



SECURITY PRODUCT MATRIX

TRIED, TESTED AND TRUSTED AROUND THE WORLD

FLIR SECURITY SOLUTIONS

From industry-leading thermal and visible security cameras to advanced analytics, FLIR professional security products provide unparalleled detection in all lighting conditions.

Fixed Thermal _____	p. 3
Multispectral PTZ _____	p. 4 - 5
Radar _____	p. 6
VMS / PSIM _____	p. 7
Visible _____	p. 8 - 9
IOI Encoders _____	p. 10
Servers / Storage / Workstations _____	p. 11



FIXED THERMAL



	F-Series ID	FH-ID and FH-R	FC-AI and FC-AI-R	FC-ID and FC-O	FB-ID	DH-390 Dome
Description	Fixed Thermal Security Camera with Onboard Analytics	Multispectral Fixed Camera for Perimeter Security	Fixed Thermal AI Analytics Camera	Fixed IP Thermal Camera	Fixed IP Thermal Camera	Multi-Spectral Intrusion Solution
Thermal Sensor	Uncooled sun-safe VOx microbolometer	Uncooled sun-safe VOx microbolometer	Uncooled sun-safe VOx microbolometer	Uncooled sun-safe VOx microbolometer	Uncooled sun-safe VOx microbolometer	2x Lepton® 3.5 LWIR micro thermal camera module
Thermal Sensitivity (NETD)	<35 mK	<25 mK	<35 mK	<35 mK	<50 mK	<50 mK
Thermal FOV	VGA 5 models 8°–44° (13 mm–75 mm)	13°–69° QVGA, 3 models (9 mm–25 mm) 8°–69° VGA, 7 models (9 mm–75 mm)	FC-AI: 8.6° × 6.6° to 90° × 69° FC-AI-R: 17° × 14° to 69° × 56°	4°–69° QVGA, 9 models (9 mm–75 mm) 8°–90° VGA, 8 models (7.5 mm–75 mm)	9°–93° QVGA, 5 models (3.7 mm–24 mm) 18°–95° VGA, 4 models (4.9 mm–24 mm)	2x Lepton 3.5 HFOV 57° each Min. stitched HFOV 90°
Wide Dynamic Range Thermal	Yes	Yes	Yes	Yes	Yes	Yes
Resolution	VGA (640 × 480)	VGA (640 × 512)	VGA (640 × 512)	VGA (640 × 480), QVGA (320 × 240)	VGA (640 × 480), QVGA (320 × 240)	320 × 120 native
Video Outputs	IP & Analog	IP & Analog	IP & Analog	IP & Analog	IP & Analog	IP
IP Video	Dual stream H.264 & MJPEG	Dual stream H.264/H.265 or MJPEG for each sensor	Dual stream H.264, MPEG-4 & MJPEG	Dual stream H.264, MPEG-4 & MJPEG	Dual stream H.264 & MJPEG	Independent channels of streaming H.264 or M-JPEG
On-board Analytics	Region entrance/intrusion detection, Crossover/fence trespassing; Human and vehicle rules, Hand-off target to autonomous PTZ tracking, Tampering	Region entrance/intrusion detection, Crossover/fence trespassing; Human and vehicle rules, Tampering, Loitering, DNN classifier, Isotherms for Radiometry	Region entrance/intrusion detection, Crossover/fence trespassing; Human and vehicle rules, Tampering, Loitering, DNN classifier, Isotherms for Radiometry	Region entrance/intrusion detection, Crossover/fence trespassing; Human and vehicle rules, Hand-off target to PTZ tracking, Tampering (FC-ID model only)	Region entrance/intrusion detection, Crossover/fence trespassing; Human and vehicle rules, Hand-off target to autonomous PTZ tracking, Tampering	Person and vehicle object classification, Crossline detection, Object in region, Rule dependency/multi-rule trigger, Event notification via relay out, White light LED activation
Nexus Enabled	Yes	Yes	Yes	No	No	No
Visible Camera	No	4K 2160p (3840 × 2160)	No	No	No	2.1 MP (1920 × 1080), 3-9 mm, optical FOV 95° × 53°
ONVIF Conformance	Profile S	Profile S/G/T	Profile S/G/T	Profile S	Profile S	Profile S
Ingress Rating	IP67	IP67	IP66 (FC-AI only), IP67	IP67	IP66	IP66
Minimum Operating Temperature	-50°C to 70°C (-58°F to 158°F) continuous operation, -40°C to 70°C (-40°F to 158°F) cold start	-40°C to 70°C (-40°F to 158°F)	-40°C to 70°C (-40°F to 158°F) cold start, -50°C to 85°C (-58°F to 185°F) storage range	-50°C to 70°C (-58°F to 158°F) continuous operation, -40°C to 70°C (-40°F to 158°F) cold start	-40°C to 50°C (-40°F to 122°F) cold start	-40°C to 60°C (-40°F to 140°F) without LEDs enabled, 40°C max with LEDs
Anti-Ice/De-Ice	Yes	Yes	Yes	Yes	No	No
Power Inputs	24 VAC, 24 VDC	12 VDC, 24 VDC, 24 VAC, 802.3 bt	PoE+, 12 VDC, 24 VDC, 24 VAC(VA)	PoE, PoE+, 14–32 VAC, 11–44 VDC	12 VDC, 24 VAC, PoE	12 VDC, 24 VAC, PoE
NDA Compliant	Yes	Yes	Yes	Yes	Yes	Yes
Warranty	3 years on fixed cameras, 2 years on PTZ cameras, 10 years on thermal sensor					

MULTI-SPECTRAL PTZ



	Ranger HDC MS 800/1200	Ranger HRC MS (E/S/U/X)	Ranger HDC MR cooled	Ranger HDC MR uncooled
Description	High Definition Long Range Surveillance System	Long Range Pan-Tilt, EO and IR Multi-Sensor	High Definition Surveillance System	Uncooled High Definition Surveillance System
Thermal Camera				
Detector Type	MWIR indium antimonide (InSb)	MWIR: indium antimonide (InSb) or mercury cadmium telluride (MCT)	MWIR indium antimonide (InSb)	LWIR Microbolometer FPA
Horizontal Field of View (±7%)	2 available options: from 1.35° to 30° on HDC-800 MS; from 0.92° to 20.4° on HDC-1200 MS	4 available options: from narrow 2° to wide 25° on HRC-E; narrow 0.5° to wide 6.3° on HRC-X	2 available options: narrow 3.0° to wide 38.0° on HDC 350; narrow 1.9° to wide 24° HDC 550	From narrow 5.4° to wide 16.8°
Focal Length	HDC-800 MS: 36 mm–800 mm HDC-1200 MS: 55 mm–1.200 mm	4 available options: from 22 mm–275 mm lens on HRC-E; 88 mm–1100 mm lens on HRC-X	4.3 mm to 129 mm	Narrow lens: 129 mm Wide lens: 4.3 mm Two optical fields of view with seamlessly integrated digital zoom between wide FOV and NFOV. Digital zoom: 16x
Resolution	1280 × 720 pixels	640 × 480 pixels	1280 × 720 pixels	1024 × 576 pixels
Visible Camera				
Detector Type	2 available options 1/2" Color CCD, 1280 × 720 pixels 1/2" Color CMOS, 1920 × 1080 pixels	SR-TV NTSC 1/4" Color CCD, HD LR-TV 750 Type 1/1.8" Full HD CMOS, HD LR-TV 1000 Type 1/1.8" Full HD CMOS	1920 × 1080 HD Color TV camera	1920 × 1080 HD Color TV camera
Horizontal Field of View (±7%)	4 available options From 0.54° (0.27° with 2x extender) to 31.5° to 0.38° (0.19° with 2x extender) to 22.4°	3 available options From 1.7° to 57.8° on SR-TV to 0.19° to 10.5° ±7% on HD LR TV 1000 (with 2x Extender)	From narrow: 2.3° to wide 63.0°	From narrow: 2.3° to wide 63.0°
Focal Length	2 available options From 112 mm–750 mm on HDC-800 MS (25 mm–1500 mm with 2 extenders) From 16.7 mm–1000 mm on HDC-1000 MS (33.4 mm–2000 mm with 2x extender)	4 available options From 3.4 mm–122.4 mm lens on SR-TV to 33.4 mm–2000 mm (with 2x extender) on HD LR-TV 1000	4.3 mm–129 mm	4.3 mm–129 mm
Video	2x HD SDI, and h.264	NTSC or PAL composite video. Optional embedded encoders provide simultaneous H.264, IR + TV digital videos/HD LR-TV option: Full HD 1080p digital video (H.264)	HD-SDI video output format: 1920 × 1080p 29.97 YCbCr 4:2:2 according to SMPTE 274 M carried over SMPTE 292 M Ethernet video output format: H.264 carrying 1920 × 1080p 29.97	HD-SDI video output format: 1920 × 1080p 29.97 YCbCr 4:2:2 according to SMPTE 274 M carried over SMPTE 292 M Ethernet video output format: H.264 carrying 1920 × 1080p 29.97
Pan/Tilt Az Range; Az Velocity	nx 360°; 0.03°–100°/sec continuous	nx 360°; 0.03°–65°/sec continuous	nx 360°; 0.08°/s–120°/s	nx 360°; 0.08°/s–120°/s
Pan/Tilt El Range; El Velocity	±90°; 0.03°–100°/sec	±35°; 0.03°–30°/sec	-35°–90°; 0.08°/s–120°/s	-35°–90°; 0.08°/s–120°/s
Pan/Tilt Accuracy	±0.5 mrad	1 mrad	±0.5 mrad	±0.5 mrad
Pan/Tilt Resolution	0.2 mrad	0.1 mrad	≤0.05 mrad	≤0.05 mrad
Merlin ASX Turbulence Filter Option	Optionally available	No	Optionally available	Optionally available
Hardware Options	Laser Range Finder (LRF), Geo Positioning (GPS), Digital Magnetic Compass (DMC)	Laser Range Finder (LRF), Geo Positioning (GPS), Digital Magnetic Compass (DMC)	Laser Range Finder (LRF), Geo Positioning (GPS), Digital Magnetic Compass (DMC)	Laser Range Finder (LRF), Geo Positioning (GPS), Digital Magnetic Compass (DMC)
Power Input	+31 VDC (operates between 18-32 VDC)	28 V ±4 V	31 VDC (operates between 20–32 VDC)	31 VDC (operates between 20–32 VDC)
Warranty	Contact Your Sales Representative			

MULTI-SPECTRAL PTZ



	PT-HD	DX-Series	DM-Series
Description	HD Visible and Thermal Pan/Tilt	Multispectral PTZ Thermal Camera	Multispectral PTZ Thermal Camera
Thermal Sensor	Uncooled sun-safe VOx microbolometer	Uncooled sun-safe VOx microbolometer	Uncooled sun-safe VOx microbolometer
Thermal Sensitivity (NETD)	<35 mK	<50 mK	<50 mK
Thermal FOV	Continuous optical zoom model 6°–24° (26 mm–105 mm) 5 fix lens models 8° to 44° (13 to 75 mm)	6°–50° QVGA, 4 models (4.3 mm–36 mm) 8°–50° VGA, 4 models (8.7 mm–55 mm)	12°–92° QVGA, 4 models, 2.3 mm–18 mm 12°–95° VGA, 4 models 4.9 mm–36 mm
Wide Dynamic Range Thermal	Yes	Yes	Yes
Resolution	Thermal – VGA (640 × 480) Visible – Full HD 1080p	Thermal – QVGA (320 × 240), VGA (640 × 480) Visible – 4K (3840 × 2160)	Thermal – QVGA, VGA Visible – 4K
Pan Angle/Speed Tilt Angle/Speed	Continuous 360°, 0.1° to 60°/sec 90° to -90°, 0.1° to 30°/sec	Pan Angle/Speed Continuous 360°, 0.1°–90°/sec Tilt Angle/Speed -10° to 190°, 0.1°–60°/sec	Pan Angle Continuous 360° Tilt Angle 10° – 190°
Video Outputs	IP & Analog	IP	IP
IP Video	Dual stream H.264 & MJPEG for each sensor	Thermal: one channel of H.264 & M-JPEG Visible: two independent channels of H.264 & M-JPEG	Thermal: one channel of H.264 & M-JPEG Visible: two independent channels of H.264 & M-JPEG
On-board Analytics	No	No	No
Nexus Enabled	No	Yes	No
Visible Camera	Full HD 1080p 1/2.8 type Exmore R CMOS, 30x optical zoom with autofocus and 12x digital zoom FOV 63.7°–2.3°	4K 1/1.8 type CMOS, 31x Optical Zoom, 8x continuous E-zoom, HFOV: 61.8°–2.15°	1/2.3 type Exmor R CMOS, 2.8-12 mm, Optical FOV 110 to 36 3 options
ONVIF Conformance	Profile S	Profile S	Profile S
Ingress Rating	IP66	IP66	IP66
Minimum Operating Temperature	-40°C to 70°C (-40°F to 158°F) cold start	-40°C to 60°C (-40°F to 140°F) continuous operation	-40°C to 55°C (-40°F to 131°F)
Anti-Ice/De-Ice	Yes	No	No
Power Inputs	24 VAC, 24 VDC	24 VAC (±10%), Universal PoE Injector	24 VAC, Universal PoE Injector
NDA A Compliant	Yes	Yes	Yes
Warranty	3 years on fixed cameras, 2 years on PTZ cameras, 10 years on thermal sensor		

RADAR



	R20SS-3D	R20SS	R8SS-3D	R8SS, R6SS	R5D, R3D	R5	R3, R2, R1	R-290 / R-190
Description	Drone Surveillance Radar	High Resolution Perimeter Surveillance Radar	Drone Surveillance Radar	Man-Portable Perimeter Surveillance Radar	Perimeter Surveillance Switchable FMCW and Pulse Doppler Radars	High Resolution Perimeter Surveillance Radar	Perimeter Surveillance Radar	FCC-Compliant Commercial Ground Radar*
Application	Airspace & Ground	Coastal & Ground	Airspace & Ground	Ground & Portable	Ground	Ground	Ground	Ground
Radar Technology	FMCW/Doppler	FMCW/Doppler	FMCW/Doppler	FMCW/Doppler	FMCW/Doppler	FMCW	FMCW	FMCW
Operating Frequency	X-Band	X-Band	X-Band	X-band	Ka-Band	Ka-Band	Ka-Band	24.075-24.175 GHz (R-290); 24.000-24.250 GHz (R-190)
Target Type	Drone/Human/Vehicle	Human/Vehicle, Rubber Rafts/Boats	Drone/Human/Vehicle	Human/Vehicle	Human/Vehicle	Human/Vehicle	Human/Vehicle	Human/Vehicle
Scan Sector	90° (fixed)–360° with P/T or 4-panel option Vertical coverage 40°	90°, 360° with optional pan/tilt device	90° (fixed)–360° with P/T or 4-panel option Vertical coverage 40°	90°, 360° with optional pan/tilt device	360°	360°	360°	Pan range ±43°, tilt range 30°/-60°
Scan Rate	2 Hz or 4 Hz (90° sector)	2 Hz (90° sector)	2 Hz or 4 Hz (90° sector)	2 Hz or 4 Hz (90° sector)	3 rpm–60 rpm, continuous or sector	1 rev/sec (60 rpm)	1 rev/sec (60 rpm)	Up to 10 Hz
Accuracy	Elevation 2° 3 m range, 0.5° azimuth	3 m range, 0.2° azimuth	Elevation 3° 3 m range 0.8° azimuth	3 m range, 0.2° azimuth	2 m range, 0.4° azimuth	0.7 m range, 1° azimuth	0.3 m range, 1° azimuth	<1 m range, <1° azimuth
Minimum Detection Velocity (MDV)	0.1 m/s	0.1 m/s	0.1 m/s	0.1 m/s	0.1 m/s	0.1 m/s	0.1 m/s	0.2 m/s
Detection Range	5,000 m walking person Micro UAS 20 m–2,000 m Mini UAS 20 m–3,500 m Small UAS 20 m–6,700 m	Up to 12,000 m walking person Up to 12,000 m rubber raft (1 m ² RCS, ss 3)	10 m–3,000 m walking person MicroUAS 10 m–1,200 m MiniUAS 10 m–2,100 m Small UAS 10 m–4,000 m	R8SS: 10 m–8,000 m walking person R6SS: 10 m–6,000 m walking person	5 m–3,500 m walking person R5D: 5 m–5,500 m walking person	10 m–3,000 m walking person	R1: 5 m–700 m walking person R2: 5 m–1,400 m walking person R3: 5 m–1,900 m walking person	R-290: up to 200 m walking, up to 400 m vehicle R-190: up to 125 m walking, up to 300 m vehicle
Operating Temperature Range	-30°C to 60°C (-22°F to 140°F)	-30°C to 60°C (-22°F to 140°F)	-30°C to 60°C (-22°F to 140°F)	-30°C to 60°C (-22°F to 140°F)	-30°C to 60°C (-22°F to 140°F)	-30°C to 60°C (-22°F to 140°F)	-30°C to 65°C (-22°F to 149°F)	-40°C to 70°C (-40°F to 158°F) cold start
Nexus Enabled	No	No	No	No	No	No	No	Yes
Warranty	3 years							

*Compliance — FLIR R-290: United States Federal Communications Commission (FCC) guidelines
FLIR R-190: Conformité Européenne (CE)-compliant for Europe



	Latitude	Horizon	Meridian
Description	Network VMS	Enterprise-Grade NVR	Enterprise-Grade Compact NVR with Built-in POE for Small Enterprises
Hardware Options	Available with FLIR USS servers or as software only	Supplied with FLIR USS BSC Servers	Supplied on FLIR USS Edge appliance with built-in 8-port POE
Cameras	Effectively unlimited with multiple servers (see server specs) Guideline: up to 500 per high spec server	Up to 150 cameras	8, 16, or 24 cameras
Max Users	Unlimited (requires license)	Up to 10	Up to 4
Base License	Includes 5 users, Classic, Elite, and Enterprise base licenses available. Camera channel licenses purchased separately	Includes 10 users pre-licensed with 24 camera channels	Includes 4 users Pre-licensed with 8, 16, or 24 camera channels
Channel Licenses	Up to 70 cameras requires Classic base license Up to 250 requires Elite base license Above 250 requires Enterprise base license	Additional camera channels may be purchased	No additional camera channels may be purchased
Architecture	Multiple server configuration with failover and/or redundancy available	All-in-one	All-in-one
Client Applications	Control Center, Admin Center, Web Client (desktop and mobile), Health Monitor	Control Center, Admin Center, Web Client (desktop and mobile)	Control Center, Admin Center, Web Client (desktop and mobile)
Storage	Various FLIR USS servers available with up to 272 TB* Additional storage modules may be purchased separately	Up to 48 TB with RAID5 Up to 64 TB when RAID not configured	Up to 16 TB non-RAID



	Cameleon
Description	Decision Support Software
Hardware Options	Available with computer hardware or as software only, support for virtual environments
Supported Equipment	A wide range of perimeter protection equipment such as cameras, radars, fence detection, unattended ground sensors, Blue Force trackers, AIS, ADSB, sonar, access control systems, RF detection systems, UAS countermeasures and various video analytics for detection and tracking.
Licensing	Unlimited (workstations, devices and system connections require licensing)
Mapping	Extensive mapping support for both GIS and static based maps
Automation	Automation engine supporting workflow logic, map automation with zones, labels and lines
Advanced Device Control	Control of advanced operational features for devices (such as laser range finders, calibration, analytics, lens controls)
Architecture	Client/Server, Client/Multiple Server and Server/Server with hot standby backup capability
Client Applications	Client, Server, Video Management, Device Drivers, Archive Server, Process Manager, Update Manager
Storage	Various FLIR USS servers available with up to 272 TB (Additional storage modules may be purchased separately)

VISIBLE - BULLET / DOME



Description	Bullet				Dome			
	Quasar CB-6404-11-I/21-I	Quasar CB-6408-11-I/21-I	Ariel CB-3308 Series	Ariel CB-3304 Series	Quasar CM-6405-11-IA	Quasar CM-6408-11	Quasar CM-6405-11	Ariel CM-3308 Series
Description	Premium Bullet 4MP QHD	Premium Bullet 4K UHD	4K UHD Bullet	Quad HD Bullet	Premium Mini Dome AI 5 MP HD and 4K UHD	Premium Mini-Dome 4K UHD	Premium Mini-Dome 5MP HD	4K UHD Mini-Dome
Resolution	2560 × 1440 4 MP Quad HD	3840 × 2160 4K Ultra HD	4K 3840 × 2160	Quad HD 2560 × 1440 @30/25 fps	2688 x 1944	3840 × 2160 4K Ultra HD	2688 × 1944 5 MP HD	4K 3840 × 2160 @ 30/25 fps
Image Sensor	1/2.8" Progressive CMOS	1/1.8" Progressive CMOS	1/2.5" BSI CMOS	1/2.9" BSI CMOS	1/2.7-in CMOS	1/1.8" Progressive CMOS	1/2.7" Progressive CMOS	1/2.5" BSI CMOS
WDR Support	130 db on 15 fps 120 db on 30 fps	130 db on 15 fps 120 db on 30 fps	Shutter WDR	Shutter WDR	3 Shutter, 130dB	130 db on 15 fps 120 db on 30 fps	130 db on 15 fps 120 db on 30 fps	Shutter WDR
Focal Length/FOV (H)	CB-6404-11-I: Varifocal 2.7 mm–13.5 mm, 102°–32° HFOV, f/1.4, D/N, motorized autofocus/auto-iris, P-Iris lens CB-6404-21-I: Varifocal 9 mm–22mm, 39°–16.5° HFOV, f/1.6, D/N, motorized autofocus/auto-iris, P-Iris lens	CB-6408-11-I: Varifocal 3.6 mm–10 mm, 97°–46° HFOV, f/1.5, D/N, motorized autofocus/auto-iris, P-Iris lens CB-6408-21-I: Varifocal 9 mm–22mm, 62°–26° HFOV, f/1.6, D/N, motorized autofocus/auto-iris, P-Iris lens	Motorized Varifocal 3.4 mm–9 mm, 42°–104° HFOV	CB-3304-11-I: 2.8 mm–8.5 mm, 36°–103° HFOV CB-3304-21-I: Motorized Varifocal 9 mm–22 mm, 15°–34° HFOV	102.14° (Wide); 31.53° (Tele)	Varifocal 4.46 mm–11 mm, 40.4°–110.7° HFOV, 22.6°–57.1° VFOV, f/1.47–f/2.5, D/N, zoom, autofocus/auto-iris, P-Iris	Varifocal 2.7 mm–12 mm, 31.5°–102° HFOV, 22.7°–70.2° VFOV, f/1.6, D/N, motorized autofocus/auto-iris, P-Iris	Motorized Varifocal 3.4 mm–9 mm, 42°–104° HFOV
Built-in IR	CM-6408-11-I: 40 m (131 ft) CM-6408-21-I: 60 m (197 ft)	CM-6408-11-I: 40 m (131 ft) CM-6408-21-I: 60 m (197 ft)	Up to 30 m (98 ft)	Up to 30 m (98 ft)		Up to 40 m (131 ft) Sunshield: 28 m (91.8 ft)	Up to 40 m (131 ft) Sunshield: 28 m (91.8 ft)	Up to 30 m (98 ft)
ONVIF Conformance	Profile G/T/S	Profile G/T/S	Profile S/G/T	Profile S/G/T	Profile S/G/M/T	Profile G/T/S	Profile G/T/S	Profile S/G/T
NEXUS Enabled	No	No	No	No	No	No	No	No
Edge Storage Support SD/microSD card not included	MicroSDXC from 32 GB up to 1 TB, SD Bus Mode UHS I	MicroSDXC from 32 GB up to 1 TB, SD Bus Mode UHS I	microSDXC up to 128 GB (Class 10)	microSDXC up to 128 GB (Class 10)	microSD/microSDHC/microSDXC 8 GB to 1 TB (Class 10)	microSD/microSDHC / microSDXC 8 GB to 1 TB (Class 10)	microSD/microSDHC / microSDXC 8 GB to 1 TB (Class 10)	microSDXC up to 128 GB (Class 10)
Audio Support	Bi-Directional Audio 1 Audio Line Input, G.711 a/μ-law, AAC support + 1 Audio Line Output	Bi-Directional Audio 1 Audio Line Input, G.711 a/μ-law, AAC support + 1 Audio Line Output	Yes, full duplex	Yes, full duplex	Bi-directional Audio - 1 Audio Line Input, G.711/G.726/AAC/LPCM support + 1 Audio Line Output	Bi-Directional Audio 1 Audio Line Input, G.711 a/μ-law, AAC support + 1 Audio Line Output	Bi-Directional Audio 1 Audio Line Input, G.711 a/μ-law, AAC support + 1 Audio Line Output	Yes, full duplex
Ingress/Vandal Protection	IP67, IK10	IP67, IK10	IK10/IP67	IP67/IK7	IP66, IK10	IP66, IK10	IP66, IK10	IP67/IK7
Operating Temperature	-40°C to 60°C (-40°F to 140°F) cold start	-40°C to 60°C (-40°F to 140°F) cold start	-40°C to 50°C (-40°F to 122°F)	-40°C to 50°C (-40°F to 122°F)	-30°C to 60°C (-22°F to 140°F)	-40°C to 60°C (-40°F to 140°F) cold start	-40°C to 60°C (-40°F to 140°F) cold start	-40°C to 50°C (-40°F to 122°F)
Power Inputs	PoE+ IEEE802.3at, class 4 AC24 V, DC12 V, max 18 watt	PoE+ IEEE802.3at, class 4 AC24 V, DC12 V, max 18 watt	PoE IEEE802.3af, 12 watts	PoE IEEE802.3af, 12 watts	POE: 12.95W AC 24V: 13.2W; 24.20 VA DC 12V: 13.31W	PoE IEEE802.3af, class 0 AC24 V, DC12 V, max 12.43 watt	PoE IEEE802.3af, class 0 AC24 V, DC12 V, max 11.5 watt	PoE IEEE802.3af, 12 watts
NDA Compliant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Warranty	4 years				4 years			

VISIBLE - DOME / PTZ / SPECIALTY / FIXED



Description	Dome		PTZ			Specialty		Fixed
	Ariel CM-3304 Series	Ariel CM-3202 Series	Quasar CP-6408-21-I/ 31-I	Quasar CP-6302-31-P/-30-R	Quasar CP-6302-31-I	Ariel CC-3303	Quasar CM-6308-P1-I	Quasar CF-6308
Description	Quad HD Mini-Dome	Full HD Mini-Dome	4K IR PTZ	1080P FHD Dome PTZ Pendant/Recessed	1080P FHD Dome PTZ	3 MP Corner Camera	4x2K Panoramic	4K IP Fixed Box
Resolution	Quad HD 2560 × 1440 @ 30/25 fps	1080p 1920 × 1080 @ 30/25 fps	4K UHD 3840 × 2160	1080p 1920 × 1080 @ 30 fps	1080p 1920 × 1080 @ 30/25 fps	2048 × 1536	180 mode: 3840 × 1440 @ 30/25 fps 360 mode: 4K (4x 1080p) @ 30/25 fps	4K UHD 3840 × 2160 @ 30/25 fps
Image Sensor	1/2.9" BSI CMOS	1/2.8", DOL 2F CMOS	1/1.8" Progressive CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.5" BSI CMOS	1/2.8" BSI CMOS (x4 each) 5th imager as accessory	1/2.5" BSI CMOS
WDR Support	Shutter WDR	Shutter WDR	Shutter WDR, 130 dB	Shutter WDR, 120 dB	Shutter WDR, 120 dB	Digital WDR	Shutter WDR	Shutter WDR
Focal Length/FOV (H)	CM-3304-11-I : Motorized Varifocal 2.8 mm–8.5 mm, 36°–103° HFOV CM-3304-21-I : Motorized Varifocal 9 mm–22 mm, 15°–34° HFOV	Varifocal 2.7 mm–13.5 mm, 35°–105° HFOV	22x and 31x continuous zoom lens options, up to 8x digital zoom 22x zoom: 6.4 mm–138.5 mm, 64°–3° 31x zoom: 6.5 mm–202 mm, 61.8°–2.15°	30x continuous zoom lens: 4.3 mm–129 mm, 2.6°–68.7° HFOV	30x continuous zoom lens: 4.3 mm–129 mm, 2.6°–68.7° HFOV	Fixed 2.1 mm/120° HFOV × 90° VFOV	Fixed 3.6 mm, 92° HFOV (each) System: 360° or 180°	Refer to accessories guide
Built-in IR	Up to 30 m (98 ft)	Up to 30 m (98 ft)	Up to 200 m (656 ft)	N/A	Up to 200 m (656 ft)	Up to 10 m (33 ft)	Up to 25 m (82 ft)	Available with housing accessory
ONVIF Conformance	Profile S/G/T	Profile S/G/T	Profile S	Profile G, M, S, T	Profile G, M, S, T	Profile S/G/T	Profile S/G/T	Profile S/G/T
NEXUS Enabled	No	No	No	No	No	No	No	No
Edge Storage Support SD/microSD card not included	microSDXC up to 128 GB (Class 10)	microSDXC up to 256 GB (Class 10)	N/A	microSDXC up to 128 GB (Class 10)	microSDXC up to 128 GB (Class 10)	microSDXC up to 128 GB (Class 10)	microSDXC up to 128 GB (Class 10)	microSDXC up to 128 GB (Class 10)
Audio Support	Yes, full duplex	Yes, full duplex	Yes, full duplex	Yes, full duplex	Yes, full duplex	Yes, full duplex (built-in mic, no line-in)	Yes, full duplex	Yes, full duplex
Ingress/Vandal Protection	IP67, IK10	IP67, IK10	IP66 Overall, IK10 Upper	IP66, IK10	IP66 Overall, IK10 Upper/IK8 Lower	IP66, IK10	IP67, IK10	Available housing accessory IP66 and IK10 rating
Operating Temperature	-40°C to 50°C (-40°F to 122°F)	-30°C to 60°C (-22°F to 140°F)	-40°C to 60°C (-40°F to 140°F)	-45°C to 50°C (-49°F to 122°F)	-45°C to 60°C (-49°F to 140°F)	-40°C to 50°C (-40°F to 122°F)	-40°C to 50°C (-40°F to 122°F)	-20°C to 50°C (-4°F to 122°F) without enclosure -20°C to 60°C (-4°F to 140°F) with available enclosure (IR-off)
Power Inputs	PoE IEEE802.3af, 12 watts	12VDC POE IEEE802.3af class 3, 7.5 watts	Universal PoE++ 4 wire 60 W 24 VAC, 61 watts	Universal POE+ IEEE 802.3at, 25 W 24 VAC, 25.4 watts	Universal PoE++ 4 wire 60 W 24 VAC, 39 watts	PoE IEEE802.3af, 9.4 watts	24V AC PoE+ IEEE 802.3at, 25 watts	12 VDC, 24 VAC, PoE IEEE 802.3af, 7.5 watts
NDA Compliant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Warranty	4 years		3 years			4 years		4 years

IOI ENCODERS



	TRK-101 P PTZ	TRK-101
Description	TRK-101 with Support for PTZ Camera Detection on Presets & Auto-tracking	Video Encoder with Built-in Analytics-IP & Analog Input
Supported via IP	CP-6408-21-I/31-I, CP-4221-30X, PT-Series, A310pt, PT-Series HD, PT-602CZ HD	FLIR – F-Series, FC-Series S, FC-Series R, FC-Series ID, CM-6308-P1-I, CC-3103, CF-6308, 3rd Party – Axis, Sony, Bosch
IP Input	H.264 main profile, via RTSP	H.264 main profile, via RTSP
Channels	1	1
IP Video Streaming	H.264, MPEG-4 SP, MJPEG	H.264, MPEG-4 SP, MJPEG
On-board Analytics	Intrusion: Regional entrance, Tripwire, Fence trespassing, Unattended baggage, Object removal, Stopped vehicle, Loitering, Camera tampering, Autonomous object tracking	Intrusion: PTZ target hand-off, Regional entrance, Tripwire, Fence trespassing, Unattended baggage, Object removal, Stopped vehicle, Loitering, Camera tampering
Physical Connector	1x BNC 75 Ω	1x BNC 75 Ω
Frame Rate	MPEG-4 25/30 fps for all resolutions H.264 D1 half framerate, VGA 18 fps	MPEG-4 25/30 fps for all resolutions H.264 D1 half framerate, VGA 18 fps
Bit Rate	CBR (128 Kbps–4 Mbps), VBR	CBR (128 Kbps–4 Mbps), VBR
Network Video Streaming	RTP/RTSP	RTP/RTSP
Alarms/Commands	TCP/IP, HTTP	TCP/IP, HTTP
Operating Temperature	0°C to 60°C (32°F to 140°F)	0°C to 60°C (32°F to 140°F)
Alarms	In – 1, Out – 1	In – 1, Out – 1
Warranty	2 Years	2 Years

SERVICES / STORAGE / WORKSTATIONS



	USS Edge appliance	USS BSC 1U	USS SMB Elite 1U	USS Premium 2U	USS Enterprise 2U	USS Client Dual Monitor	USS Client Quad Monitor	USS Client Quad Monitor High Performance
Description	Compact IP Video Appliance with Built-in PoE	High Performance Server	High Performance Server	High Performance Scalable Server Optimized for United VMS	High Performance Scalable Server Optimized for United VMS	High Performance Client Workstation optimized for United VMS Monitoring	High Performance Client Workstation optimized for United VMS Monitoring	High Performance Client Workstation optimized for United VMS Monitoring
Form Factor	Small and compact form factor with 8-port POE switch	1U Rack Server	1U Rack Server	2U Rack Server	2U Rack Server	Workstation—small form factor	Workstation—small form factor	Workstation—small form factor
Operating System	Microsoft® Windows 10 IoT 2019 Enterprise 64-bit	Microsoft® Windows 10 IoT 2019 Enterprise 64-bit	Microsoft® Windows Server 2016/2019 64-bit	Microsoft® Windows Server 2019 Embedded	Microsoft® Windows Server 2016/2019 Embedded	Windows 10 IoT Enterprise LTSC 2021	Windows 10 IoT Enterprise LTSC 2021	Windows 10 IoT Enterprise LTSC 2021
Processor	2 TB and 4 TB: Alder Lake I3-12100E; 6 TB – 16 TB: Alder Lake I5-12500E	Intel® Core™ i3-8100 CPU @ 3.60 GHz	Enterprise Quad-core Intel® Xeon™ E-2136	Enterprise Eight-core Intel® Xeon™ Silver	Enterprise Eight-core Intel® Xeon™ Silver 4208	Intel Core i3-12100 processor 3.3 GHz to 4.3 GHz	Intel Core i5-12500 processor 3.0 GHz to 4.6 GHz	Intel Core i7-12700 processor 2.1 GHz to 4.9 GHz
I/O Ports	USB2.0 x2; USB3.2 x2; (front); USB3.2 Type-C x1 (rear); Alarm I/O: In x4, Relay out x4; HDMI 2.1b(4K@60) x2, DP x1 (4K@60); MIC-in, 3.5 mm x1, TRS phone jack; Line-out, 3.5 mm x1, TRS phone jack	2x PCIe slots, 2x USB 3.0, 1x USB 2.0, 1x iDRAC micro-USB 2.0	2x PCIe slots, 2x USB 3.0, 1x USB 2.0, 1x iDRAC micro-USB 2.0	1 PCIe slot Front: 1 x USB 2.0-compliant port, 1 x iDRAC Direct port (Micro-AB USB 2.0-compliant port) Rear: 1 x USB 2.0-compliant port, 1 x USB 3.0	2x PCIe slots, 2x USB 3.0, 2x USB 2.0, 1x iDRAC RJ45	4 x USB 2.0, 4 x USB 3.2 Gen 2, 3 x USB 3.2 Gen 1, line-out/line-in audio port, 1 x Universal audio port, 1 x Serial/PS2	4 x USB 2.0, 4 x USB 3.2 Gen 2, 3 x USB 3.2 Gen 1, line-out/line-in audio port, 1 x Universal audio port, 1 x Serial/PS2	4 x USB 2.0, 4 x USB 3.2 Gen 2, 3 x USB 3.2 Gen 1, line-out/line-in audio port, 1 x Universal audio port, 1 x Serial/PS2
Storage	2 TB, 4 TB, 8 TB, 12 TB, and 16 TB	Enterprise-class, hot-swap hard drives Maximum internal storage 64 TB RAID0 or 48 TB RAID5	Enterprise-class, hot-swap hard drives Maximum internal storage 64 TB RAID0 or 48 TB RAID5	Enterprise-class, hot-swap hard drives, Maximum internal storage 160TB	Enterprise-class, hot-swap hard drives, Maximum internal storage 288 TB - usable RAID5 272 TB / usable RAID6 / Hot-Spare 256 TB	1x M.2 256GB PCIe NVMe Class 35 Solid State Drive	1x M.2 256GB PCIe NVMe Class 35 Solid State Drive	1x M.2 256GB PCIe NVMe Class 35 Solid State Drive
Communications	Embedded dual port 1 Gb NIC Built-in POE: 8 x 10/100 RJ-45 ports	Embedded dual port 1 Gb NIC	Embedded dual port 1 Gb NIC	Embedded dual port 1 Gb NIC	Embedded quad port 1 Gb NIC	Integrated Gigabit Ethernet controller	Integrated Gigabit Ethernet controller	Integrated Gigabit Ethernet controller
Weight/Dimensions	1.6 kg (3.5 lb) 43.9 x 220.0 x 244.3 mm (1.72 x 8.66 x 9.62 in)	12.2 kg (26.89 lb.) 434.0 x 595.6 x 42.8 mm (17.08 x 23.44 x 1.69 in)	13.8 kg (30.42 lb.) 434.0 x 595.6 x 42.8 mm (17.08 x 23.44 x 1.69 in)	24.80 kg (54.67 lb) 86.8 x 434 x 675 mm (3.42 x 17.08 x 26.57 in)	33.1 kg (72.91 lb) 86.8 x 434.0 x 678.8 mm (3.42 x 17.08 x 26.72 in)	5.26 kg (11.57 lb)	5.26 kg (11.57 lb)	5.26 kg (11.57 lb)
Memory	Alder Lake I3-12100E - 16 GB; Alder Lake I5-12500E - 32 GB	16 GB 2666 MT/s DDR4	16 GB 2666 MT/s DDR4	16 GB RDIMM RAM	16 GB RDIMM RAM	16 GB (2x8GB) DDR5 4800 MHz, SO-DIMM, Non-ECC		
Recording Throughput	Alder Lake I3-12100E: 80 Mbps; Alder Lake I5-12500E: 150 Mbps	All-in-one: 150 Mbps Dedicated archiver: 200 Mbps	All-in-one: 200 Mbps Dedicated archiver: 300 Mbps	All-in-one: 450 Mbps Dedicated archiver: 550 Mbps	All-in-one: 500 Mbps Dedicated archiver: 650 Mbps	N/A	N/A	N/A
Power	100–240 VAC (Adapter 250 W, 56 V/4.46 A), PSE total consumption 120 W	Single, cabled power supply, 250 W	Single hot plug 350 W, 100–240 VAC 50/60 Hz (auto)	Dual, hot-plug, redundant power supply, 750 W, 100–240 VAC 50/60 Hz (auto)	Dual, hot-plug, redundant power supply, 750 W, 100–240 VAC 50/60 Hz (auto)	300 W, 100–240 VAC 50/60 Hz (auto)	300 W, 100–240 VAC 50/60 Hz (auto)	300 W, 100–240 VAC 50/60 Hz (auto)
Warranty	3 years, normal RMA	5-year Pro Support and Next Business Day On-site Service						

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