



MISSION CATALOG · CB-000058

GYRO STABILIZED AUTOMATIC PTZ TRACKING THERMAL CAMERA

The AGT-Z50II-CTVC62245-2186 is a gyro-stabilized automatic PTZ tracking thermal camera integrating cooled MWIR thermal, HD visible, and...

Model AGT-Z50II-CTVC62245-2186

KEY BENEFITS

- Wider detection spectrum: integrates HD visible light, MWIR thermal imaging, and optional NIR laser for complementary active/passive detection and multi-source fusion, eliminating hidden targets in day, night, and all-weather conditions.
- Faster invert speed adjustment: rotation speed up to $80^{\circ}/s$ and acceleration up to $100^{\circ}/s^2$ enable quick start-stop, smooth operation, and rapid capture and tracking of moving targets.
- Wider coverage: 0° – 360° pan and -90° to $+90^{\circ}$ tilt range provide dead-angle-free detection and full-dimension coverage.

DESCRIPTION

The AGT-Z50II-CTVC62245-2186 is a rugged, gyro-stabilized PTZ camera system that combines a cooled MWIR thermal imager, an ultra-low-light HD visible camera, and optional NIR laser illumination or laser rangefinder into a single multi-sensor payload. It is designed for long-range monitoring in total darkness, fog, rain, and other challenging environments, delivering continuous optical zoom, active auto-focus, digital image enhancement, and intelligent video analytics. The system supports automatic target tracking, fire detection, intrusion and cross-border analytics, human/vehicle classification, face detection, and AR information fusion. A high-speed servo turntable provides 360° continuous pan, $\pm 90^\circ$ tilt, acceleration up to $100^\circ/\text{s}^2$, and positioning accuracy better than 0.02° , while optional two-axis gyro stabilization maintains line-of-sight accuracy in moving platforms or high-wind conditions. Built for harsh industrial and outdoor deployment, the camera operates from -40°C to $+60^\circ\text{C}$, meets IP66/IP67 protection, survives 96-hour salt spray, and includes surge protection, power-fail memory, remote maintenance, and multi-level security controls.

OVERVIEW

- Combines visible camera, thermal imaging camera (cooled/uncooled), and optional NIR laser illumination multi-sensor modules for long-distance monitoring in total darkness and foggy/rainy environments.
- Optional system enhancements include laser rangefinders, GPS, electronic compass, auto-tracking system, and AI-analysis module to achieve all-day full-dimension monitoring, positioning, tracking, and identification.

APPLICATIONS

- Long-range perimeter and border security
- Coastal, maritime, and port surveillance
- Critical infrastructure and asset protection
- Search, rescue, and moving-target tracking
- Fire detection and early-warning monitoring
- All-weather day/night surveillance in fog, rain, and low light

TECHNICAL SPECIFICATION

ENHANCEMENTS	
Ranging function	support passive ranging; support optional laser ranging
Strong light protection	support, protection from Sun Burn function
Temperature Correction	non-thermal design, imaging sharpness is not affected by temperature
Scene mode	support multi-configuration scene, adapt to different environment applications
Auto-focus tuning	support remote auto-focus accuracy parameter adjustment, adapt to different scenarios
Day-night cruise	day-night cruise groups with different preset, day cruise 1-40 preset, night cruise 41-80 preset, according to the state of light automatically switch day and night, adapt to different space-time scenarios
Lens servo	support lens pre-position, focal length back, focal length positioning function
Power-off memory	support to restore the pre-power-off position, pre-position state, cruise state, line scan state
Off and on	support
Camera diagnosis function	support network alarm, support IP conflict alarm, support illegal access alarm (illegal access number, lock time can be set), support SD card abnormal alarm (SD space is insufficient, SD card error, no SD card), video block alarm, anti-sun damage (support threshold, block time can be set)
Life Cycle Management	Health Index recording function, support working time, shutter times, working temperature, limit temperature, etc.
Remote Maintenance	with fault inquiry, self-examination, remote restart function; online upgrade, remote upgrade
Keyframe settings	support keyframe interval 100-level adjustable
Configuration File	Support Configuration File Import and export function
Web Access	support WEB full function configuration, remote online upgrade
SECURITYCONTROL	
Support illegal access alarm	illegal access number, lock time can be set
Security mode	authorized user name and password, support IP white list and black list, Mac White list and black list
PTZ	
Structure	spherical, multi-dimensional free-form surface shape, small wind resistance, strong anti-shake, can resist 12 strong wind

TECHNICAL SPECIFICATION

PTZ	
Windows	Dual/triple windows, 2/3 band sensors, wiper
Level range	N × 360 ° continuous rotation, after power failure can be mechanically locked
Pitch range	-90 ° ~ + 90 °, with soft limit function, program can be set
Rotation Speed	level
Acceleration	100 ° S 2 level, 100 ° S 2 pitch
Speed adaptation	with intelligent induction speed change function, support lens focal length speed adaptation function
Driving mode	adopting high torque rare earth permanent magnet synchronous motor direct drive, high speed start and stop
Positioning accuracy	better than
Location Time	less than 4s
Zero setting	support for horizontal and pitch zero setting
Preset cruise	3000, supports 16 cruise routes, each can support 256 preset positions
Path scan	Support Preset Point Cruise, day and night cruise, line scan, frame scan, apple skin scan, scan speed can be set
Over watch	preset position/pattern scan/cruise scan/vertical scan/frame scan/panoramic scan/apple peel scan/horizontal fan scan
Motor Protection	turntable block and turn protection, high reliability
Gyro image stabilization	optional two-axis gyro stabilization, pitch and roll $\leq \pm 10^\circ$, period greater than 6 seconds, los stabilization accuracy ≤ 2 mrad (RMS)
INTERFACE	
Network interface	1-way RJ45,10/100base-t adaptive
Network protocol	support HTTP, HTTPS, FTP, SMTP, DNS, NTP, RTSP, RTCP, RTP, TCP, UDP, ICMP, DHCP network protocol; support ONVIF and GB28181 protocol
Secondary development	provide free SDK, easy to use or convenient secondary development

TECHNICAL SPECIFICATION

INTERFACE	
Physical interface	Alloy Waterproof Aviation Plug
Optical network	(optional built-in Fiber Module, single mode fiber output, improve anti-interference)
POWER	
Power consumption	the maximum power consumption of the turntable is less than 500W and the stable power consumption is less than 150W
Dimensions	480mm ×
H825mm Total weight	≤85 kg
ENVIRONMENT	
Working Temperature	-40 °C ~ + 60 °C
Storage Temperature	-45 °C ~ + 70 °C
Humidity	< 90% Rh
Lightning protection	Interface Circuit built-in surge protection, 6000V
Salt spray	in PH
Protection class	IP66(Ball Chamber air-tight IP67)

COMMERCIAL TECHNICAL DATA

DATASHEET · EN

DOCUMENT CONTROL SHEET

ISSUING AUTHORITY

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