



CAMERA & VIDEO SYSTEMS

WTI SIDEWINDER

INDUSTRY-LEADING PTZ CAMERA SYSTEM

VS265-R



Purpose-Built For The Most Demanding Environments

WTI's Sidewinder is engineered from the ground up to handle rigorous industrial environments, including Intelligent Transportation Systems (ITS), Fire/EMS, Industrial sites, and more. From congested urban intersections to high-speed highways or remote locations, Sidewinder delivers the reliability, accuracy, and flexibility you need to keep vehicles moving and your streets safer.

WTI Company Highlights

- All products made in USA
- In-house repair department with 3 year warranty
- Live customer and technical support with US-based team
- California Certified Small Business
- ISO 9001 Certified since 2004

Key Product Highlights

- 0.05° preset repeatability accuracy
- Continuous 360° rotation in both axes
- Hydrophilic "self cleaning" glass window
- Heated camera for reliable cold weather operation
- Wide Dynamic Range (WDR), Electronic Image Stabilization
- Auto DeFog
- Camera enclosure humidity sensor for water ingress detection
- ENG Option - locks pan/tilt motion for heavy wind and vehicle travel
- All Aluminum housing
- MTBF 11.83 years



Permanent
Traffic Count
Stations

Traffic Surveys
and Temporary
Studies

Mobility Data
Collection

Congestion &
Incident
Detection

Industrial /
Rugged
Monitoring

Built for Extreme Conditions

WTI's Sidewinder thrives where other systems falter, thanks to its rugged construction and robust environmental protections. From scorching heat to freezing cold—operating between -40°C and 74°C (-40°F to 165°F)—this camera endures harsh climates, intense vibrations, and exposure to sand, dust, fungus, and salt.

Engineered to meet rigorous government and military specifications, Sidewinder stays resilient and reliable in even the most punishing roadside environments.

Environmental Performance

- **Broad temperature range: operates from -40°C to $+74^{\circ}\text{C}$ (-40°F to $+165^{\circ}\text{F}$)**
- **Rugged vibration resistance: endures 3g RMS random, 5 to 1000 Hz**
- **All-Weather Durability: Withstands 100% humidity; meets MIL-E5400T specs**
- **IP-68/NEMA-4X/ASTM-B117**



Operating and Physical Specifications

Power

- Power input: IEEE 802.3bt
- Power consumption: 62W with heater on

Mechanical

- Weight: 14.5 lbs. (6.5 kg)
- Vibration: 3g RMS random, 5 to 1000 Hz, any axis, less lens
- Air contaminants: Withstands exposure to sand, dust, fungus, and salt atmosphere per MIL-E-5400T, Paragraphs 3.2.24.7, 3.2.24.8, and 3.2.24.9
- Interface: bottom egress

Environmental

- Operating temperature: -40°F to +165°F (-40°C to +74°C)
- Conforms to NEMA 21.5.1 Std. TS2 for traffic control systems
- Humidity: 100% relative humidity
- Protection rating: IP-68 / NEMA-4X / ASTM-B117, entire camera

Camera and Optics

Imaging

- Imager: 1/2.8" Exmor CMOS, 2.14 megapixel
- Resolution: 1080p / 720p
- Day/night: color day, B&W night
- Wide Dynamic Range: on/off
- DeFog: on/off
- Electronic Image Stabilization: on/off

Low light

- Sensitivity:
- High Mode On: 0.0013 lux
- High Mode Off: 0.0008 lux
- S/N ratio: >50 dB

Lens

- 30x optical zoom, F1.6 to F4.7
- 12x digital zoom
- Focal length: 4.3 mm to 129 mm
- Iris: auto or manual override
- Shutter: auto or manual override, 1 second to 1/10,000 second
- Focus: auto or manual override

Visibility Features

- Hydrophilic coated window surface to reduce cleaning maintenance
- Direct-heated window to prevent fogging
- Closed-loop heater control with outside temperature sensing

Camera and Optics (continued)

PTZ Control

- Pan angle range: continuous 360°
- Tilt angle range: continuous 360°
- Pan speed: 150°/sec, proportional to zoom
- Tilt speed: 150°/sec, proportional to zoom
- Pan/tilt repeatability: 0.05°
- Presets: 64 preset positions
- Tours: 8 tours of 32 presets with individual dwell settings per preset
- Title generation: 18 rows of 70 characters using default font and logo overlays
- Protocol: ONVIF, Pelco-D, COHU, NTCIP
- Firmware: field-upgradeable flash memory
- **Optional:** Pan/Tilt brakes that lock motion for heavy wind, vehicle travel, or other external forces

Video Streaming and Integration

Encoding and Performance

- Video encoding: H.265 Main Profile up to Level 4.1
- H.264 Baseline, Main, and High Profile up to Level 4
- MJPEG standards
- Image resolution: 1080p, 720p, D1, VGA, HVGA, QVGA, 2CIF
- Eight independent stream configurations
- Streaming mode: CBR or VBR
- Image setting: GOP (M, N), quality value
- Frame rate: 30, 15, 7, 4, 2, 1 (M, N)
- Data rate:
 - VBR mode: adjustable from 32K to 12 Mbps
 - CBR mode: adjustable from 32K to 16 Mbps

Compatibility

- Connection types: unicast or multicast
- Network protocols: RTP, RTSP, UDP, TCP, IP, HTTP, IGMPv2, ICMP, ARP, SNMPv3, RADIUS KEY, TACACS+, HTTPS, IPv4, DHCP, NTP, IEEE 802.1x, Ethernet 802.3u, and TELNET

Image Enhancement Features

- Wide Dynamic Range: on/off
- DeFog: on/off
- Electronic Image Stabilization: on/off
- Day/night operation: color day, B&W night

Humidity and Temperature Sensing

- 100% relative humidity
- Operating temperature: -40°F to +165°F (-40°C to +74°C)

Video Streaming and Integration (continued)

Firmware

- Field-upgradeable flash memory

WTI Camera Control Software

- Intuitive monitoring & configuration
- Backwards compatible with existing systems
- TCP/IP compliant video management
- Full control over camera functionality
- Full control and configuration of video analytics
- Monitor internal temperature and humidity
- Update camera firmware and analytics
- H.265/H.264/MPEG-4/MJPEG
- ONVIF, Pelco-D, COHU, and NTCIP protocol support
- Supports unicast and multicast connection types
- Supports RTP, RTSP, UDP, TCP, IP, HTTP, HTTPS, SNMPv3, DHCP, NTP, IEEE 802.1x, Ethernet 802.3u, and TELNET connectivity
- Video recording (onboard or web-based)
- Export data in JSON or CSV