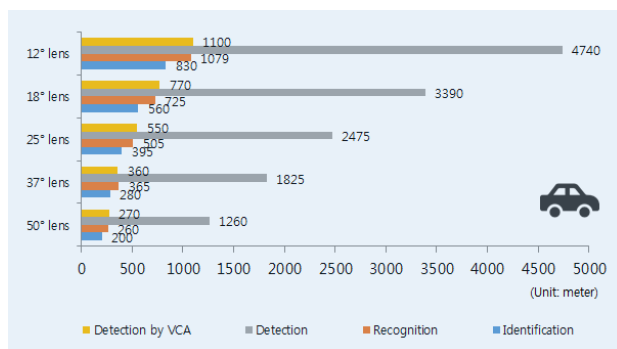


VCA6500TCVD					
Lens	Object	Identification	Recognition	Detection	Detection by VCA
12°	Person	330	425	2,105	500
	Vehicle	830	1,079	4,740	1,100
18°	Person	220	285	1,450	340
	Vehicle	560	725	3,390	770
25°	Person	150	195	1,030	250
	Vehicle	395	505	2,475	550
37°	Person	105	140	745	160
	Vehicle	280	365	1,825	360
50°	Person	60	100	550	110
	Vehicle	200	260	1,260	270

Person



Vehicle



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