



MISSION CATALOG · CB-000009

AGT-TC121023C HD OUTDOOR THERMAL IMAGING CAMERA FOR BORDER SURVEILLANCE

The AGT-TC121023C is an ultra-long-range continuous zoom thermal imaging camera with 1280×1024 resolution, IP66 housing, and optional PTZ...

Model AGT-TC121023C

KEY BENEFITS

- 1280×1024 uncooled VOx FPA sensor with 50 mK NETD for high-sensitivity thermal imaging
- 22–230 mm continuous IR optical zoom with auto focus for long-range seek-and-watch missions
- AS+DOE advanced optical design and 3CAM high-precision optomechanics
- Penetrates fog, dirt, rain, and snow for true 24-hour operation
- Integral aluminum alloy housing with IP66 sealing for harsh outdoor environments
- Non-uniform correction and SDE digital processing for low-noise, uniform images
- Optional heavy-duty PTZ with 360° continuous pan and 80 presets

DESCRIPTION

The AGT-TC121023C is an ultra-long-range continuous zoom thermal imaging camera built on uncooled IR technology. It delivers high-contrast thermal imagery using a 1280×1024 FPA sensor, advanced digital image processing, and a 22–230 mm continuous zoom lens, enabling detection of vehicles out to 17.4 km and humans out to 6.8 km. The system is housed in a one-piece aluminum alloy enclosure rated IP66, with PTA coating for seawater corrosion resistance, built-in thermal management, and aviation waterproof connectors. An optional 50 kg-capacity PTZ provides 360° pan and $\pm 45^\circ$ tilt with precision speed control, making the camera suitable for unattended all-weather observation.

OVERVIEW

- NETD 50 mK preserves imaging detail in foggy, rainy, or snowy conditions.
- Unique AS+DOE optical design and 3CAM high-precision optomechanical design suit both wide-area seeking and long-distance watching.
- Non-uniform image correction technology provides stable operation without TEC, good uniformity, and wide dynamic range.
- SDE digital image processing with 10 pseudo-color palettes, B/W and B/W inverse modes, and AGC.
- 1–8× continuous digital amplification with optical/electronic relay zoom.
- Digital-control PTZ enables 360° continuous rotation with no dead corners, stable operation, and low dither.
- One-piece aluminum alloy housing is weatherproof, waterproof, dustproof, and IP66 rated.

APPLICATIONS

- Border and coastal surveillance
- Perimeter security and critical infrastructure protection
- Long-range target detection and recognition
- All-weather maritime and port monitoring
- Airfield, military, and remote-site security

TECHNICAL SPECIFICATION

OPTICAL	
FOV	38.5°×31.2° to 3.8°×3.1°
IFOV	0.05–0.55 mrad
Zoom	Optical zoom
Auto focus	Auto focus
Dual focal fast switch	Dual focal fast switch
AS+DOE optical design	AS+DOE advanced optical design
3CAM optomechanical design	3CAM high-precision optomechanical design
ENHANCEMENTS	
SDE image processing	SDE digital image processing
Pseudo color modes	10 pseudo color and B/W, B/W inverse
AGC	AGC
Digital amplification	1–8× continuous digital amplification
Relay zoom	Optical/electronic relay zoom
HOUSING	
Material	Aluminum alloy
Structure	Integral single-window design
Coating	PTA coating
Corrosion resistance	Anti-seawater corrosion
Sealing / IP rating	IP66
Temperature controller	Built-in temperature controller

TECHNICAL SPECIFICATION

HOUSING	
Thermal balance	Thermal balance design
PTZ	
Load	50 kg
Pan range	0–360° continuous
Tilt range	-45° to +45°
Speed	0.01–30°/s
Presets	80
Lens zoom/focus memory	Support lens zoom/focus memory
Variable speed scanning	0–30°/s
Apple-peel scanning	Apple-peel scanning
CONSUMPTION	
Min. power consumption	40 W (PT included)
Max. power consumption	120 W (PT included)
WEIGHT	
Total weight	≤45 kg (PT included)
INTERFACE	
RJ45	RJ45
Remote OSD setting	Remote OSD setting
Video output	PAL/NTSC video output
Power input	AC/DC 24 V with anti-reverse protection
Waterproof connector	Waterproof connector
ENVIRONMENT	
Operating temperature	-25°C to +55°C (-40°C optional)

TECHNICAL SPECIFICATION

ENVIRONMENT	
Storage temperature	-35°C to +75°C
Humidity	<90%
Anti-shock	0.2 g (GB/T15211-2013 harshest level 2)
Anti-vibration	15 g (GB/T15211-2013 harshest level 3)
Lightning protection (power)	4000 V
Lightning protection (signal)	2000 V
Salt spray resistance	pH 6.5–7.2, continuous spraying 48 h

COMMERCIAL TECHNICAL DATA

DATASHEET · EN

DOCUMENT CONTROL SHEET

ISSUING AUTHORITY

ORGANIZATION	Volls Global Inc
REGISTERED OFFICE	1207 Delaware Ave #5352
LOCALITY	Wilmington, DE 19806
COUNTRY	United States
POINT OF CONTACT	info@circuitbull.com
BRAND	Circuitbull®
PARENT ORGANIZATION	Volls Global · volls.us

MATRIX CODES · SCAN TO OPEN

01	02	03	04
			
THIS PRODUCT circuitbull.com/.../ agt-tc121023c-41075081	REGISTERED ADDRESS 1207 Delaware Ave #5352	MAIN WEBSITE circuitbull.com	VOLLS GLOBAL volls.us

DISTRIBUTION STATEMENT

Uncontrolled when printed. Verify the current revision at the product address before procurement or use. This sheet identifies the issuing organization and the digital addresses for this document.