

Integrated Thermal Imager and PTZ

for Intrusion Detection and Object Tracking

PRODUCT HIGHLIGHTS

- Thermal detection and tracking of intruders up to 400 m in a 360° panoramic view
- Integrated high-speed PTZ provides real-time tracking
- Geospatial tracking on localized maps
- Excellent performance regardless of lighting or weather conditions
- Dual inputs to VMS provide PTZ image and multi-screen customized thermal display
- One thermal unit can replace up to 8 fixed cameras
- Perfect for large storage yards, parking lots, power plants or other secure areas



PRODUCT

Vicon's high-powered thermal sensor cameras provide 360° coverage of open spaces to detect, identify and track intruders. Combined with Vicon's high-speed PTZ dome camera, the resulting product delivers situational awareness of any physical incursion that may threaten a facility or its perimeter, doing the work of multiple fixed cameras, decreasing the number of security personnel needed to monitor critical areas.

The continuous 360° scanning for thermal intrusion detection monitors both inside and outside the perimeter using sophisticated analytics to determine and classify detections. It provides rapid geospatial detection of multiple targets from every direction. Instant slew-to-cue PTZ autotracking action allows multiple targets to be observed simultaneously and provides immediate confirmation and forensic coverage. When a detection occurs, the coordinates are sent to the integrated PTZ, triggering an instant response to zoom in on the incursion. Human intrusions can be detected over a wide area of 400 meters and vehicles over an area of 1500 m.

With the use of an optional interface appliance (VLR-TRIA), the thermal sensor and PTZ outputs can be displayed in a unique combined view that clearly shows any intruder's location and identity.

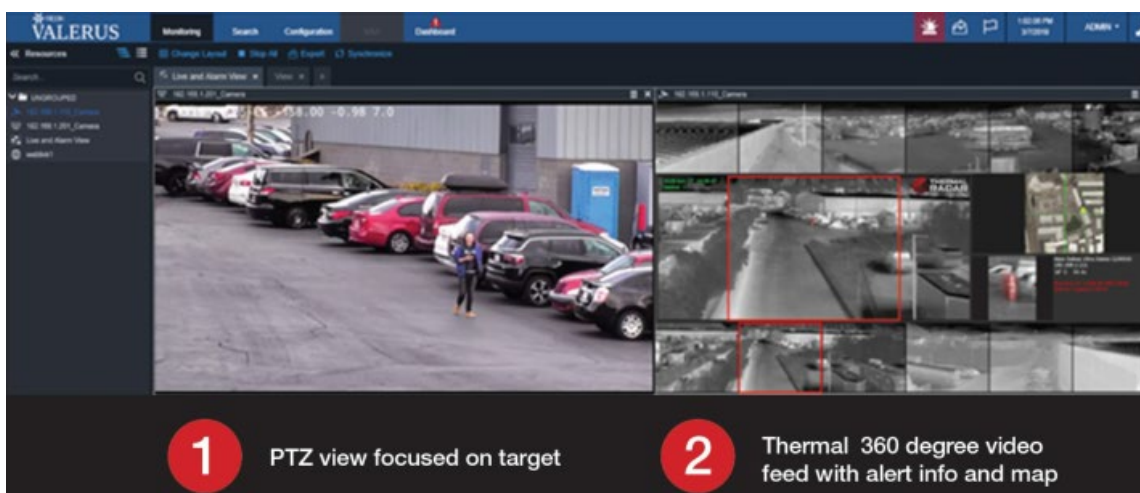
The unit easily integrates into Vicon's Valerus as well as many other VMS solutions over LAN or mobile. It can also be used as a standalone product and viewed in a browser using its IP address.



Thermal Sensor

SN683D Camera

The VTR thermal sensor with SN683D PTZ is a mission-critical and operationally relevant solution for wide area intrusion detection. It provides comprehensive and cost-effective perimeter security through analytics-based thermal intrusion detection and geospatial alarm generation.



1

PTZ view focused on target

2

Thermal 360 degree video
feed with alert info and map

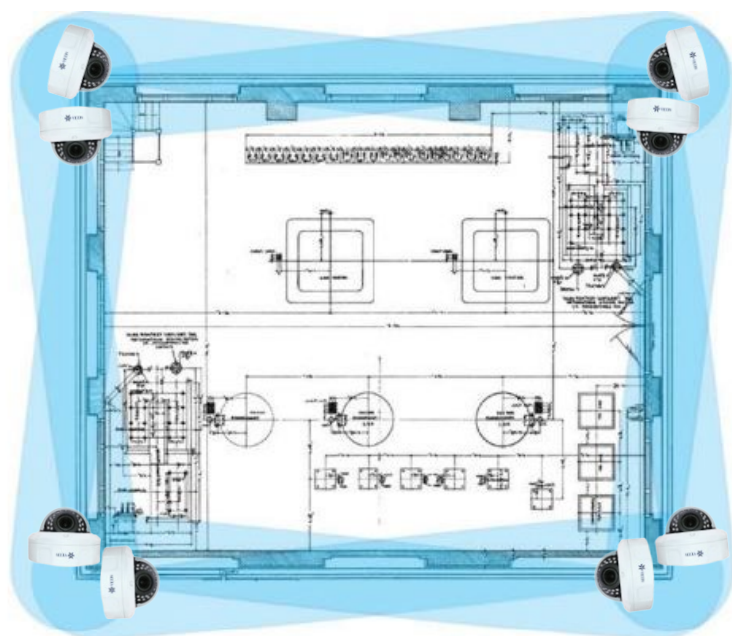
The unique integration of the VTR thermal camera sensor and the SN683D with the Valerus VMS provides two views. The image on the left (#1) is directly from the PTZ. The images on the right (#2) are from the thermal imaging sensor and the customizable user-friendly UI can be configured to meet your exact facility needs.

ORDERING INFORMATION

Model Number	Description
VTR-609	Thermal sensor camera; 640 x 512 resolution; 9 mm focal length
VTR-613	Thermal sensor camera; 640 x 512 resolution; 13 mm focal length
VTR-619	Thermal sensor camera; 640 x 512 resolution; 19 mm focal length
VTR-625	Thermal sensor camera; 640 x 512 resolution; 25 mm focal length
Accessories	
VLR-TRIA	Valerus VMS interface appliance; PC running thermal technology software; one required for each unit; must have to work SN683D and Valerus
V-ARM-TR	Mounting arm; for mounting the VTR-SN683D combination; includes interface that connects VTR unit to the SN683D; required for each unit
V-GNB-TR	Gooseneck mounting bracket; for mounting the VTR-SN683D combination; includes interface that connects VTR unit to the SN683D; required for each unit
V-PMK-TR	Pole mounting kit; for mounting the VTR-SN683D combination
V-CMK-TR	Corner mounting kit; for mounting the VTR-SN683D combination
V-RMK-TR	Roof mounting kit; for mounting the VTR-SN683D combination

Refer to the page of graphics at the end of this document for diagrams and dimension drawings of these products.

The VTR thermal camera sensor with the SN683D PTZ provides smart detection and targeted surveillance. The figure below illustrates how it offers better perimeter coverage - and beyond the perimeter - with just one sensor vs. 8+ fixed thermal cameras. Establish a perimeter anywhere and the rotating thermal sensor provides continuous thermal coverage, securing your business borders.



**You will need
Eight Fixed Thermal Cameras...**



**...to get the surveillance coverage
of ONE VTR/SN683D**

THERMAL CAMERA SPECIFICATIONS

Thermal Imager Module	
Thermal Sensor Type	FLIR® Tau 2 sun safe VOx microbolometer
FPA Resolution	640 x 512
Image Bit Depth	12 bit - raw
Lens Focal Length	9 mm, 13 mm, 19 mm, 25 mm
Speed and Resolution	
Rotation Speed	28 - 55 RPM, configurable, depending on model
Image FOV (H)	360 degrees continuous
Image FOV (V)	56°, 37°, 26°, 20°
Image Resolution	0.66 - 4.72 megapixels
Communication	
Ethernet	10/100 BaseT with PoE power (IPv4/IPv6)
Network Protocols	Zeroconfig system with multicast, DNS/DNS-SD Service Discovery, DHCP, NTP, TCP/IP, UDP/IP
Processor and Analytics	
Processor	1 GHz Arm® Cortex® A8 Plus C84x+ DSP
Embedded Analytics	Thermal Sensor: Intrusion; Classification PTZ: Tracking
Detection Zones	Configurable Areas of Interest and Exclusions
Detection Range	Environmentally Dependent
Human	Up to 400 m
Vehicle	Up to 1500 m
Environmental	
Operating Temperature	-40 to 131° F (-40 to 55° C)
Storage Temperature	-40 to 185° F (-40 to 85° C)
Certification	IP66
Power Requirements	
Power Source	PoE, IEEE 802.3at, 802.3af
Input Voltage	20 - 57 VDC

PTZ SPECIFICATIONS

PTZ Camera	SN683D-WIR
Image Sensor:	1/2.8-inch progressive scan Sony Starvis CMOS
Max Resolution:	3 MP (2048 x 1536)
Image Settings:	Dynamic adjustable bit rate. Digital image effects: flip. Configurable brightness, contrast, high sensitivity. White balance. Digital zoom. Gain control. Exposure control. Electronic shutter speed. Day/night mode. BLC (Backlight Compensation). Dynamic Noise Reduction (2DNR/3DNR). Motion detection (16 zones). Privacy masking (16 zones). Event notification.
Video Content Analysis (VCA):	Tampering. Defog. Intrusion Detection.
Electronic Shutter Speed:	1 ~ 1/10,000 sec
Day/Night Performance:	True day/night (IR cut filter)

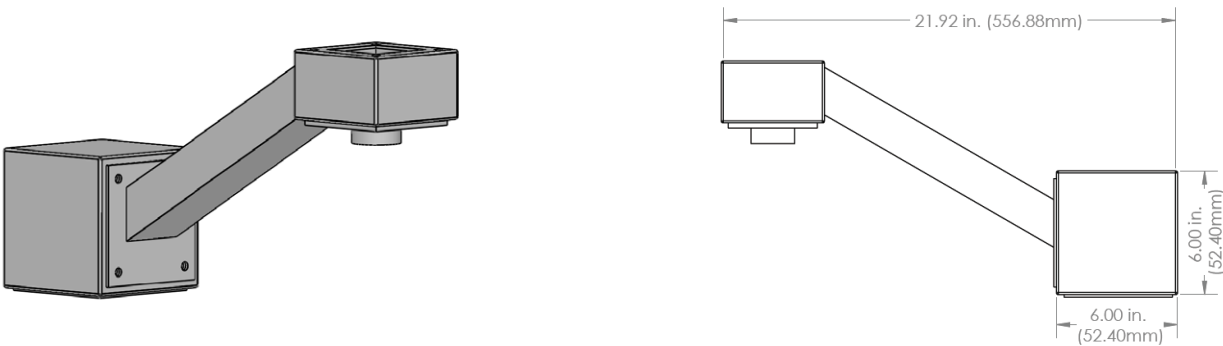
Wide Dynamic Range (WDR):	True WDR (120 dB)
Minimum Illumination:	Color: 0.35 lux, B/W: 0.013 lux @ 50 IRE; 0 lux (IR LED ON)
IR Illuminator:	Distance: 1312 ft (400 m). Angle: 5 - 60°. Synchronized, manual or fixed mode.
Lens	
Focal Length:	4.6 - 165 mm (36X optical zoom)
Max. Aperture:	f/1.6
Iris:	Autoiris
Zoom/Focus Adjust:	Motorized focus and zoom
Horizontal Field of View:	1.9° - 58.1°
Network Video Transmission	
Network:	10Base-T, 100Base-TX, RJ-45
Image Compression:	H.265/H.264 and M-JPEG
Resolution:	2048x1536, 1920x1080 (1080P), 1440x1080, 1280x1024/720, 1024x768, 800x600/480, D1, 640x480, 400x240, CIF
Protocol:	IPv4/IPv6, TCP/IP, HTTP, HTTPS, RTSP, RTCP, RTP, DHCP, FTP, DDNS, UDP, uPnP, QoS, Zeroconf, Bonjour, ONVIF
Frame Rate:	Max. 60 fps (50 fps, PAL) dual stream; 30 fps (25 fps, PAL) triple stream
Streams:	Quad stream (3x H.265/H.264 and 1 x M-JPEG)
Users:	Live viewing for up to 10 clients; playback for up to 3 clients
Web Browser:	Internet Explorer®; Safari®, Firefox®, Google Chrome®
Security:	IP address filtering, HTTPS encrypted data transmission, SSL, password protection
Local Recording:	Micro-SD slot provided; customer supplied SD card
Mechanical and Electrical	
Construction:	Die-cast aluminum base; tamperproof screws
Pan Range:	360° continuous pan
Pan Speed:	380°/second maximum
Tilt Range:	100° (-10° to 90°)
Tilt Speed:	380°/second maximum
Presets:	256
Tours:	8
Audio Capability:	Two-way audio; G.711 compression
Mounting:	Mounting accessories available for pendant/wall and in-ceiling
Dimensions:	7.9 in. (201.8 mm) (Diam) x 12.5 in. (317.8 mm) (H)
Weight:	11.2 lb (5.1 kg)
Input Power:	UPoE (injector included); 12 VDC $\pm 10\%$. Injector dimensions: H: 1.25 in. (31.8 mm); W: 2.375 in. (60.3 mm); D: 5.375 in. (136.5 mm)
Current (IR on):	500 mA @ PoE; 2.3 A @ 12 VDC
Power Consumption (IR on):	28 W
Controls and Connectors	
Connectors:	Power: 12 VDC DC jack; Network/UPoE: RJ-45 CAT 5; Alarm In (4)/Out (1): screw terminal; SD Card Slot; Audio In and Out: jack (Audio Out requires external amplifier)
Environmental	
Operating Conditions:	Temp: -22° to 149° F (-30° to 65° C) Humidity: up to 90%, relative, non-condensing Limitations in certain weather conditions, including blizzard conditions and freezing rain with high winds.
Approvals:	FCC Class A, CE, IP66; IK10

THERMAL CAMERA SENSOR AND ACCESSORIES

VTR Sensor



V-ARM-TR Mounting Arm



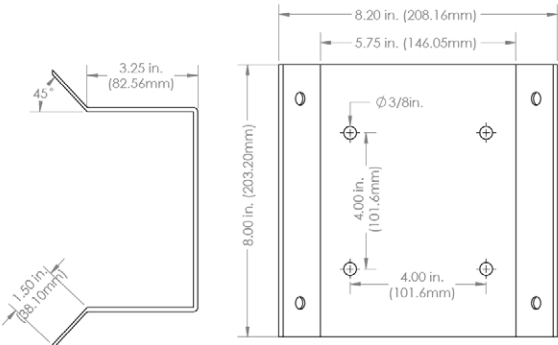
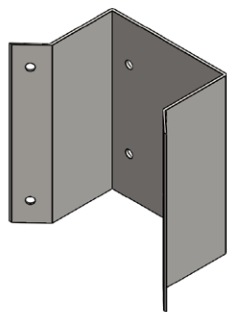
V-GNB-TR Gooseneck Mounting Bracket



V-PMK-TR Pole Mounting Kit



V-CMK-TR Corner Mounting Kit



V-RMK-TR Roof Mounting Kit

