



MISSION CATALOG · CB-000037

PROFESSIONAL PTZ THERMAL IMAGING CAMERA AGT-Z50IV-CTVC690110-21100-LRF15K

Professional PTZ thermal imaging camera for intelligent traffic, integrating cooled MWIR thermal, starlight visible CMOS, 15 km laser range...

Model AGT-Z50IV-CTVC690110-21100-LRF15K

KEY BENEFITS

- Multi-spectrum detection combining HD visible, MWIR thermal, and NIR laser for active/passive, day/night, all-weather coverage
- High-speed PTZ with up to 80°/s rotation, 100°/s² acceleration, and 0.02° positioning accuracy for rapid target capture and tracking
- Full-dimension coverage via 360° continuous pan and -90° to +90° tilt with dead-angle-free monitoring
- Built-in AI analytics including fire detection, intrusion, cross-border, loitering, human/vehicle classification, face detection, and auto-tracking

• Rugged IP66/IP67-rated design operating from -40 °C to +60 °C with 6000 V surge protection and 12-level wind resistance

DESCRIPTION

The AGT-Z50IV-CTVC690110-21100-LRF15K is a rugged professional PTZ camera built for intelligent traffic and long-range surveillance. It combines a cooled 640×512 MCT thermal detector (3.7–4.8 μm, NETD 20 mK, 90–1100 mm F5.5 zoom), a backlit starlight CMOS visible camera (12–1100 mm), and an optional 1570 nm laser rangefinder with 200–15000 m range and ±3 m accuracy. The system supports continuous 360° pan, ±90° tilt, speeds up to 80°/s, and acceleration up to 100°/s² for rapid target acquisition. Onboard intelligence includes fire detection, intrusion/cross-border/loitering detection, human/vehicle classification, face detection, automatic tracking, and 18 dual-light fusion modes. It streams H.265/H.264/MJPEG video at up to 16 Mbps and supports ONVIF, GB28181, and SDK integration. Housed in an IP66/IP67-rated spherical enclosure, the camera operates from -40 °C to +60 °C, withstands 6000 V surge protection, and resists 12-level winds, making it suitable for harsh outdoor traffic and perimeter applications.

OVERVIEW

- Combines visible camera, cooled/uncooled thermal imaging, and optional NIR laser illumination modules for long-distance monitoring in total darkness, fog, and rain
- Optional enhancements include laser rangefinder, GPS, electronic compass, auto-tracking system, and AI-analysis module for all-day full-dimension monitoring
- Spherical two-axis two-frame servo turntable with dual/triple windows, wiper, gyro image stabilization option, and power-off memory
- Network interface includes RJ45 10/100Base-T, HTTP/HTTPS/RTSP/ONVIF/GB28181 protocols, free SDK, and optional built-in fiber module

APPLICATIONS

- Intelligent traffic management, highway monitoring, and road safety enforcement
- Long-range perimeter, border, and coastal surveillance
- All-weather security, target tracking, and critical infrastructure protection
- Fire detection and alarm monitoring in large outdoor areas

TECHNICAL SPECIFICATION

THERMAL CAMERA	
Bad Correction	support for bad correction
Image Correction	support manual correction, background correction, automatic correction time interval, Gamma correction parameters adjustable
Bright Light Protection	supports protection against Sun Damage
Detector Array	640 × 512
VISIBLE CAMERA	
Sensor type	backlit ultra-low illumination star-level CMOS
Minimum illuminance	Color:
Lens	12~1100mm, Mega HD electric zoom; Manual/auto focus, 3A adaptive active focus algorithm, support multiple trigger modes, accurate and high speed
Image Processing	support for white balance, electronic shutter, frame accumulation, backlight compensation, strong light suppression, 2D/3D digital noise reduction, electronic anti-shake, wide dynamic, heat wave drift suppression
AUDIOANDVIDEO	
Resolution	1920 × 1080; 1280 × 1024; 1280 × 960; 1024 × 768; 1280 × 720; 704 × 576; 640 × 512; 640 × 480; 400 × 300; 384 × 288; 352 × 288; 352 × 240
Visible resolution	2592 × 1520; 2560 × 1440; 1920 × 1080; 1280 × 1024; 1280 × 960; 1024 × 768; 1280 × 720; 704 × 576; 640 × 512; 640 × 480; 400 × 300; 384 × 288; 352 × 240
Video Coding	H. 265/h. 264/MJPEG, multi-stream support
Video rates	32 KBPS to 16 Mbps
Audio encoding	G. 711A/g. 711U/G726
Image rollover	right/left/up/down/diagonal
OSD settings	Support Channel name, time, PAN, field of view angle, focal length of the OSD display settings, support preset position name settings
INTELLIGENTFUNCTION	
Fire Detection Alarm	Threshold Level 255, target size, target number 1-16 can be set, automatic selection of the most prominent target display, hot tracking
Intelligence analysis	support intrusion detection, cross-border detection, entry/exit area detection, motion detection, loitering detection, people gathering, fast moving, target tracking, items left behind, items taken; Human/vehicle target detection, face detection; and support 16 regional settings; support intrusion detection, human, vehicle filtering function; support target temperature filtering function
Automatic tracking	single-scene tracking support multi-scene tracking support panoramic tracking support alarm linkage tracking

TECHNICAL SPECIFICATION

INTELLIGENTFUNCTION	
Intelligent Information Fusion	support 512 AR intelligent information fusion, support point of fire, intelligent analysis video identification information fusion, support azimuth angle, field of view, focal length, multiple information fusion
Image Fusion	support 18 kinds of dual-light fusion mode, support picture-in-picture function
Alarm management	Support Alarm capture upload
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

TECHNICAL SPECIFICATION

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
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)

TECHNICAL SPECIFICATION

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
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	Φ565 mm ×
H880 mm Total weight	≤105 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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