



**THERMAL AND NEAR-IR ILLUMINATION CAMERAS FOR
LONG RANGE THREAT DETECTION AND ASSESSMENT**

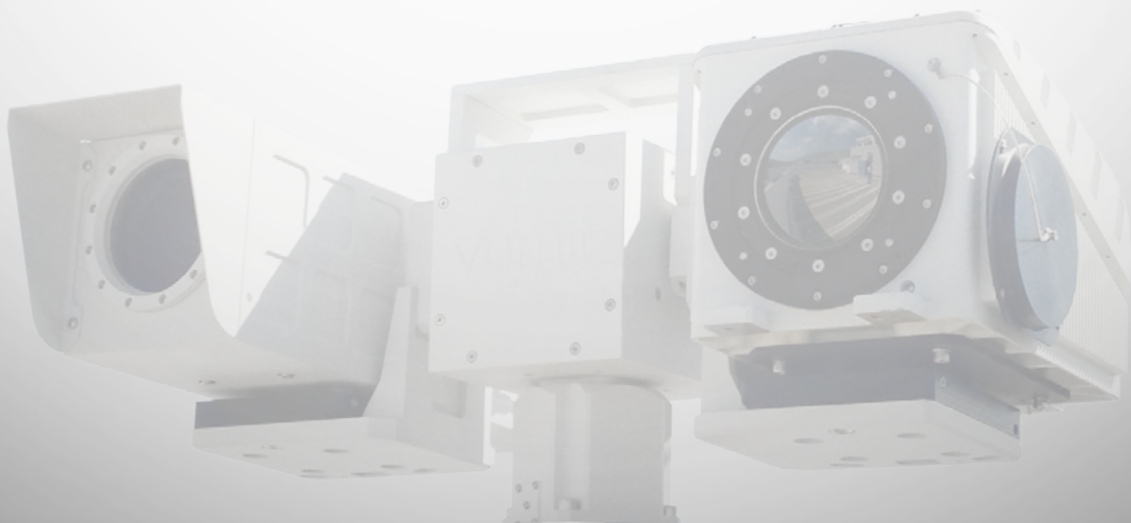
DETECT



RECOGNIZE



IDENTIFY





Vumii's high-quality, field-proven, zero-light surveillance products are embedded with more than 30 years of experience in developing night vision systems. Vumii products include a portfolio of camera systems that provide long range detection, recognition and identification night or day and consists of fixed and PTZ thermal camera systems, multi-sensor PTZ camera systems, and near-IR illuminated PTZ camera systems.

Thermal cameras passively detect the thermal energy emitted by all objects and materials to generate a greyscale video image based on the differentiation between the temperature of an active body and the background. Illuminating cameras actively generate their own near-IR illumination that is projected to and reflects off of a scene and back to the camera, much the same as how visible light is emitted by the sun and reflected to our eyes.

THERMAL CAMERA SYSTEMS

SII AT



- Athermalized Lenses
- Fire Detection Analytics
- Analog or IP

SII ML



- Advanced Lenses
- High Quality/Performance
- Analog or IP

SII XR



- Continuous Zoom Lenses
- Extremely Long Range
- Analog, IP, CameraLink

MULTI SENSOR CAMERA SYSTEMS

ACCURACII AT



- Athermalized Lenses
- Compact Design
- Simple Integration
- 24/7 Site Protection

ACCURACII ML



- Advanced Zoom Lenses
- High Quality/Performance
- Thermal Autofocus
- Fire Detection Analytics

ACCURACII XR



- Extreme Long Range
- High Quality/Performance
- Continuous Zoom Lenses
- Thermal Autofocus

ILLUMINATED CAMERA SYSTEMS

CLARITII



- LED Illumination beyond 600m
- Dedicated Day and Night Cameras
- Extreme Low Light Sensitivity

DISCOVERII

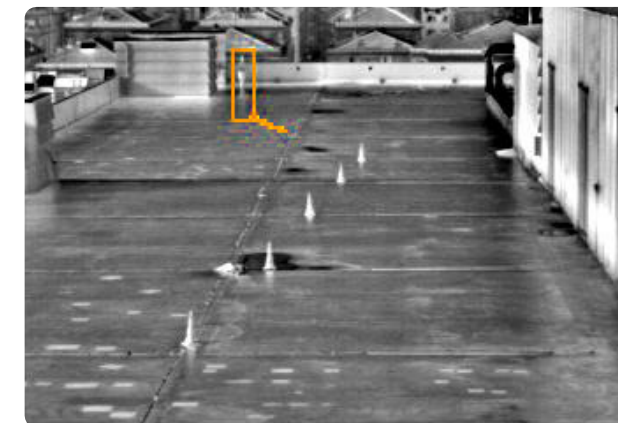


- Laser Illumination beyond 4km
- Dedicated Day and Night Cameras
- Thermal Add-On available

THREAT DETECTION

Fixed thermal cameras are ideal for 24/7 wide area threat detection tasks, especially when combined with video analytics.

- Wide area day/night observation
- Ideal for video analytics
- Can discern human vs. vehicle



THREAT RECOGNITION

Thermal and Color day imaging cameras with zoomable optics that are integrated with pan/tilt platforms excel at threat recognition and classification tasks.

- Verification of threat type
- Determine vehicle type
- Determine # of individual threats



THREAT IDENTIFICATION

Multi-sensor PTZ cameras with near-infrared illuminators excel at providing threat identification day and night; they can acquire prosecution level video quality at both short and long ranges.

- Determine friend vs. foe
- Extremely fine details in zero-light
- See objects held & read text
- See through glass





FEATURES AND BENEFITS



Fire Detection Ready

- Safety & Security**
 The Sii family of products is available with innovative image processing for **Fire and Hot Spot Detection** as well as provides enhanced contrast video for Video Analytics software
- Analog or IP, Fixed or PTZ**
 Available as a standard analog camera or with TCP/IP video and control on either a fixed or PTZ platform
- Versatile Video Options**
 30Hz or 9Hz video options for ease of export
- Low Power**
 Less than 4w using DC or PoE power
- Rugged Design**
 Designed and certified to IP66, hot, cold, dusty, and other harsh environments

AVAILABLE CONFIGURATIONS

Sii AT is available with a wide variety of camera and lens options including:

Single FOV Athermalized Lenses

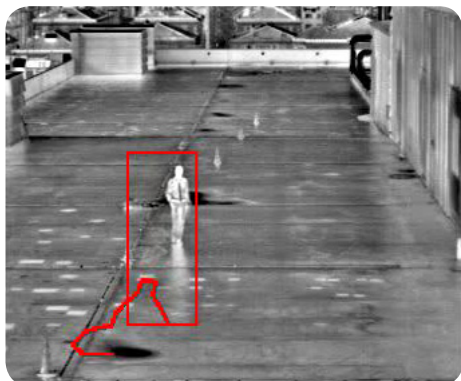
- 7.5mm*, 8.5mm, 14mm, 19mm, 35mm, 50mm, 60mm, 100mm

Thermal Engine / Resolution

- 17μ 640 x 480 NTSC/PAL
- 25μ 320 x 240 NTSC
- 25μ 384 x 288 PAL

Analog or IP, Fixed or PTZ

Embedded Fire Detection Algorithms

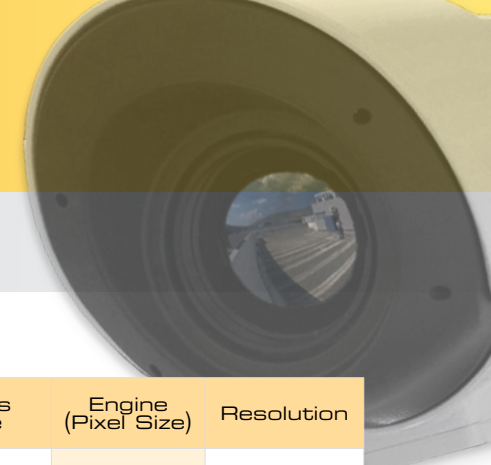


PART NUMBERS

	Part Number	Lens Size	Horizontal FOV NTSC (PAL)	Lens Type	Focus Type	Engine (Pixel Size)	Resolution				
ANALOG	CS7A25Q-0A020	7.5mm (F1.4)	63.4° (77.7°)	Athermalized	Fixed (adjustable)	25μ LWIR Uncooled	320x240 (NTSC) 384x288 (PAL)				
	CS8A25Q-0A020	8.5mm (F1.2)	53.9° (64.7°)								
	CS14A25Q-0A020	14mm (F1.2)	32.7° (39.3°)								
	CS19A25Q-0A020	19mm (F1.2)	24.4° (29.3°)								
	CS35A25Q-0A020	35mm (F1.2)	13.1° (15.7°)								
	CS50A25Q-0A020	50mm (F1.2)	9.2° (11.0°)								
	CS60A25Q-0A020	60mm (F1.2)	7.6° (9.2°)								
	ES100A17V-0A020	100mm (F1.6)	4.6° (5.5°)								
	CS8A17V-0A020	8.5mm (F1.2)	73.3° (73.3°)					Athermalized	Fixed (adjustable)	17μ LWIR Uncooled	640x480 (NTSC/PAL)
	CS14A17V-0A020	14mm (F1.2)	44.5° (44.5°)								
CS19A17V-0A020	19mm (F1.2)	33.2° (33.2°)									
CS35A17V-0A020	35mm (F1.2)	17.8° (17.8°)									
CS50A17V-0A020	50mm (F1.2)	12.5° (12.5°)									
CS60A17V-0A020	60mm (F1.2)	10.4° (10.4°)									
ES100A17V-0A020	100mm (F1.6)	6.2° (6.2°)									
FIRE CS8A17V-0A030	8.5mm (F1.2)	73.3° (73.3°)	FIRE								
FIRE CS19A17V-0A030	19mm (F1.2)	33.2° (33.2°)									
FIRE CS35A17V-0A030	35mm (F1.2)	17.8° (17.8°)									
FIRE CS60A17V-0A030	60mm (F1.2)	10.4° (10.4°)									
IP	CS7A25Q-0N020	7.5mm (F1.4)	63.4° (77.7°)	Athermalized	Fixed (adjustable)	25μ LWIR Uncooled	320x240 (NTSC) 384x288 (PAL)				
	CS8A25Q-0N020	8.5mm (F1.2)	53.9° (64.7°)								
	CS14A25Q-0N020	14mm (F1.2)	32.7° (39.3°)								
	CS19A25Q-0N020	19mm (F1.2)	24.4° (29.3°)								
	CS35A25Q-0N020	35mm (F1.2)	13.1° (15.7°)								
	CS50A25Q-0N020	50mm (F1.2)	9.2° (11.0°)								
	CS60A25Q-0N020	60mm (F1.2)	7.6° (9.2°)								
	ES100A25Q-0N020	100mm (F1.6)	4.6° (5.5°)								
	CS8A17V-0N020	8.5mm (F1.2)	73.3° (73.3°)					Athermalized	Fixed (adjustable)	17μ LWIR Uncooled	640x480 (NTSC/PAL)
	CS14A17V-0N020	14mm (F1.2)	44.5° (44.5°)								
CS19A17V-0N020	19mm (F1.2)	33.2° (33.2°)									
CS35A17V-0N020	35mm (F1.2)	17.8° (17.8°)									
CS50A17V-0N020	50mm (F1.2)	12.5° (12.5°)									
CS60A17V-0N020	60mm (F1.2)	10.4° (10.4°)									
ES100A17V-0N020	100mm (F1.6)	6.2° (6.2°)									
FIRE CS8A17V-0N030	8.5mm (F1.2)	73.3° (73.3°)	FIRE								
FIRE CS19A17V-0N030	19mm (F1.2)	33.2° (33.2°)									
FIRE CS35A17V-0N030	35mm (F1.2)	17.8° (17.8°)									
FIRE CS60A17V-0N030	60mm (F1.2)	10.4° (10.4°)									
PTZ (Analog)	CS7A25Q-PA020	7.5mm (F1.4)	63.4° (77.7°)	Athermalized	Fixed (adjustable)	25μ LWIR Uncooled	320x240 (NTSC) 384x288 (PAL)				
	CS8A25Q-PA020	8.5mm (F1.2)	53.9° (64.7°)								
	CS14A25Q-PA020	14mm (F1.2)	32.7° (39.3°)								
	CS19A25Q-PA020	19mm (F1.2)	24.4° (29.3°)								
	CS35A25Q-PA020	35mm (F1.2)	13.1° (15.7°)								
	CS50A25Q-PA020	50mm (F1.2)	9.2° (11.0°)								
	CS60A25Q-PA020	60mm (F1.2)	7.6° (9.2°)								
	ES100A25Q-PA020	100mm (F1.6)	4.6° (5.5°)								
	CS8A17V-PA020	8.5mm (F1.2)	73.3° (73.3°)					Athermalized	Fixed (adjustable)	17μ LWIR Uncooled	640x480 (NTSC/PAL)
	CS14A17V-PA020	14mm (F1.2)	44.5° (44.5°)								
CS19A17V-PA020	19mm (F1.2)	33.2° (33.2°)									
CS35A17V-PA020	35mm (F1.2)	17.8° (17.8°)									
CS50A17V-PA020	50mm (F1.2)	12.5° (12.5°)									
CS60A17V-PA020	60mm (F1.2)	10.4° (10.4°)									
ES100A17V-PA020	100mm (F1.6)	6.2° (6.2°)									

*Some countries may be subject to thermal camera export licensing requirements

*7.5mm lens available only on cameras with a 25μ thermal engine



FEATURES AND BENEFITS



 **Fire Detection Ready**

- Safety & Security**
 Innovative signal processing makes Fire and Hot Spot Detection possible as well as provides enhanced contrast video for Video Analytics software
- High Performance Engine and Optics**
 High sensitivity thermal engines with continuous zoom, dual field of view, autofocus and F1.0 motorized lenses up to 150mm provide high contrast video
- Versatile Video Options**
 30Hz or 9Hz video options for ease of export
- Simple Integration**
 Embedded Pelco-D protocol, and simple “set-it and forget-it” lens focus for scene optimization
- Rugged Design**
 Designed and certified to IP66, hot, cold, dusty, and other harsh environments

AVAILABLE CONFIGURATIONS

Sii ML is available with a wide variety of camera and lens options including:

Advanced Motorized Lenses

- 15-100mm Continuous Zoom
- 45/135mm Dual Field of View
- 25mm, 50mm, 75mm, 150mm - Fixed FOV F#1.0 Motorized Focus

Thermal Engine / Resolution

- 17μ 640 x 480 NTSC/PAL
- 25μ 320 x 240 NTSC
- 25μ 384 x 288 PAL

Analog or IP, Fixed or PTZ

Embedded Fire Detection Algorithms



PART NUMBERS

	Part Number	Lens Size	Horizontal FOV NTSC (PAL)	Lens Type	Focus Type	Engine (Pixel Size)	Resolution
ANALOG	ES25M25Q-0A020	25mm (F1.0)	18.3° (22.0°)	Fixed FOV	Motorized	25μ LWIR Uncooled	320x240 (NTSC) 384x288 (PAL)
	ES50M25Q-0A020	50mm (F1.0)	9.2° (11.0°)				
	ES75M25Q-0A020	75mm (F1.0)	6.1° (7.3°)				
	ES150M25Q-0A020	150mm (F1.0)	3.1° (3.7°)				
	ES100Z25Q-0A020	15-100mm (F1.1/F1.4)	30.8° - 4.6° (37.1° - 5.5°)	Continuous Zoom	Autofocus		
	ES135D25Q-0A020	45/135mm (F1.1/F1.6)	10.4° / 3.4° (12.6° / 4.1°)	Dual FOV	Autofocus		
	ES25M17V-0A020	25mm (F1.0)	25.0° (25.0°)	Fixed FOV	Motorized		
	ES50M17V-0A020	50mm (F1.0)	12.5° (12.5°)				
	ES75M17V-0A020	75mm (F1.0)	8.3° (8.3°)				
	ES150M17V-0A020	150mm (F1.0)	4.2° (4.2°)				
ES100Z17V-0A020	15-100mm (F1.1/F1.4)	42.2° - 6.2° (42.2° - 6.2°)	Continuous Zoom	Autofocus			
ES135D17V-0A020	45/135mm (F1.1/F1.6)	14.3° / 4.6° (14.3° / 4.6°)	Dual FOV	Autofocus			
FIRE	ES25M17V-0A030	25mm (F1.0)	25.0° (25.0°)	Fixed FOV	Motorized	17μ LWIR Uncooled	640x480 (NTSC/PAL)
	ES135D17V-0A030	45/135mm (F1.1/F1.6)	14.3° / 4.6° (14.3° / 4.6°)	Dual FOV	Autofocus		
IP	ES25M25Q-0N020	25mm (F1.0)	18.3° (22.0°)	Fixed FOV	Motorized	25μ LWIR Uncooled	320x240 (NTSC) 384x288 (PAL)
	ES50M25Q-0N020	50mm (F1.0)	9.2° (11.0°)				
	ES75M25Q-0N020	75mm (F1.0)	6.1° (7.3°)				
	ES100Z25Q-0N020	15-100mm (F1.1/F1.4)	30.8° - 4.6° (37.1° - 5.5°)				
	ES135D25Q-0N020	45/135mm (F1.1/F1.6)	10.4° / 3.4° (12.6° / 4.1°)	Dual FOV	Autofocus		
	ES25M17V-0N020	25mm (F1.0)	25.0° (25.0°)	Fixed FOV	Motorized		
	ES50M17V-0N020	50mm (F1.0)	12.5° (12.5°)				
	ES75M17V-0N020	75mm (F1.0)	8.3° (8.3°)				
	ES150M17V-0N020	150mm (F1.0)	4.2° (4.2°)				
	ES100Z17V-0N020	15-100mm (F1.1/F1.4)	42.2° - 6.2° (42.2° - 6.2°)	Continuous Zoom	Autofocus		
ES135D17V-0N020	45/135mm (F1.1/F1.6)	14.3° / 4.6° (14.3° / 4.6°)	Dual FOV	Autofocus			
FIRE	ES25M17V-0N030	25mm (F1.0)	25.0° (25.0°)	Fixed FOV	Motorized	17μ LWIR Uncooled	640x480 (NTSC/PAL)
	ES135D17V-0N030	45/135mm (F1.1/F1.6)	14.3° / 4.6° (14.3° / 4.6°)	Dual FOV	Autofocus		
PTZ (Analog)	ES25M25Q-PA020	25mm (F1.0)	18.3° (22.0°)	Fixed FOV	Motorized	25μ LWIR Uncooled	320x240 (NTSC) 384x288 (PAL)
	ES50M25Q-PA020	50mm (F1.0)	9.2° (11.0°)				
	ES75M25Q-PA020	75mm (F1.0)	6.1° (7.3°)				
	ES100Z25Q-PA020	15-100mm (F1.1/F1.4)	30.8° - 4.6° (37.1° - 5.5°)				
	ES135D25Q-PA020	45/135mm (F1.1/F1.6)	10.4° / 3.4° (12.6° / 4.1°)	Dual FOV	Autofocus		
	ES25M17V-PA020	25mm (F1.0)	25.0° (25.0°)	Fixed FOV	Motorized		
	ES50M17V-PA020	50mm (F1.0)	12.5° (12.5°)				
	ES75M17V-PA020	75mm (F1.0)	8.3° (8.3°)				
	ES150M17V-PA020	150mm (F1.0)	4.2° (4.2°)				
	ES100Z17V-PA020	15-100mm (F1.1/F1.4)	42.2° - 6.2° (42.2° - 6.2°)	Continuous Zoom	Autofocus		
ES135D17V-PA020	45/135mm (F1.1/F1.6)	14.3° / 4.6° (14.3° / 4.6°)	Dual FOV	Autofocus			

*Some countries may be subject to thermal camera export licensing requirements

FEATURES AND BENEFITS



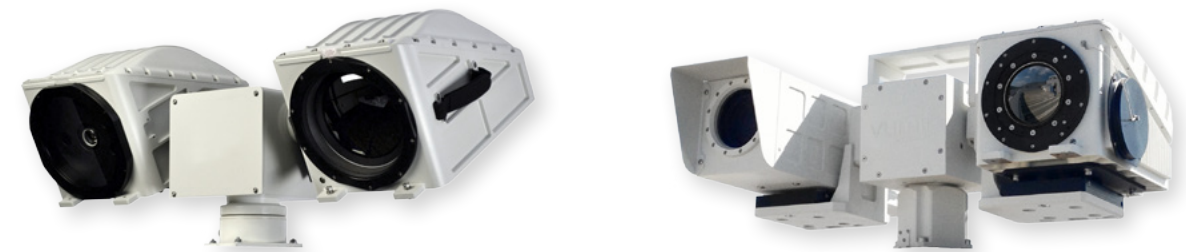
- Advanced Imaging**
 Proprietary image processing and autofocus algorithms provide industry leading thermal image quality
- Innovative Uncooled Continuous Zoom**
 Sii XR is available with an uncooled configuration using an F#1.5 25-225mm continuous zoom thermal lens with Autofocus technology
- Long Range Cooled Continuous Zoom**
 Continuous zoom lenses with focal lengths up to 700mm provide detection performance beyond 20 kilometers (12 miles)
- Rugged Design**
 Designed and certified to IP66 for operation in hot, cold, dusty, and other harsh environments
- IP, analog and CameraLink****
 Cooled versions of Sii XR have the option to use any of the three: IP, analog, and CameraLink out

PART NUMBERS

ANALOG	Part Number	Lens Size	Horizontal FOV	Engine (Pixel Size)	Frame Rate	Resolution	Video Types	Lens Type
	ES225Z17V-0A020	25 - 225mm (F1.5)	24.5° - 2.77°	17μ LWIR Uncooled	30Hz	640 x 480	Analog	Continuous Zoom
	ES275Z15V-0A020	19 - 275mm (F5.5)	29.8° - 2.0°	15μ MWIR Cooled	30Hz	640 x 512	Analog IP CameraLink	
	ES300Z15V-0A020	15 - 300mm (F4.0)	35.1° - 1.8°					
	ES420Z15V-0A020	21 - 420mm (F4.0)	25.1° - 1.3°					
	ES700Z15V-0A020	48.5 - 700mm (F5.5)	11.9° - 0.8°					

SII XR - IDEAL FOR OEM INTEGRATION

Sii XR is designed to be used in rugged applications as part of an array of sensors. Sii XR integrates quickly and easily using Pelco-D protocol or the available SDK. Sii XR is available on the Accuracii XR line of products and has successfully been integrated into camera systems by other third party system manufacturers.



AVAILABLE CONFIGURATIONS

Sii XR is available with a wide variety of camera and lens options including:

Uncooled Continuous Zoom Lenses

- 25 - 225mm

Cooled Continuous Zoom Lenses

- 19 - 275mm
- 15 - 300mm
- 21 - 420mm
- 48.5 - 700mm

Thermal Engine / Resolution

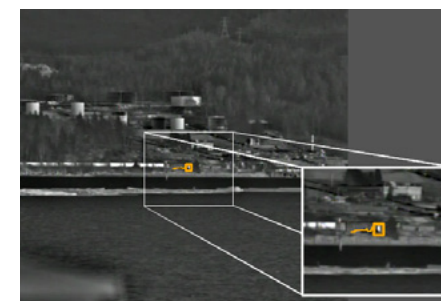
- UnCooled LWIR 17μ 640 x 480
- Cooled MWIR 15μ 640 x 512

Embedded Autofocus

IP and Analog**
 CameraLink 14bit output**



APPLICATION HIGHLIGHT: LONG RANGE ANALYTICS



Video analytics partners are using Sii XR in combination with their advanced video analytics software to accomplish long range threat detection. Using geo-spatial analysis these systems are able to provide the threat distance, elevation and lat/long coordinates at a stand-off distance that allows security teams to mount their response far before the threat poses an imminent danger to site personnel and infrastructure.

*Some countries may be subject to thermal camera export licensing requirements

**These features available in the cooled Sii XR models only

FEATURES AND BENEFITS



- Dual Channel System for 24/7 Operation**
 Detect and assess threats using both the color day CCD channel and the day / night thermal channel.
- Dual Output Video**
 View or record both the color CCD and the thermal video channels at the same time.
- Simple Integration**
 Pelco D protocol control and scene awareness software for easy integration and ease-of-use.
- Rugged Design**
 Designed and certified to IP66, hot, cold, dusty, and other harsh environments



PART NUMBERS

ACCURACII AT	Part Number	Thermal Lens	Thermal HFOV	Thermal Engine	Thermal Lens Type	Day Camera	Day Lens
NTSC	AC19A25Q-PAN00	19mm	24.4°	25μ 320 x 240	Fixed FOV Athermalized Fixed Focus	Color	Continuous Zoom 3.3 - 119mm HFOV 60.2° - 1.8°
	AC35Z25Q-PAN00	35mm	13.1°				
	AC60Z25Q-PAN00	60mm	7.6°				
	AC100Z25Q-PAN00	100mm	4.6°	25μ 384 x 288			
	AC19A25Q-PAP00	19mm	29.3°				
	AC35Z25Q-PAP00	35mm	15.7°				
PAL	AC60Z25Q-PAP00	60mm	9.2°	17μ 640 x 480	Fixed FOV Athermalized Fixed Focus	Color	Continuous Zoom 3.3 - 119mm HFOV 60.2° - 1.8°
	AC100Z25Q-PAP00	100mm	5.5°				
	AC19A17V-PAN00	19mm	33.2°				
	AC35Z17V-PAN00	35mm	17.8°	17μ 640 x 480			
	AC60Z17V-PAN00	60mm	10.4°				
	AC100Z17V-PAN00	100mm	6.2°				
PAL	AC19A17V-PAP00	19mm	33.2°	17μ 640 x 480	Fixed FOV Athermalized Fixed Focus	Color	Continuous Zoom 3.3 - 119mm HFOV 60.2° - 1.8°
	AC35Z17V-PAP00	35mm	17.8°				
	AC60Z17V-PAP00	60mm	10.4°				
	AC100Z17V-PAP00	100mm	6.2°				

AVAILABLE CONFIGURATIONS

Accuracii AT is available with a wide variety of camera and lens options including:

Thermal Camera

- Uncooled LWIR 17μ 640 x 480 NTSC/PAL
- Uncooled LWIR 25μ 320 x 240 NTSC
- Uncooled LWIR 25μ 384 x 288 PAL

Thermal Lens (Athermalized)

- 19mm
- 35mm
- 60mm
- 100mm

Day Camera

- Vibrant Day Color CCD

Day Camera Lens

- 3.3 - 119mm Continuous Zoom



APPLICATION HIGHLIGHT: NUCLEAR PROTECTION



Accuracii camera systems are being used at nuclear power stations in Hungary in order to provide full 24/7 site security. Since it is nearly impossible to avoid detection, Accuracii's thermal imaging camera provides security personnel with a high level of confidence that threats will be detected before they become a security risk to the facility.

APPLICATION HIGHLIGHT: AIRPORT OPERATIONS



In several European airports airport security officials use Accuracii camera systems to monitor runway operations and ensure that the airport perimeter remains secure at all hours of operation. The Accuracii dual channel system provides assurance that airport operations run smoothly and that security threats are recognized and identified before they become a major issue to flight operations.

*Some countries may be subject to thermal camera export licensing requirements

FEATURES AND BENEFITS



Fire Detection Ready

- Advanced Zoom Lenses**
 Dual field of view and continuous zoom thermal lenses allow for wide area scene awareness or close-up threat assessment
- Dual Output Video**
 View both video channels at the same time.
- Safety and Security**
 Use the embedded **fire detection algorithm** for an added layer of functionality and site safety.
- Simple Integration**
 Pelco D protocol control and scene awareness software for easy integration and ease-of-use.
- Rugged Design**
 Designed and certified to IP66, hot, cold, dusty, and other harsh environments

PART NUMBERS

ACCURACII ML		Part Number	Thermal Lens HFOV	Thermal Engine	Thermal Resolution	Day Camera Day Lens	System Options			
15-100 CZ	NTSC	AC100Z25Q-PAN01	Continuous Zoom 15-100mm Autofocus 30.8° - 4.6°	Uncooled 25µ LWIR	320 x 240	Continuous Zoom	None			
		AC100Z25Q-PAN10					LRF			
		AC100Z25Q-PAN20					GPS			
		PAL	AC100Z25Q-PAN30			LRF & GPS				
			AC100Z25Q-PAP01			None				
			AC100Z25Q-PAP10			LRF				
	PAL	AC100Z25Q-PAP20	Continuous Zoom 15-100mm Autofocus 37.1° - 5.5°	Uncooled 17µ LWIR	640 x 480	HFOV 60.2° - 1.8°	GPS			
		AC100Z25Q-PAP30					LRF & GPS			
		AC100Z17V-PAN01					None			
		NTSC	AC100Z17V-PAN10			Continuous Zoom 15-100mm Autofocus 42.2° - 6.2°	Uncooled 17µ LWIR	640 x 480	Continuous Zoom	LRF
			AC100Z17V-PAN20							GPS
			AC100Z17V-PAN30							LRF & GPS
PAL	AC100Z17V-PAP01	Continuous Zoom 15-100mm Autofocus 10.4° / 3.4°	Uncooled 25µ LWIR	320 x 240	Continuous Zoom	None				
	AC100Z17V-PAP10					LRF				
	AC100Z17V-PAP20					GPS				
	NTSC	AC100Z17V-PAP30			Dual Field of View 45 / 135mm Autofocus 12.6° / 4.1°	Uncooled 17µ LWIR	640 x 480	HFOV 60.2° - 1.8°	LRF & GPS	
		AC135D25Q-PAN01							None	
		AC135D25Q-PAN10							LRF	
PAL	AC135D25Q-PAN20	Dual Field of View 45 / 135mm Autofocus 14.3° / 4.6°	Uncooled 17µ LWIR	640 x 480	Continuous Zoom			GPS		
	AC135D25Q-PAN30							LRF & GPS		
	AC135D25Q-PAP01							None		
	NTSC	AC135D25Q-PAP10			Dual Field of View 45 / 135mm Autofocus 14.3° / 4.6°	Uncooled 17µ LWIR	640 x 480	HFOV 60.2° - 1.8°	LRF	
		AC135D25Q-PAP20							GPS	
		AC135D25Q-PAP30							LRF & GPS	
PAL	AC135D17V-PAN01	Dual Field of View 45 / 135mm Autofocus 14.3° / 4.6°	Uncooled 17µ LWIR	640 x 480	Continuous Zoom			None		
	AC135D17V-PAN10							LRF		
	AC135D17V-PAN20							GPS		
	NTSC	AC135D17V-PAN30			Dual Field of View 45 / 135mm Autofocus 14.3° / 4.6°	Uncooled 17µ LWIR	640 x 480	HFOV 60.2° - 1.8°	LRF & GPS	
		AC135D17V-PAP01							None	
		AC135D17V-PAP10							LRF	
PAL	AC135D17V-PAP20	Dual Field of View 45 / 135mm Autofocus 14.3° / 4.6°	Uncooled 17µ LWIR	640 x 480	HFOV 60.2° - 1.8°			GPS		
	AC135D17V-PAP30							LRF & GPS		
	AC135D17V-PAN01							None		
	NTSC	AC135D17V-PAN10			Dual Field of View 45 / 135mm Autofocus 14.3° / 4.6°	Uncooled 17µ LWIR	640 x 480	HFOV 60.2° - 1.8°	LRF	
		AC135D17V-PAN20							GPS	
		AC135D17V-PAN30							LRF & GPS	
PAL	AC135D17V-PAP01	Dual Field of View 45 / 135mm Autofocus 14.3° / 4.6°	Uncooled 17µ LWIR	640 x 480	HFOV 60.2° - 1.8°			None		
	AC135D17V-PAP10							LRF		
	AC135D17V-PAP20							GPS		
	NTSC	AC135D17V-PAP30			Dual Field of View 45 / 135mm Autofocus 14.3° / 4.6°	Uncooled 17µ LWIR	640 x 480	HFOV 60.2° - 1.8°	LRF & GPS	
		AC135D17V-PAN01							None	
		AC135D17V-PAN10							LRF	

AVAILABLE CONFIGURATIONS

Accuracii ML is available with a wide variety options including:

Thermal Engine / Resolution

- Uncooled LWIR 17µ 640 x 480 NTSC/PAL
- Uncooled LWIR 25µ 320 x 240 NTSC
- Uncooled LWIR 25µ 384 x 288 PAL

Continuous Zoom Lens

- 15 - 100mm

Dual Field of View Lens

- 45 / 135mm

Color Day Camera

- 3.3 - 119mm

Additional Options

Laser Range Finder

GPS

Embedded Autofocus

Embedded Fire Detection (optional)



FIRE DETECTION PART NUMBERS

FIRE		Part Number	Thermal Lens HFOV	Thermal Engine	Thermal Resolution	Day Camera Day Lens	System Options
45/135 DFOV	PAL	AC135D17V-PAN03	Dual Field of View 45 / 135mm Autofocus 14.3° / 4.6°	Uncooled 17µ LWIR	640 x 480	Continuous Zoom	Fire Detection
		AC135D17V-PAN13					LRF and Fire Detection
		AC135D17V-PAN23					GPS and Fire Detection
		AC135D17V-PAN33					LRF, GPS, and Fire Detection
		AC135D17V-PAP03					Fire Detection
		AC135D17V-PAP13					LRF and Fire Detection
	PAL	AC135D17V-PAP23	Dual Field of View 45 / 135mm Autofocus 14.3° / 4.6°	Uncooled 17µ LWIR	640 x 480	HFOV 60.2° - 1.8°	GPS and Fire Detection
		AC135D17V-PAP33					LRF, GPS, and Fire Detection

APPLICATION HIGHLIGHT: RECYCLING FACILITIES



Embedded **fire detection algorithms** in Sii and Accuracii cameras are saving lives and money at recycling facilities both Internationally and in the U.S. The cameras are able to pre-emptively detect hot spots and give early warning of fires initiating in the recycling “fluff” material. The cameras operate around-the-clock to provide both fire safety and site security for the facility when the plant is non operational.

*Some countries may be subject to thermal camera export licensing requirements

FEATURES AND BENEFITS

- Long Range Thermal Imagers**
 Extreme long range lenses provide surveillance beyond 20km
- Cooled or Uncooled Thermal Options**
 Uncooled thermal requires no routine maintenance. Cooled thermal provides high sensitivity ultra-long range performance
- Dual Channel / Dual Output Video**
 View both thermal and color CCD channels at the same time
- Simple Integration**
 Pelco D protocol control, common industry mounting options, and scene awareness software for easy integration and ease-of-use
- Rugged Design**
 Designed and certified to IP66, hot, cold, dusty, and other harsh environments



AVAILABLE CONFIGURATIONS

Accuracii XR is available with a wide variety of options including:

Uncooled Continuous Zoom

- 25 - 225mm Autofocus

Cooled Continuous Zoom

- 19 - 275mm Autofocus
- 15 - 300mm Autofocus
- 21 - 420mm Autofocus
- 48.5 - 700mm Autofocus

Thermal Engine / Resolution

- Uncooled LWIR 17μ 640 x 480
- Cooled MWIR 15μ 640 x 512

Color Day Continuous Zoom

- 3.3 - 119mm Autofocus
- 10 - 320mm Autofocus
- 15.6 - 500mm Autofocus

Additional Options

Laser Range Finder

GPS



PART NUMBERS

	Part Number	Day Camera Horizontal FOV	Thermal Camera Horizontal FOV	Lens Types	Focus Type	System Options
Uncooled	25-225mm	Color CCD	Uncooled LWIR 17μ 640 x 480	Continuous Zoom	Autofocus	None
						LRF
						GPS
						LRF & GPS
						None
						LRF
						GPS
LRF & GPS						
Cooled	19-275mm	Color CCD	Cooled MWIR 15μ 640 x 512	Continuous Zoom	Autofocus	None
						LRF
						GPS
						LRF & GPS
						None
						LRF
						GPS
LRF & GPS						
Cooled	15-300mm	Color CCD	Cooled MWIR 15μ 640 x 512	Continuous Zoom	Autofocus	None
						LRF
						GPS
						LRF & GPS
						None
						LRF
						GPS
LRF & GPS						
Cooled	21-420mm	Color CCD	Cooled MWIR 15μ 640 x 512	Continuous Zoom	Autofocus	None
						LRF
						GPS
						LRF & GPS
						None
						LRF
						GPS
LRF & GPS						
Cooled	48.5-700mm	Color CCD	Cooled MWIR 15μ 640 x 512	Continuous Zoom	Autofocus	None
						LRF
						GPS
						LRF & GPS
						None
						LRF
						GPS
LRF & GPS						

*Some countries may be subject to thermal camera export licensing requirements



FEATURES AND BENEFITS

- Long Range 24/7 Imaging**
 Covert near-IR LED illumination and long range optics provide court-admissible quality video surveillance beyond 5km (day) and 600m (night), even in zero-light conditions
- Dedicated Day and Night Cameras**
 Separate cameras dedicated and optimized for day or night imaging provide vibrant color day video and high contrast night video
- Long Range LED's**
 Innovative LED illumination design provides nighttime performance beyond 600m
- Simple Installation**
 Pelco D protocol control and common industry mounting options for easy integration
- Easy Export**
 No export license required



PART NUMBERS

C600	Part Number	Video Type	Day Camera Day Lens	Night Camera Night Lens	Horizontal FOV	Lens Types	Focus Type
	C600-000-N0000	NTSC 30Hz	Day Color CCD 3.3 - 119mm	Near-IR Low Light CCD 8.6 - 154mm	Day: 60.2° - 1.8° Night: 32.0° - 2.3°	Continuous Zoom	Autofocus
	C600-000-P0000	PAL 25Hz					

CLARITII - IDEAL DETECTION SYSTEM COMPLEMENT

Claritii is ideal for use in systems that can direct it to slew-to-cue to a preset location or to a detected event. Radar, thermal analytics, and buried or fence sensors provide the alarm and Claritii provides the details, even in zero-light.

APPLICATION HIGHLIGHT: EMBASSY PROTECTION

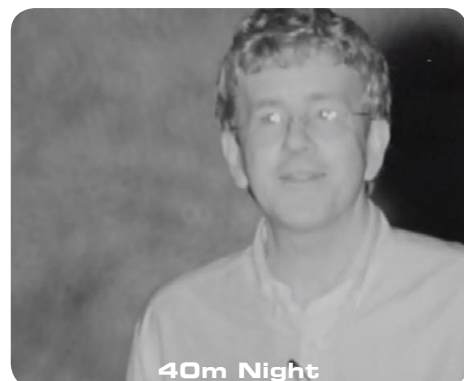


Around the world, embassies use the Illuminated Claritii camera system for providing 24/7 site security. Claritii provides evidentiary quality video capable of clearly identifying perpetrators for prosecution. Control room operators are able to gain the specific details they need to assess dangerous situations outside of the compound in order to form an adequate response.

AVAILABLE CONFIGURATIONS

Claritii uses dedicated cameras that are each optimized for either day or night imaging. The near-IR illumination CCD camera takes full advantage of the near-IR illumination provided by the systems focused beam LED array for the longest range LED illumination system available in the market.

- Claritii 600 - 24/7 Threat Detection and Assessment at more than 600 meters



APPLICATION HIGHLIGHT: SUBSTATION MONITORING



Copper theft is a major problem at electrical substations around the U.S. Despite the inherent risk, desperate thieves disregard the facility warnings and attempt to break-in and pilfer the valuable metal available at these locations. Installed for 24/7 site monitoring, Claritii provides a theft deterrent and layer of security at these substations. In all lighting conditions both day and night, Claritii provides high quality video. Combined with DVR and NVR recorders the systems provide reliable surveillance with video quality and details that hold up in the courtroom.

*Some countries may be subject to thermal camera export licensing requirements



FEATURES AND BENEFITS



- Zero Light Imaging**
 Covert near-IR laser illumination and long range optics provide court-admissible quality video surveillance beyond 15km (day) and 4km (night), even in zero-light conditions
- Dedicated Day and Night Cameras**
 Separate cameras dedicated and optimized for day or night imaging provide vibrant color day video and high contrast night video
- Detection and Assessment**
 The addition of an optional wide-area thermal video channel creates a complete threat detection & assessment package
- Long Range**
 Daytime surveillance beyond 15km, nighttime surveillance beyond 4km
- Easy Export**
 No export license required for most countries



AVAILABLE CONFIGURATIONS

Discoverii provides daytime color video, IR-optimized nighttime video, continuous zoom, and autofocus. All Discoverii models include a near-IR laser illuminator, day/night optics, ruggedized electronics unit, and precision pan & tilt platform.

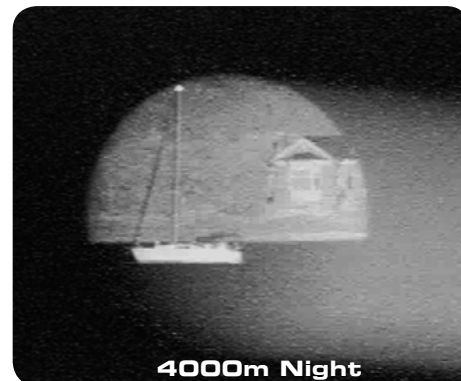
- 24/7 Threat Detection and Assessment at more than 4000 meters
- Optional - Thermal video channel for wide area threat detection



300m Night



2000m Night



4000m Night

*Some countries may be subject to thermal camera export licensing requirements

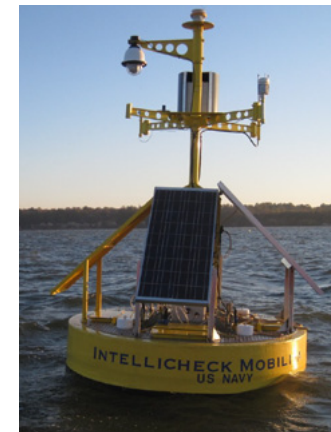
PART NUMBERS

DISCOVERII	Part Number	Video Type	Day Camera Night Camera	Lens Type Horizontal FOV	Optional Imager	Control Cable Length
	D3000-X00-N000	NTSC 30Hz	Color CCD / GreyScale CCD	Continuous Zoom 12.5 - 1500mm 22° - 0.09°	None	Standard (4m)
	D3000-XT1-N000				25u 45/135mm thermal add-on	Standard (4m)
	D3000-X00-P000	PAL 25Hz			None	Standard (4m)
	D3000-XT1-P000				25u 45/135mm thermal add-on	Standard (4m)
	D3000-X00-N008	NTSC 30Hz			None	Extended (8m)
	D3000-XT1-N008				25u 45/135mm thermal add-on	Extended (8m)
	D3000-X00-P008	PAL 25Hz			None	Extended (8m)
	D3000-XT1-P008				25u 45/135mm thermal add-on	Extended (8m)
	D3000-X00-N020	NTSC 30Hz			None	Extended (20m)
	D3000-XT1-N020				25u 45/135mm thermal add-on	Extended (20m)
D3000-X00-P020	PAL 25Hz	None			Extended (20m)	
D3000-XT1-P020		25u 45/135mm thermal add-on	Extended (20m)			

DISCOVERII - IDEAL DETECTION SYSTEM COMPLEMENT

Discoverii is ideal for use alongside systems such as radar, thermal analytics, and sensors that can direct the camera to slew-to-cue to a preset location or to the detected event. These detection sensors provide the alarm and Discoverii provides the details, even in zero-light.

APPLICATION HIGHLIGHT: BUOY MONITORING



Around the U.S., a constellation of high tech sensor buoys configured with an array of video, acoustic, environmental, radiation, weather, and other sensors are being used for detecting security and environmental risks in seaports and harbors. As a complement, Discoverii is used as both an autonomous slew-to-cue system as well as a control room operator-driven assessment tool for monitoring the buoys.

During slew-to-cue operation, the buoy sensors provide inputs that command the Discoverii camera to move to pre-configured field of view positions for visual verification of detected events. The camera shows details about vessel occupants, ship type, and even ship identification and can visually show the condition of the buoys themselves.

Control room operators are able to gain the specific details they need to assess a potentially hazardous situation and respond accordingly. With the information provided by the buoys array of sensors and the natural contrast video provided by Discoverii for visual verification night or day, the wireless buoy network is a highly effective harbor and seaport protection tool.

FEATURES AND BENEFITS

- Rugged, Mobile, and Compact**
 Sii HT is easily carried into hot, cold, dusty and other harsh field situations.
- High Resolution**
 Detailed thermal image with a 25μ 384 x 288 PAL (25μ 320 x 240 NTSC) detector.
- Extended Range Performance**
 A variable focus 35mm focusable lens allows the viewing of a person at up to 700 meters or a vehicle at more than 1.6km.
- Wide Variety of Accessories**
 Wireless video transmission, remote viewing units, attachable recording devices, command and tactical accessories provide unlimited customization possibilities.
- Long Battery Life**
 Up to 3 hours continuous use on a single charge.



AVAILABILITY

The Fire Detection algorithm is available in Sii and Accuracii Products

- **Open Frame Cameras**
- **Sii AT**
- **Sii ML**
- **Accuracii ML**



AVAILABLE CONFIGURATIONS

Detector

- 25μ 384 x 288 PAL
- 25μ 320 x 240 NTSC

Lens

- 35mm Variable-focus

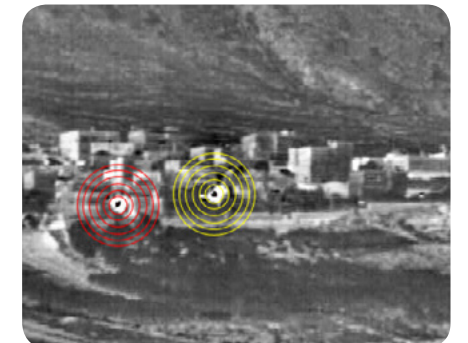
Accessories

- Remote Video Transmitter
- Remote Video Receiver
- Remote Command Center
- Covert Viewing Scope
- Glare Shield
- Tactical Pole
- Battery Charging Base
- Hard Transport Case



FIRE DETECTION

The Fire Detection algorithm is able to detect and identify a nearly unlimited number of fire sources while avoiding false alarms from hot spots in the scene. The Fire Detection algorithm is accurate at detecting large fires as far as 6km away in the longest range configuration.



RISK OF FIRE DETECTION

The "High Risk of Fire" algorithm (often called Hot Spot Detection) is able to examine a scene and determine which pixels have exceeded a user-defined temperature threshold. Once set, the algorithm will highlight every pixel that exceeds the user-defined threshold in red, so that it is clearly visible within the video image.



Wildfire Early Warning



Substation Monitoring



Recycling Yards



Emergency Operations



Oil, Gas, Chemical



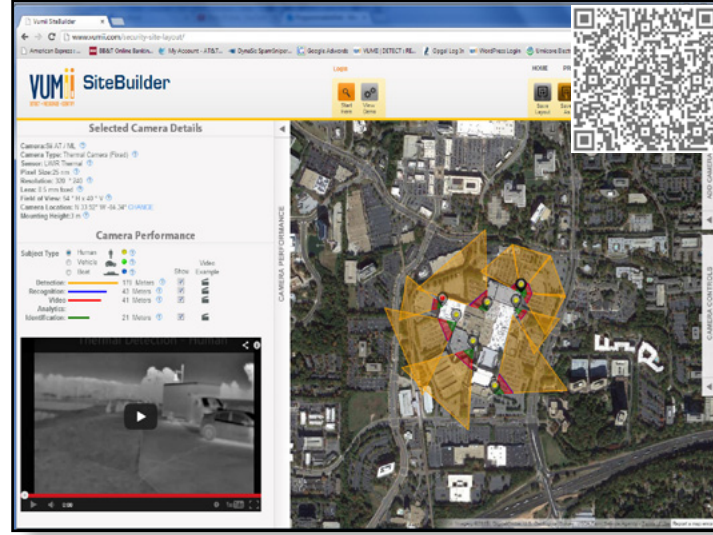
*Some countries may be subject to thermal camera export licensing requirements

Support Applications/Software

SITEBUILDER - CAMERA SITE DESIGN TOOL

Vumii SiteBuilder is the easiest, most user-friendly tool available for designing a site security system. SiteBuilder allows you to use the incredibly accurate and always available google maps database to place cameras down to match your unique security site needs.

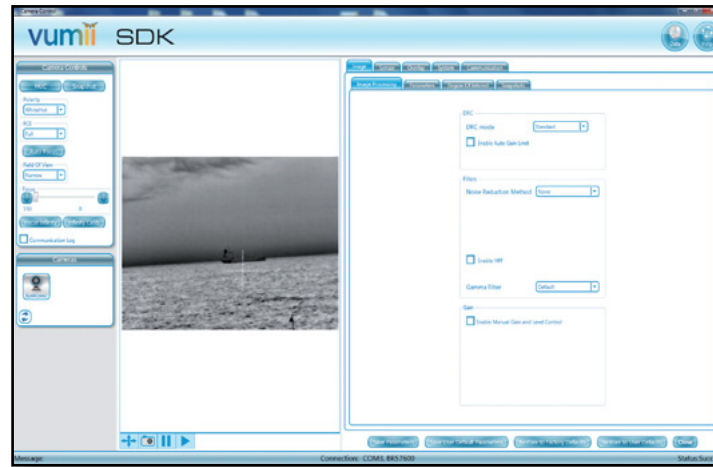
- Find your specific site in Google Maps™
- Show and fill-in site coverage gaps
- Simulate site-specific design needs
- See Security or Fire Detection coverage
- Save unlimited sites and site variations
- Change sensor, mounting height, FOV, etc.



CAMERA SDK - QUICK AND EASY INTEGRATION

The camera SDK allows for the quick and efficient development of customizable interfaces. The SDK allows developers to control multiple types of security sensors or integrate into existing command and control systems. The SDK includes access to object data, comprehensive video management, and a full selection of camera control tools.

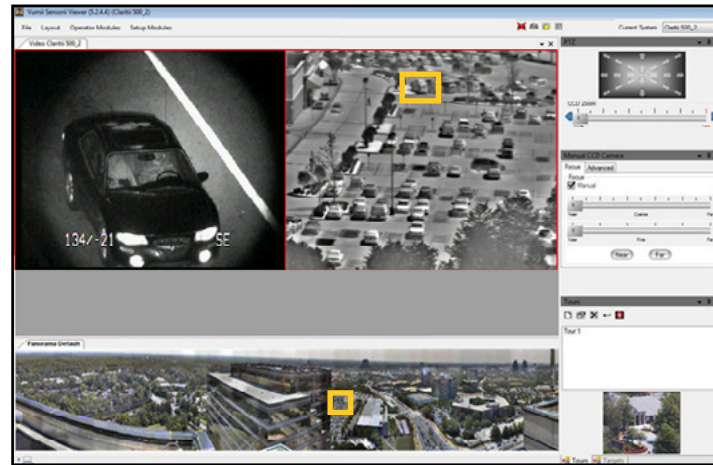
- Automatic recognition and communication
- Full screen, snapshot, pause, play tools
- Full non-uniformity correction tool access
- Embedded video overlay creation tool
- Communication debug log window



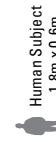
SENSORII CAMERA CONTROL & AWARENESS SOFTWARE

Sensorii camera control software provides intuitive camera control and maximum scene awareness using the camera software's automatic panorama generator and control widgets. The panorama provides a daytime image of the scene that is used to guide the camera at night. The user is able to either click to make the camera point anywhere in the scene or draw a box that commands the camera to show the exact field of view desired.

- Panorama creator for night-time awareness
- Point-and-click control in Panorama/video
- Unlimited number of tours and presets
- Completely free software tool
- Perfect for multi-sensor PTZ cameras



LEGEND



Human Subject
1.8m x 0.8m

23

Day Recognition
6 lines on target

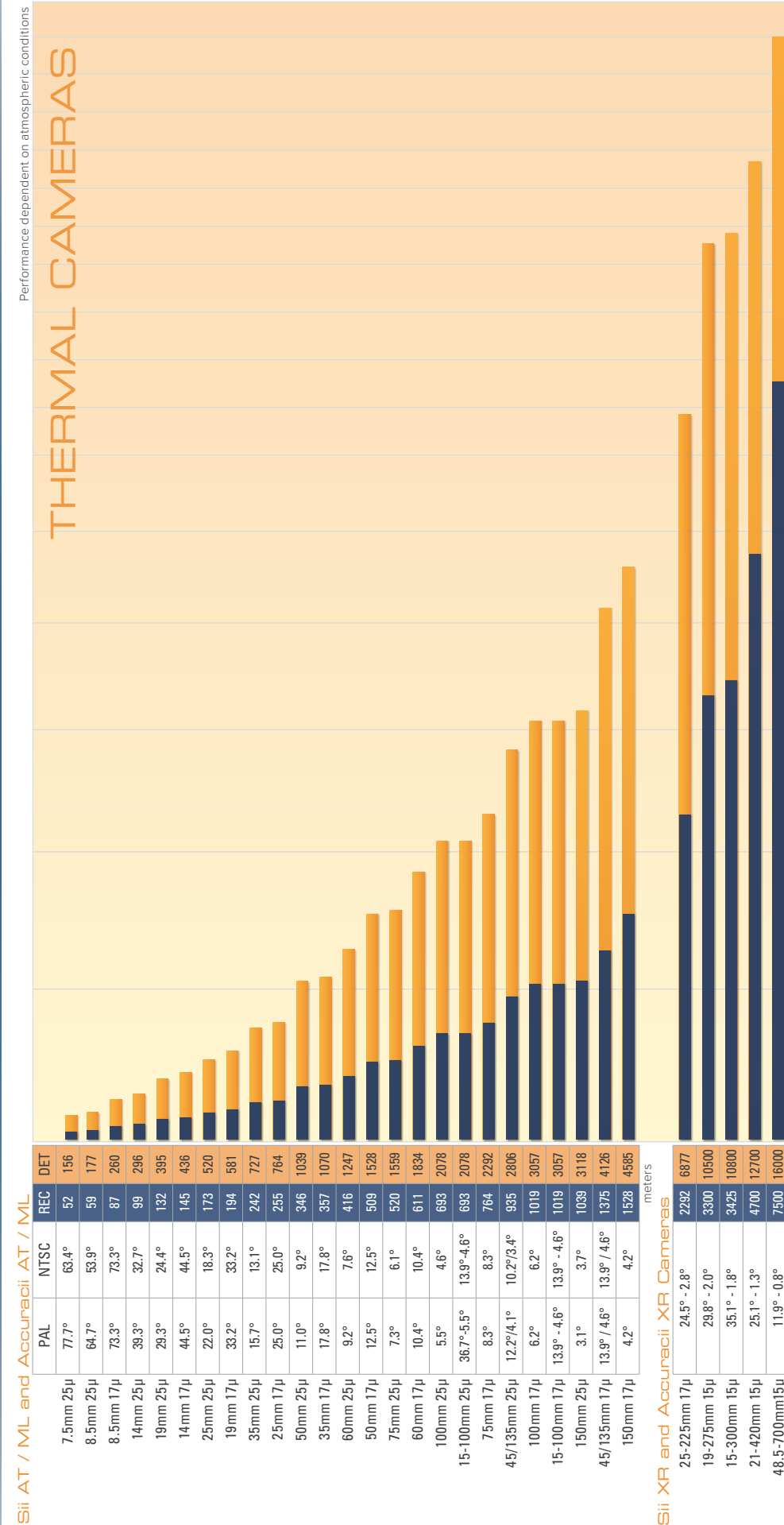
Day Assessment
60 lines on target

Night Assessment
60 lines on target

Thermal Detection
2 lines on target

Thermal Recognition
6 lines on target

Sii AT / ML and Accuracii AT / ML



DAY COLOR CAMERAS

ILLUMINATED SYSTEMS

SYSTEM RANGE PERFORMANCE



vumii

- Public Safety
- Residential Estates
- Embassy Compounds
- Maritime
- Chemical Facilities
- Airport Security
- Port Security
- Citywide Surveillance
- Oil, Gas, and Refinery
- Reservoirs
- Nuclear Facilities
- Power Plants



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