

Technical Specifications

Thermal Mini Bullet IP Cameras

- Compact size and light weight
- 12 μm uncooled vanadium oxide microbolometer
- Flexible input power options: DC or PoE
- 802.3af (PoE) simplified installation over a single standard cable
- Burnt-in text, video motion detection
- Two-way audio
- Embedded VCA Technology video analytics
- Embedded storage and edge recording
- Indoor/Outdoor (IP66)



CAMERA MODULE (Pixel Array)	
Array Size (Resolution)	206 x 156
Detection Type	Uncooled Vanadium Oxide Microbolometer
Sensor Pixel Size	12 μm
Spectral Response	7.8~14 μm
Lens	VCA650LD-20: 6.8mm, F1.2 (FOV: 20°) VCA650LD-36: 4.0mm, F1.2 (FOV: 36°)
Sensitivity (NETD)	Less than 100mK
VIDEO	
Video Compression	H.264, MJPEG
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	4:3 mode QVGA(320x240), VGA(640x480), NTSC(720x480), PAL(720x576), SVGA(800x600), XGA(1024x768)
	16:9 mode 320x180, 480x270, 640x360, 800x450, 960x540, 1120x630, 1280x720
Frame Rate	Max. 9fps in all resolutions
Image Orientation	Flip / Mirror / Corridor Mode(-90°, +90°)
Motion Detection	Supported
Burnt-in Text	Supported
Privacy Mask	4 configurable regions
Smart Bitrate Control	Supported
AUDIO	
Input	1 channel
Output	1 channel
Compression Format	G.711
NETWORK	
Ethernet Standard	10 / 100 Base-T
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, HTTP, RTSP, RTCP, RTP/UDP, RTP/TCP, SNTP, mDNS, UPnP, SMTP, IGMP, DHCP, FTP, DDNS, SSL v2/v3, SSH, SNMP v2c/v3, 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; Video Content Analytics(VCA); Network Loss/Detect; Network Setting Change; Time(Recurrence/Schedule); Storage Error
Event Actions	File upload: E-mail, FTP Notification: E-mail, FTP, HTTP, TCP(push, multicast, TCP event server) Active alarm(DO) Recording Event log saving
Event Metadata Streaming (RTSP/RTP)	Video Motion Detection(MD); Video Content Analytics(VCA)
GENERAL	
Material	Aluminum Die Casting
External I/O Terminals	1 x Alarm In, 1 x Alarm Out
Language on Webpage	Korean, English, Chinese
Power Source / Consumption	DC 12V, PoE / 12W @ 12VDC
Operating Conditions	Up to 85% RH (Non-condensing) [DC/PoE] -40 $^{\circ}\text{C}$ ~ 50 $^{\circ}\text{C}$ (-40 $^{\circ}\text{F}$ ~ 122 $^{\circ}\text{F}$)
Lowest Temperature for device start up	0 $^{\circ}\text{C}$ (32 $^{\circ}\text{F}$)
Weight	621g (1.4lb)
Approval	FCC, CE, KC, IP66, UL
Dimension (H x V x D)	Ø2.7" x 3.0" x 7.5" (Ø69 x 76 x 191 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

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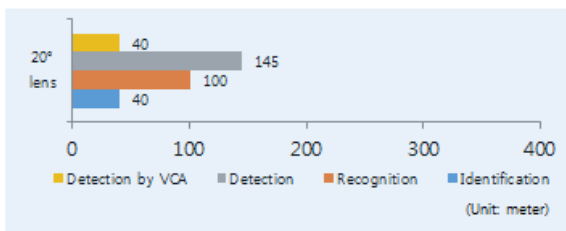
VIDEO ANALYTICS		VIDEO ANALYTICS (OPTIONAL FEATURES)	
High Performance	Advanced tracking algorithm, low false alarm rate	Detection Behavior	Enter, Exit, Appear, Disappear, Stop and Tailgating filters
Easy to Use	Intuitive web browser interface	Logical Rules	Extends standard rules to allow various combinations of the inputs
Detection Zones	Multi-segment polygons and lines	Counting Line	High accuracy people and vehicle counting
On-screen Display	Real-time display of tracking data and events	Counter	20 counters in total
Tamper Detection	Detect camera tampering	Counting Report	Generates counter reports based on the counter database
Presence Filter	Detect presence of an object	Meta Data	Plain XML format
Detection Behavior	Direction and Dwell filters		
3D Behavior	Perspective corrected size, speed filters and calibration		

Detection Range*

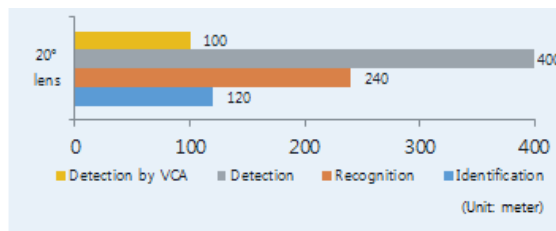
(Unit: meter)

VCA650LD-20				
Object	Identification	Recognition	Detection	Detection by VCA
Person	40	100	145	40
Vehicle	120	240	400	100

Person

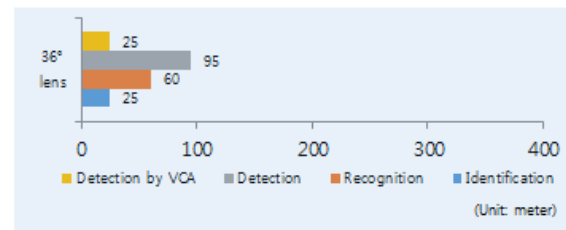


Vehicle

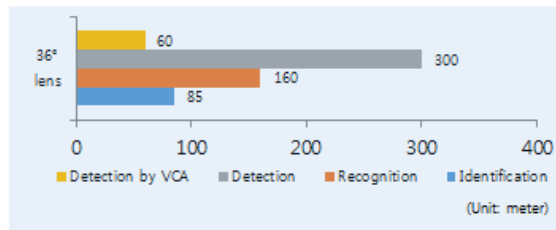


VCA650LD-36				
Object	Identification	Recognition	Detection	Detection by VCA
Person	25	60	95	25
Vehicle	85	160	300	60

Person



Vehicle

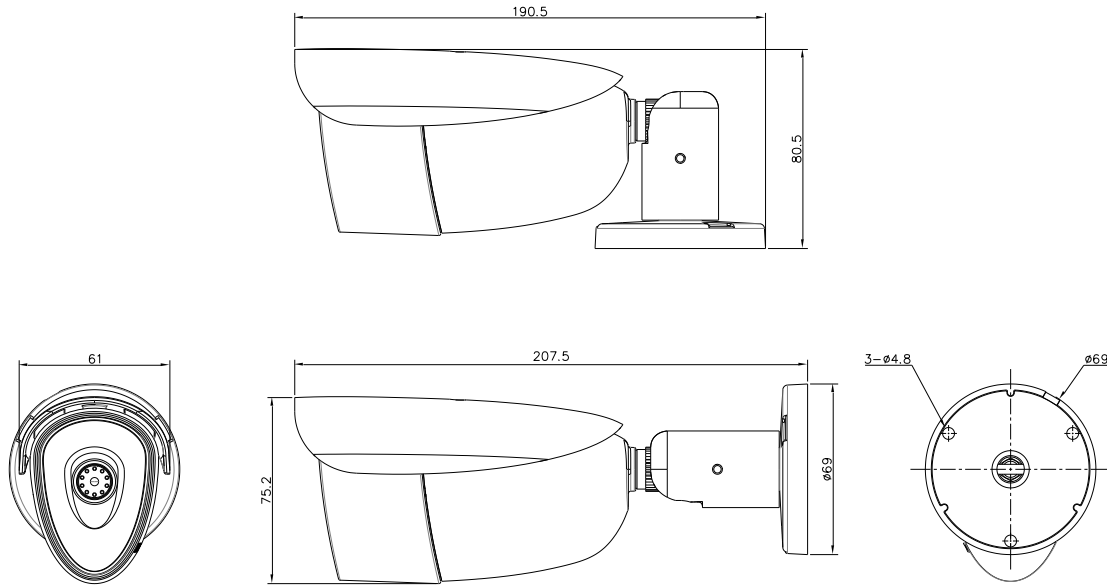


*The detection range is of maximum values.

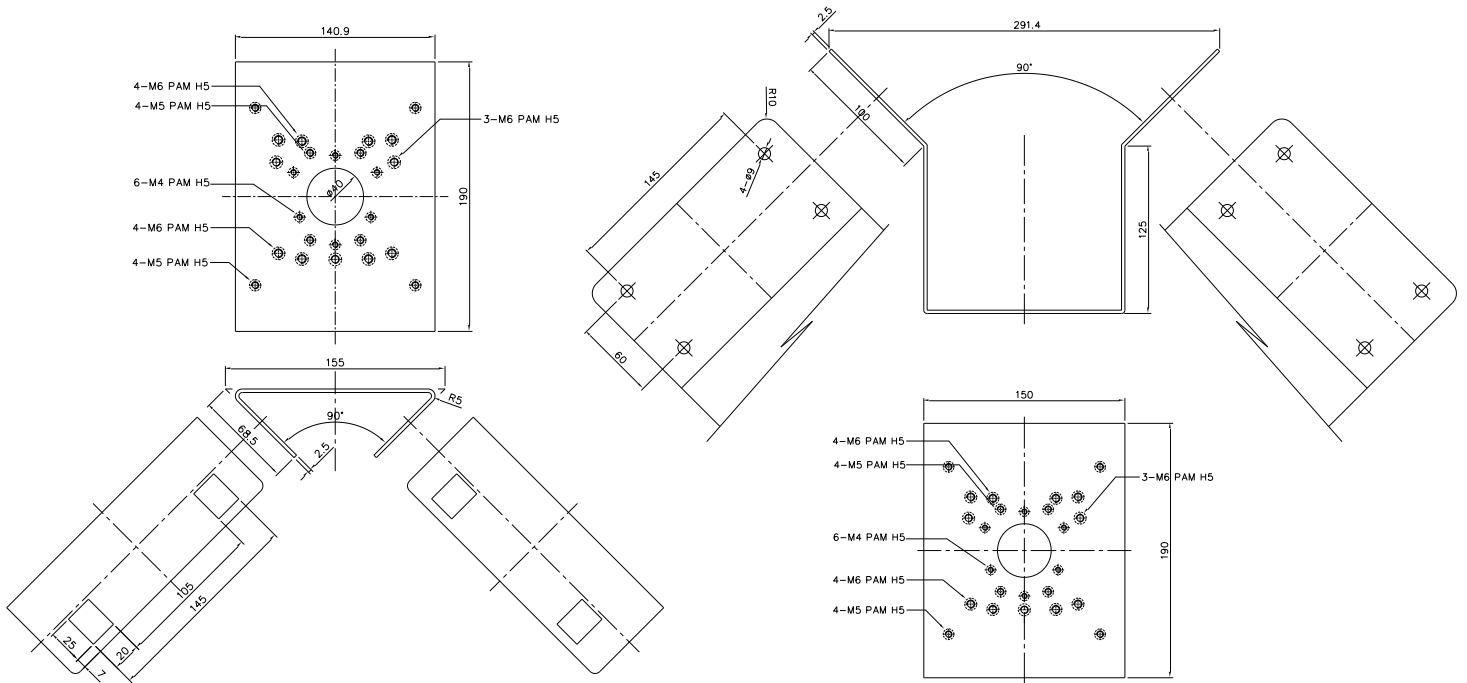
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Dimensions

(Unit: mm)



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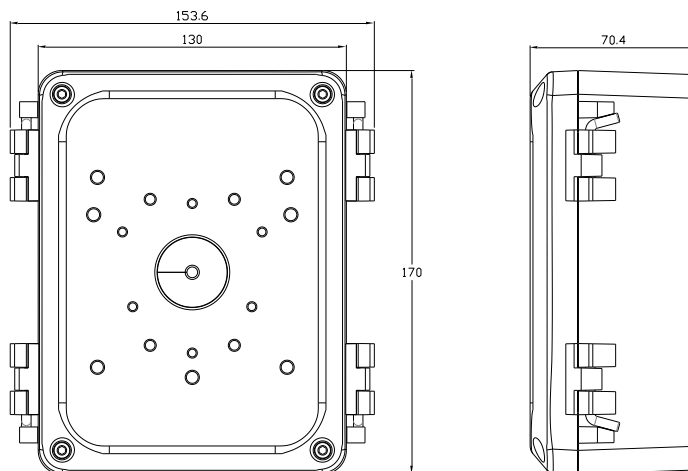


Pole Mount Adaptor

Model: PMA-U100
Weight: 946g(2.11lb)

Corner Mount Adaptor

Model: CMA-U100
Weight: 2,283g(5.0lb)



Junction Box Kit

Model: JBK-U100
Weight: 1,011.5g(2.2lb)

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