

## Mini Bullet Thermal IP Camera with Video Analyses

- 12  $\mu\text{m}$  uncooled vanadium oxide microbolometer
- 206x156 Resolutions
- 9fps for global commercial applications
- Radiometric functionality
- Dual Audio transmission, burnt-in text / video motion detection
- 802.3af (PoE) simplified installation over a single network cable
- Integrated video analyses of VCA Technology
- Indoor/Outdoor IP66 Liquid Protection



### Specifications

CAMERA	
<b>Image Resolution</b>	206 x 156
<b>Detection Type</b>	Uncooled Vanadium Oxide Microbolometer
<b>Sensor Pixel Size</b>	12 $\mu\text{m}$
<b>Spectral Response</b>	7.8 ~14 $\mu\text{m}$
<b>Sensitivity (NETD)</b>	Less than 100mK
<b>Lens (FOV)</b>	<b>RTS650-A20:</b> 6.8mm, F1.2, (FOV: 20°) <b>RTS650-A36:</b> 4.0mm, F1.2, (FOV: 36°)
<b>Detectable Temperature Range</b>	-40°C to 330°C (-40°F to 626°F)
<b>Accuracy According to Temperature Variation*</b>	<b>RTS650-A20</b> ROI at 5m $\pm 1^\circ\text{C}$ (16ft $\pm 1.8^\circ\text{F}$ ) ROI at 10m $\pm 3^\circ\text{C}$ (33ft $\pm 5.4^\circ\text{F}$ )
	<b>RTS650-A36</b> ROI at 4m $\pm 1^\circ\text{C}$ (13ft $\pm 1.8^\circ\text{F}$ ) ROI at 8m $\pm 3^\circ\text{C}$ (26ft $\pm 5.4^\circ\text{F}$ )
VIDEO	
<b>Video Compression</b>	H.264 Baseline, Main, High profile(MPEG-4 Part 10/ AVC), MJPEG(Motion JPEG)
<b>Video Streaming</b>	Dual Stream, Respective Configurable <b>H.264:</b> Controllable frame rate, image resolution, bandwidth limitation (CVBR/CBR) <b>MJPEG:</b> Controllable frame rate, image resolution, JPEG quality
<b>Resolutions</b> ①	<b>4:3 mode</b> QVGA(320x240), VGA(640x480), NTSC(720x480), PAL(720x576), SVGA(800x600), XGA(1024x768)
	<b>16:9 mode</b> 320x180, 480x270, 640x360, 800x450, 960x540, 1120x630, 1280x720
<b>Frame Rate</b>	Max. 9fps in all resolutions
<b>Image Orientation</b>	Flip / Mirror / Corridor Mode(-90o,+90o)
<b>Motion Detection</b>	Max. 8 zones with respective setting detection sensitivity and minimum object size
<b>Smart Bitrate Control</b>	Supported for First/Second Stream
<b>Text Overlay</b>	Free positioning of display for time/ data/ name (name up to 48 signs)
<b>Privacy Mask</b>	4 configurable regions

Audio	
<b>Audio Streaming</b>	Two-way
<b>Audio Compression</b>	G.711
<b>Audio Interface</b>	Line Input / output terminal
NETWORK	
<b>Ethernet Standard/IP</b>	10 / 100 Base-T / IPv4, IPv6
<b>Protocol</b>	QoS Layer 3 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, IEEE802.1X
<b>Users connection</b>	Live viewing for up to 10 clients
<b>Security</b>	HTTPS(SSL), SRTP, IP Filtering, Multi-level access with password protection
GENERAL	
<b>I/O Terminal</b>	1x Alarm In - max 50mA@5VDC, TTL 2x Alarm Out - max 50mA@24VDC, TTL
<b>Application Programming Interface</b>	Software Development Kit (SDK) available ONVIF compliant
<b>Event Metadata Streaming RTSP/RTP</b>	Video Motion Detection (MD), Video Content Analytics( VCA)
<b>ONVIF</b>	Version: 2.41 (Support Profile S and G)
<b>Event Sources</b>	Input(DI), Output(DO), Video Motion Detection, Tamper Detection, Video Content Analytics(VCA), Network Loss/Detect, Network Setting Change, Time (Recurrence/Schedule)
<b>Event Actions</b>	Notification service via TCP/IP, HTTP, multicast or email text messages with snapshot, output (DO) switching, snapshot upload on external FTP server
<b>Approvals</b>	FCC, CE, KC, IP66, UL, RoHs
ELETRICAL	
<b>Power Source</b>	DC 12V, PoE (IEEE 802.3af)
<b>Consumption</b>	Max. 12W @ DC 12V

### ① Please Note:

The image resolutions are digital up-scaled from Microbolometer sensor source 206(H) x 156(V).

ENVIRONMENT	
<b>Temperature</b>	DC12V/PoE: -40°C ~ 50°C (-40°F ~ 122°F)
<b>Humidity</b>	Up to 85% rel. humidity non-condensing
MECHANICAL	
<b>Material</b>	Aluminum Die-Casting
<b>Color</b>	White
<b>Dimension</b>	61(w) x 76(H) x 208(D) mm 2.4"x3.1"x8.2"
<b>Weight (Approx)</b>	0.65kg (1.5lb)
VIDEO CONTENT ANALYSIS (Included as Standard)	
<b>High Performance</b>	Advanced tracking algorithm and low false alarm rate
<b>Easy to Use</b>	Intuitive web browser interface
<b>Detection Zones and Rules</b>	Up to 40 zones (multi-segment polygons and lines) 60 VCA filter rules in total
<b>On-screen Display</b>	Real-time display of tracking data and events via activeX plug-in in IE browser
<b>Burnt in Annotation</b>	Allows the VCA annotation to be burnt into the raw video stream for displaying on third party application
<b>Tamper Detection</b>	Recognize camera tampering via VCA detection (defocusing, lens covering, camera moving)

VCA DETECT LICENSE (Included as Standard)	
<b>3D VCA Calibration</b>	Camera Scene Settings will be configured with innovative graphical controls and tools to optimize VCA output
<b>Object Classification</b>	Design of different Object classes to include in VCA Alarm Rules
<b>Included VCA Detection Filters</b>	Direction, Speed, Dwell, Stop, Object Classification
VIDEO CONTENT ANALYSIS (Option extension License)	
<b>Additional Functions</b>	VCAcountIP, VCAadvancedIP, VCAprofessionalIP
<b>VCA Detection Filter</b>	Objekt: Enter, Exit, Appear, Disappear, Stop, Direction, Dwell, Speed, Unauthorized Access, Counting Line, Color Filter, Object Classification
<b>VCA Functions</b>	<ul style="list-style-type: none"> <li>- Up to 20 Onscreen Counter Displays</li> <li>- Counting-Line for accuracy people and vehicle counting with local database and reporting service</li> <li>- VCA calibration via 3D tools for right object size detection</li> <li>- Several definable object class to include into the detection rules for the VCA alarm</li> <li>- 10 colors in total to distinguish objects by color</li> <li>- People tracking mode to tracks individuals separately among overlapped multiple people</li> <li>- Heatmap Report shows relative crowd density of the 24 hour period (criterion: midnight)</li> </ul>
<b>Logical Rules</b>	Extension of alarm rules using logical operators (AND, OR..) for the VCA detection filters of created zones / lines

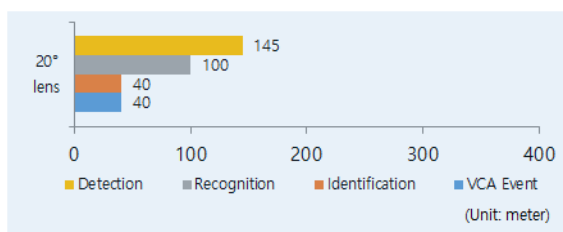
\* A black body has been used for the temperature measurement test with the 10°C variation (0°C to 100°C).

## Detection Range

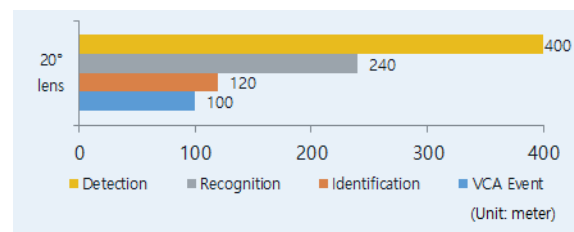
**Please Note!** Released distance are based on theoretical calculation. In practical application reached distance can diverse depending environment conditions.

Unit: meter		RTS650-A20			
Lens	Object	Detection	Recognition	Identification	VCA Event
20°- 6.8mm	Person	145	100	40	40
	Vehicle	400	240	120	100

**Person**



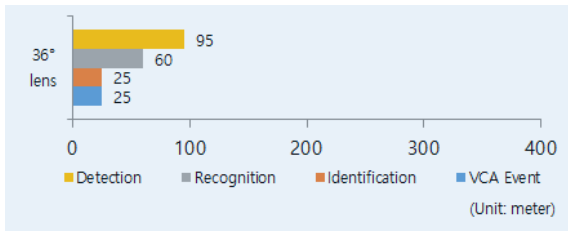
**Vehicle**



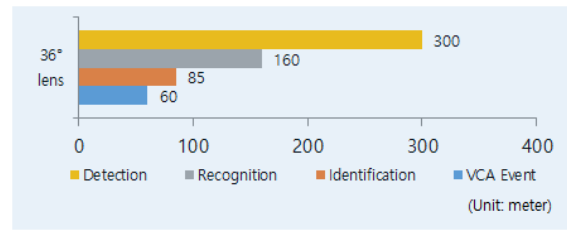
# RTS650

Unit: meter		RTS650-A36			
Lens	Object	Detection	Recognition	Identification	VCA Event
36°- 4mm	Person	95	60	25	25
	Vehicle	300	160	85	60

**Person**

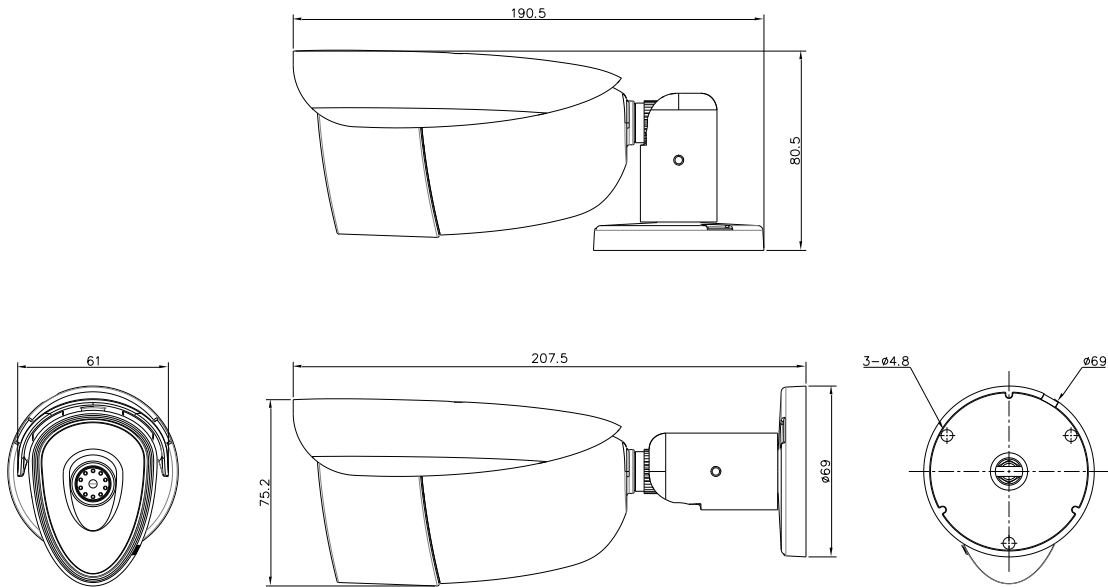


**Vehicle**

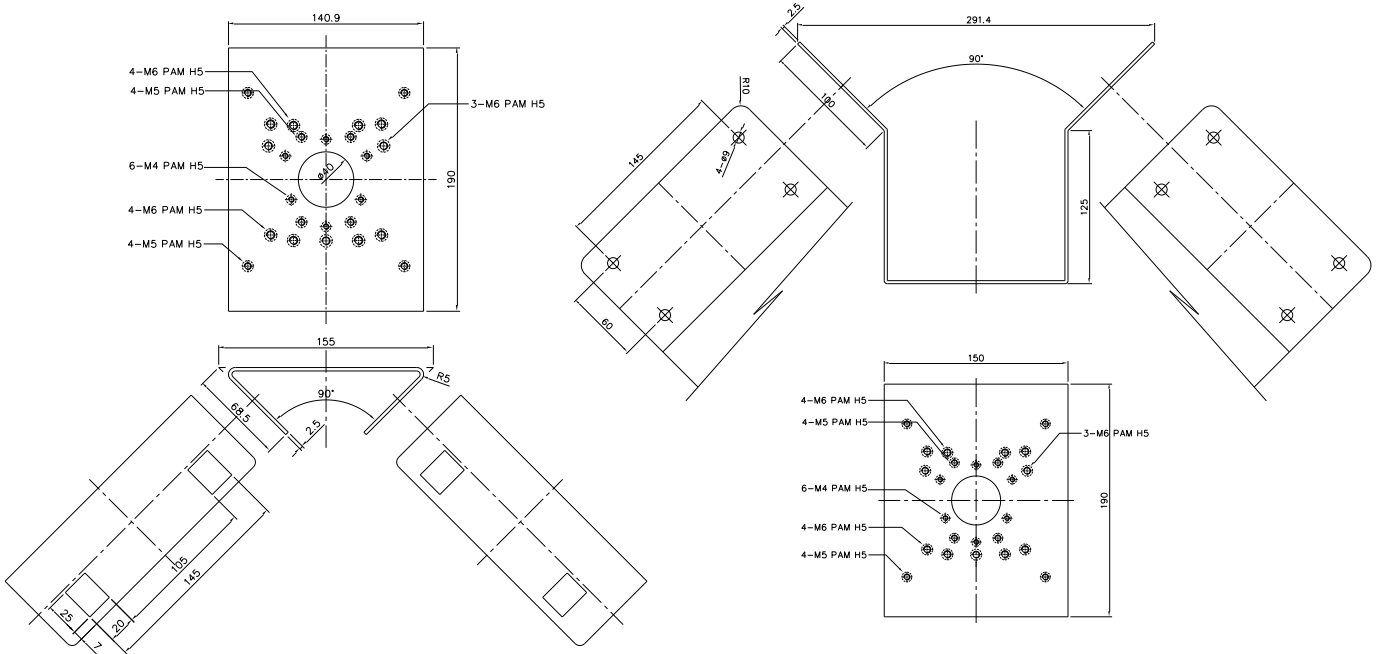


## Dimensions

(Unit: mm)



## Accessories

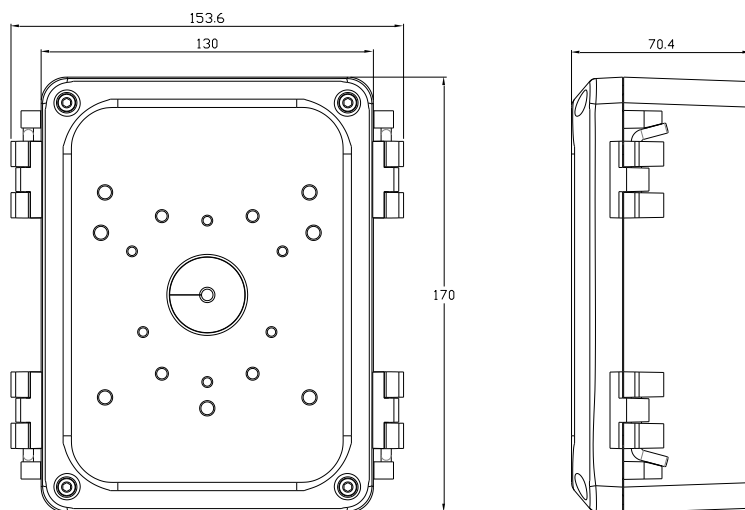


### Pole Mount Adaptor

Model: PMA-U100  
Weight: 2,28Kg (5.0lbs)

### Corner Mount Adaptor

Model: CMA-U100  
Weight: 946g (2.1lbs)



### Junction Box

Model: JBK-U100  
Weight: 1.02Kg (2.2lbs)