



SECURITY PRODUCT MATRIX

TRIED, TESTED AND TRUSTED AROUND THE WORLD

1.800.561.8187

www.**itm**.com

information@itm.com

FLIR SECURITY SOLUTIONS

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

Fixed Thermal _____	p. 3
Multispectral PTZ _____	p. 4-5
Visible _____	p. 6-7
Radiometric Cameras _____	p. 8
Radar _____	p. 9
Security Software _____	p. 10



FIXED THERMAL



	F-Series ID	FH-ID	FC-AI	FC-ID	FB-ID
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
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
Thermal Sensitivity (NETD)	<35 mK	<25 mK	<25 mK	<35 mK	<50 mK
Thermal FOV	8°–44° VGA, 5 models (13 mm–75 mm)	13°–69° QVGA, 3 models (9 mm–25 mm) 8°–69° VGA, 8 models (9 mm–100 mm)	8.6° × 6.6° to 90° × 69°	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)
Wide Dynamic Range Thermal	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)
Video Outputs	IP & Analog	IP & Analog	IP & Analog	IP & Analog	IP & Analog
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
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	Region entrance/intrusion detection, Crossover/fence trespassing; Human and vehicle rules, Tampering, Loitering, DNN classifier	Region entrance/intrusion detection, Crossover/fence trespassing; Human and vehicle rules, Hand-off target to PTZ tracking	Region entrance/intrusion detection, Crossover/fence trespassing; Human and vehicle rules, Hand-off target to autonomous PTZ tracking, Tampering
Nexus Enabled	Yes	Yes	Yes	No	No
Visible Camera	No	4K 2160p (3840 × 2160)	No	No	No
ONVIF Conformance	Profile S	Profile S, G, T	Profile S, G, T	Profile S	Profile S
Ingress Rating	IP67	IP67	IP66	IP67	IP66
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
Anti-Ice/De-Ice	Yes	Yes	Yes	Yes	No
Power Inputs	24 VAC, 24 VDC	12 VDC, 24 VDC, 24 VAC, 802.3bt	PoE+, 12 VDC, 24 VDC, 24 VAC (VA)	PoE, PoE+, 14–32 VAC, 11–44 VDC	12 VDC, 24 VAC, PoE
NDA Compliance	Yes	Yes	Yes	Yes	Yes
Warranty	3 years on fixed cameras, 2 years on PTZ cameras, 10 years on thermal sensor				

MULTI-SPECTRAL PTZ



	PT-SERIES AI SR	DX-Series	DM-695
Description	Visible 4K and Thermal Pan/Tilt Short Range Security Camera	Multispectral PTZ Thermal Camera	Multispectral PTZ Thermal Camera
Thermal Sensor	Uncooled thermal sensor with 4x optical zoom	Uncooled sun-safe VOx microbolometer	Uncooled sun-safe VOx microbolometer
Thermal Sensitivity (NETD)	<25 mK	<50 mK	<50 mK
Thermal FOV	6°–36° VGA, 7 models (13 mm–105 mm)	8°–50° VGA, 4 models (8.7 mm–55 mm)	95° VGA (2.8 mm)
Wide Dynamic Range Thermal	Yes	Yes	Yes
Resolution	Thermal: VGA (640 × 512)	Thermal: VGA (640 × 480) Visible: 4K (3840 × 2160)	Thermal: VGA Visible: 4K
Pan Angle, Speed	continuous 360°, 0.1° to 60°/sec	continuous 360°, 0.1°–90°/sec	continuous 360°
Tilt Angle, Speed	90° to -90°, 0.1° to 30°/sec	-10° to 190°, 0.1°–60°/sec	10° to 190°
Video Outputs	IP	IP	IP
IP Video	Two independent channels of H.265, H.264 & MJPEG for each sensor	Thermal: one channel of H.264 & MJPEG Visible: two independent channels of H.264 & MJPEG	Thermal: one channel of H.264 & MJPEG Visible: two independent channels of H.264 & MJPEG
On-board Analytics	Region entrance/intrusion detection, Crossover/fence trespassing; Human and vehicle rules, Tampering, Loitering, DNN classifier, Nuisance Alarm filtering, Masking, Autotracking, Geotracking	No	No
Nexus Enabled	Yes	Yes	No
Visible Camera	4K (2160p) 1/1.8" STARVIS II CMOS, 25x optical zoom, auto-focus and 12x digital zoom	4K 1/1.8" CMOS, 31x Optical Zoom, 8x continuous E-zoom, HFOV: 61.8°–2.15°	1/2.3" Exmor R CMOS, 2.8 mm, Optical FOV 110° × 59°
ONVIF Conformance	Profile S, G, T	Profile S	Profile S
Ingress Rating	IP66	IP66	IP66
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)
Integrated Hardware	Wiper	Wiper	None
Anti-Ice/De-Ice	MIL-STD-810F, Method 521.1; De-Icing	No	No
Power Inputs	24 VDC (21-30 VDC)	24 VAC (±10%), Universal PoE Injector	24 VAC, Universal PoE Injector
NDAA Compliance	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	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	640 × 480	1280 × 720	1024 × 576
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, 1/1.8" Full HD CMOS, HD LR-TV 1000, 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)	Narrow 2.3° to wide 63.0°	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 VDC (±4 VDC)	31 VDC (operates between 20–32 VDC)	31 VDC (operates between 20–32 VDC)
Warranty	Contact Your Sales Representative			

VISIBLE – BULLET / DOME



	Bullet		Dome		
	Quasar CB-6505-11-IA / CB-6505-21-IA	Quasar CB-6508-11-IA/ CB-6508-21-IA	Quasar CM-6405-11-IA	Quasar CM-6408-11-IA/ CM-6408-21-IA	Quasar CM-6412-H2-IA
Description	Premium Bullet 4 MP QHD	Premium Bullet 4K UHD	Premium Mini Dome AI 5 MP HD and 4K UHD	Premium Mini-Dome 4K UHD	Premium Hemispheric Mini Dome 12 MP camera with Edge AI analytics
Resolution	2560 × 1440 4 MP Quad HD	3840 × 2160 4K Ultra HD	2688 × 1944	3840 × 2160 4K Ultra HD	2976 × 2976 12 MP
Image Sensor	1/2.8" Progressive CMOS	1/1.8" Progressive CMOS	1/2.7" CMOS	1/1.8" Progressive CMOS	1/1.7"
WDR Support	130 dB on 15 fps 120 dB on 30 fps	130 dB on 15 fps 120 dB on 30 fps	3 Shutter, 130 dB	130 dB on 15 fps 120 dB on 30 fps	≥50 dB
Focal Length/FOV (H)	CB-6505-11-IA: Varifocal 2.8 mm–8 mm, 106°–38° HFOV, f/1.3, D/N, motorized autofocus/auto-iris, P-iris lens CB-6505-21-IA: Varifocal 8 mm–20 mm, 36°–15° HFOV, f/1.5, D/N, motorized autofocus/auto-iris, P-iris lens	CB-6508-11-IA: Varifocal 4 mm–9 mm, 117°–50.8° HFOV, f/1.5, D/N, motorized autofocus/auto-iris, P-iris lens CB-6508-21-IA: Varifocal 9 mm–20 mm, 50°–22.3° HFOV, f/1.6, D/N, motorized autofocus/auto-iris, P-iris lens	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	Fixed focal length: 1.65 mm F2.8 Field of view: 360°
Built-in IR	CB-6505-XX-IA: 60 m (200 ft)	CB-6508-XX-IA: 80 m (260 ft)	Yes	Up to 40 m (131 ft) Sunshield: 28 m (91.8 ft)	
ONVIF Conformance	Profile S, G, T	Profile S, G, T	Profile S, G, T, M	Profile S, G, T, M	Profile S, G, T, M, Q
Onboard Analytics	Intrusion detection, Human/ Vehicle detection, Tripwire, DNN classifier	Intrusion detection, Human/ Vehicle detection, Tripwire, DNN classifier	Person / Face / Vehicle, Intrusion-Region/ Tripwire, Object Counting, Loitering, Stopped Vehicle, Abandoned Object, Object Removal, Wrong Direction, Camera Sabotage, People Counting	Person / Face / Vehicle, Intrusion-Region/ Tripwire, Object Counting, Loitering, Stopped Vehicle, Abandoned Object, Object Removal, Wrong Direction, Camera Sabotage, People Counting	Person/vehicle, intrusion/ region/tripwire, object counting, loitering, stopped vehicle, abandoned object, object removal, wrong direction, camera sabotage
NEXUS Enabled	Yes	Yes	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	microSD/microSDHC/microSDXC 8 GB to 1 TB (Class 10)	microSD/microSDHC/microSDXC 8 GB to 1 TB (Class 10)	MicroSDXC up to 2 TB, SD Bus Mode UHS I
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	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	G.711/G.726/AAC/LPCM
Ingress/Vandal Protection	IP67, IK10	IP67, IK10	IP66, IK10	IP66, IK10	IP66, IK10
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	-30°C to 60°C (-22°F to 140°F)	-40°C to 60°C (-40°F to 140°F) cold start	-10°C to 55°C without heater -30°C to 55°C with heater
Power Inputs	PoE+ IEEE 802.3at, class 4, 24 VAC, 12 VDC, max 18 W	PoE+ IEEE 802.3at, class 4, 24 VAC, 12 VDC, max 18 W	PoE: 12.95 W, 24 VAC; 13.2 W, 24.20 VA, 12 VDC; 13.31 W	PoE IEEE 802.3af, class 0, 24 VAC, 12 VDC, max 12.43 W	PoE IEEE 802.3af: 9.12 W 12 VDC: 9.9 W
NDAA Compliance	Yes	Yes	Yes	Yes	Yes
Warranty	4 years		4 years		

VISIBLE – DOME / PTZ / SPECIALTY / FIXED



	Dome		PTZ			Specialty		Fixed
	Ariel CM-3505-11-I and CM-3508-11-I	Ariel CM-3202 Series	Quasar CP-6408-21-IA/ 31-IA	Quasar CP-6402-31-PA / CP-6402-30-RA	Quasar CP-6402-41-IA	Ariel CC-3405-01-I CC-3408-01-IA	Quasar CM-6308-P1-I	Quasar CF-6408-00-0A
Description	Quad HD Mini-Dome	Full HD Mini-Dome	Premium 4K IR PTZ (CP-6408-31-IA with integrated Wiper)	1080P FHD Dome PTZ Pendant/Recessed	1080P FHD Dome PTZ	5 MP and 8 MP Corner Cameras	4 × 2K Panoramic	4K Fixed Box AI
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	2592 × 1944 / 4000 × 3000	180 mode: 3840 × 1440 @ 30/25 fps, 360 mode: 4K (4x 1080p) @ 30/25 fps	320 × 240 (CIF) to 3864 × 2180 (4K)
Image Sensor	1/1.8" CMOS	1/2.8" DOL 2F CMOS	1/1.8" Progressive CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.7" / 1/2.3"	1/2.8" BSI CMOS (x4 each) 5th imager as accessory	1/1.8"
WDR Support	Shutter WDR	Shutter WDR	Shutter WDR, 130 dB	Shutter WDR, 120 dB	Shutter WDR, 120 dB	Digital WDR	Shutter WDR	Shutter WDR 130dB
Focal Length/FOV (H)	CM-3505-01-I Fixed lens: 4 mm 77° HFOV, F/2.0, D/N CM-3505-11-I Varifocal 2.7–13.5 mm, 101° ~ 30.4° HFOV, F/1.4, D/N, motorized, P-Iris CM-3508-11-I Varifocal 4–10 mm, 110.4° ~ 45° HFOV, F/1.6, D/N, motorized, P-Iris CM-3505-11-I Varifocal 2.7–13.5 mm, 101° ~ 30.4° HFOV, F/1.4, D/N, motorized, P-Iris	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: 6.9 mm–214.6 mm	30x continuous zoom lens: 4.3 mm–129 mm	40x continuous zoom lens: 4.3 mm–170 mm	2.1 mm, F/2.0, 139.1° HFOV × 101.65° VFOV / 2.8 mm, F2.2, 132.9° HFOV × 98.1° 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)	15 m (49.2 ft) / 10 m (32.80 ft)	Up to 25 m (82 ft)	Available with housing accessory
Onboard Analytics	Basic: line and area, human/vehicle, Object counting, Line crossing, Zone object counting, Intrusion detection, Loitering		Abandoned object, Intrusion detection, Camera sabotage, Wrong direction, Loitering, Object counting, Object removal, Stopped vehicle, Face detection, PTZ auto tracking	Abandoned object, Intrusion detection, Camera sabotage, Wrong direction, Loitering, Object counting, Object removal, Stopped vehicle, Face detection, PTZ auto tracking	Abandoned object, Intrusion detection, Camera sabotage, Wrong direction, Loitering, Object counting, Object removal, Stopped vehicle, Face detection, PTZ auto tracking	8 MP camera only - Abandoned Object, Intrusion Detection, Camera sabotage, Trip wire, Loitering, Object removal, Object counting, Stopped vehicle, Face detection	No	Person/Face/Vehicle Intrusion: Region/tripwire, Object counting, Loitering, Stopped vehicle, Face detection, Abandoned object, Object removal, Wrong direction-corridor use, Camera sabotage, People counting
ONVIF Conformance	Profile S, G, T, M	Profile S, G, T	Profile S, G, T, M	Profile S, G, T, M	Profile S, G, T, M	Profile S, G, T, M	Profile S, G, T	Profile S, G, T, M
NEXUS Enabled	No	No	Geotracking on CP-6408-31-I	No	No	No	No	No
Edge Storage Support SD/microSD card not included	micro SDXC up to 1 TB	microSDXC up to 256 GB (Class 10)	micro SD/micro SDHC/micro SDXC size up to 1 TB	micro SD/micro SDHC/micro SDXC size up to 1 TB	micro SD/micro SDHC/micro SDXC size up to 1 TB	micro SD/micro SDHC/micro SDXC size up to 1 TB	microSDXC up to 128 GB (Class 10)	micro SD/micro SDHC/micro SDXC size up to 1 TB
Audio Support	Yes, full duplex	Yes, full duplex	Yes, full duplex	Yes, full duplex	Yes, full duplex	Line in and Microphone built in, G.711/G.726/AAC/LPCM, Line out	Yes, full duplex	Yes, full duplex
Ingress/Vandal Protection	IP67, IK10	IP67, IK10	IP66, IK10	IP66, IK10	IP66I, IK10	IP66, IK10	IP67, IK10	IP66, IK10 (with optional accessory)
Operating Temperature	-40°C to 60°C (-40°F to 140°F) IR off	-30°C to 60°C (-22°F to 140°F)	-40°C to 60°C (-40°F to 140°F)	-25°C to 60°C (-13°F to 140°F) with heater	-40°C to 60°C (-40°F to 140°F) with heater	-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) no enclosure; -20°C to 60°C (-4°F to 140°F) with enclosure (IR-off)
Power Inputs	PoE IEEE 802.3af, Class 3	12 VDC PoE IEEE802.3af Class 3, 7.5 watts	PoE + IEEE802.3bt, max 51.00 W, 24 VAC, max 59.39 W, max 83.25 VA	PoE + IEEE 802.3at, max 25.5 W, 24 VAC, max 29.04 W, max 53.24 VA	PoE + IEEE802.3bt, max 51.00 W, 24 VAC, max 59.39 W, max 83.25 VA	PoE IEEE802.3af, 12.5 W	24V AC PoE+ IEEE 802.3at, 25 W	12 VDC, 24 VAC, PoE IEEE 802.3af, 12.95 W
NDA Compliance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Warranty	4 years		3 years			4 years		4 years

RADIOMETRIC CAMERAS



	FH-R	FH-Series R PTZ	FC-AI-R
Description	Multispectral Fixed Camera for Perimeter Security and for Surface Temperature Monitoring	Specialized Multi-spectral Pan-Tilt-Zoom Camera for Fire Detection and Monitoring of Surface Temperature Thresholds	Fixed Thermal Radiometric Camera for Intrusion Detection and Surface Temperature Monitoring
Thermal Sensor	Uncooled sun-safe VOx microbolometer	Long-life, uncooled VOx microbolometer	Uncooled sun-safe VOx microbolometer
Thermal Sensitivity (NETD)	<35 mK	<35 mK	<35 mK
Thermal FOV	13°–69° OVGA, 3 models (9 mm–25 mm) 17°–69° VGA, 4 models (9 mm–35 mm)	FH-669 R PTZ: 69° × 56° FH-644 R PTZ: 44° × 36° FH-625 R PTZ: 25° × 18° FH-617 R PTZ: 17° × 14°	17° × 14° to 69° × 56°
Wide Dynamic Range Thermal	Yes	Yes	Yes
Resolution	VGA (640 × 512)	VGA (640 × 512)	VGA (640 × 512)
Video Outputs	IP & Analog	IP	IP & Analog
IP Video	Dual stream H.264/H.265 or MJPEG for each sensor	H.264/H.265/MJPEG: four independent streams (2 visible, 2 thermal)	Dual stream H.264, MPEG-4 & MJPEG
On-board Analytics	Region entrance/intrusion detection, Crossover/fence trespassing; Human and vehicle rules, Tampering, Loitering, DNN classifier, Isotherms for Radiometry for Spots, Boxes and Polygons	Onboard radiometry delivers minimum, maximum, average and differential temperature measurement in user-defined spots, box and polygon shaped areas	Region entrance/intrusion detection, Crossover/fence trespassing; Human and vehicle rules, Tampering, Loitering, DNN classifier, Isotherms for Radiometry Spots and Boxes
Temperature Measurement	Measurement Accuracy Target below 100°C (212°F): ± 5°C (±9°F) accuracy Target below 150°C (302°F): ± 5% accuracy Target above 150°C (302°F): ± 15% accuracy *Measured at 25°C (77°F) ambient temperature. Error may be greater at extreme temperatures.	Measurement Accuracy Target below 100°C (212°F): ± 5°C (±9°F) accuracy Target below 150°C (302°F): ± 5% accuracy Target above 150°C (302°F): ± 15% accuracy *Measured at 25°C (77°F) ambient temperature. Error may be greater at extreme temperatures.	Measurement Accuracy Target below 100°C (212°F): ± 5°C (±9°F) accuracy Target below 150°C (302°F): ± 5% accuracy Target above 150°C (302°F): ± 15% accuracy *Measured at 25°C (77°F) ambient temperature. Error may be greater at extreme temperatures.
Nexus Enabled	Yes	Yes	Yes
Visible Camera	4K 2160p (3840 × 2160)	Full HD 1080p (1920 × 1080), 720p (1280 × 720), VGA (640 × 480)	No
ONVIF Conformance	Profile S, G, T	Profile S, G, T	Profile S, G, T
Object Temperature Range	High Gain Mode: 0°C to 160°C (32°F to 320°F) Low Gain Mode: 0°C to 380°C (32°F to 716°F)	High Gain Mode: 0°C to 160°C (32°F to 320°F) Low Gain Mode: 0°C to 380°C (32°F to 716°F)	High Gain Mode: 0°C to 160°C (32°F to 320°F) Low Gain Mode: 0°C to 380°C (32°F to 716°F)
Ingress Rating	IP67	IP66, IP67	IP66, IP67
Operating Temperature	-40°C to 70°C (-40°F to 158°F)	-35°C to 65°C (-31°F to 149°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
Anti-Ice/De-Ice	Yes	Yes	Yes
Power Inputs	12 VDC, 24 VDC, 24 VAC, 802.3bt	4 VAC (±10%), 24 VDC (±10%)	PoE+, 12 VDC, 24 VDC, 24 VAC (VA)
NDA Compliance	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-/CE-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 m² 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: FCC-compliant (Federal Communications Commission) for USA
FLIR R-190: CE-compliant (Conformité Européenne) for Europe

SECURITY SOFTWARE



	Latitude	Horizon	Meridian
Description	Security Edge Device Management and 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
Nexus Integrated	Yes	Yes	Yes



	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)

To find your local support number, visit:
flir.com/contactsupport



www.flir.com
NASDAQ: TDY

Equipment described herein may require US Government authorization for export purposes. Diversion contrary to US law is prohibited. Imagery for illustration purposes only. Specifications are subject to change without notice. All trademarks are property of their registered owners. ©2025 Teledyne FLIR, LLC. All rights reserved.
Revised 06/12/25 Security-Product-Matrix-LTR-25-0243-INS