



MISSION CATALOG · CB-000022

AGT-TC61021 HD TOP THERMAL IMAGING CAMERA FOR FIREFIGHTING

The AGT-TC61021 is a long-range uncooled thermal imaging camera with continuous 10x IR optical zoom, 640×512 resolution, and IP66-rated a...

Model AGT-TC61021

KEY BENEFITS

- Long-range 10x continuous IR optical zoom (21–210 mm) with detection up to 17400 m for vehicles
- 640×512 UFPA VOx uncooled detector with 50 mK NETD for high-sensitivity thermal imaging
- Advanced AS+DOE optical design and 3CAM precision optomechanics
- SDE digital image processing with AGC, 10 pseudo-color modes, and B/W switch
- Rugged integral aluminum alloy housing with IP66 sealing for harsh outdoor environments
- Optional digital PT with 360° continuous pan, 80 presets, and Pelco-P/Pelco-D protocols

DESCRIPTION

The AGT-TC61021 HD Top Thermal Imaging Camera for Firefighting is built on the latest uncooled IR technology with continuous infrared optical zoom. It delivers high-contrast thermal imagery using a 640×512 UFPA VOx detector, advanced digital image processing, and a 21–210 mm motorized zoom lens, providing detection ranges up to 17.4 km for vehicles and 6.8 km for humans. The camera features an AS+DOE advanced optical design and 3CAM high-precision optomechanical construction for both wide-area search and long-range observation. With NETD of 50 mK, non-uniformity correction, SDE digital image processing, AGC, and multiple pseudo-color modes, it maintains clear imaging in fog, rain, or snow. Housed in a single integral aluminum alloy enclosure with IP66 sealing, PTA anti-corrosion coating, and built-in thermal management, the system is designed for continuous outdoor operation. An optional digital PT unit offers 360° pan rotation, preset positioning, and Pelco-D/Pelco-P control.

OVERVIEW

- NETD 50 mK enhances imaging detail in foggy, rainy, or snowy conditions
- Non-uniform image correction technology enables stable operation without TEC
- Digital control PT provides 360° continuous rotation with no dead corners and low dithering
- Integral single-window aluminum housing with PTA coating resists seawater corrosion
- Built-in temperature controller and thermal balance design for reliable all-weather operation

APPLICATIONS

- Oilfield safety
- Railway and freeway security
- River and airport security
- Forest fire prevention
- City safety

TECHNICAL SPECIFICATION

HOUSING	
Built-in temperature controller	Built-in temperature controller
Thermal balance design	Thermal balance design
PTZ	
Optional	Optional
Load	50kg
Pan range	0°~360°
Tilt range	-45°~+45°
Speed range	0.01°/S~30°/S
Presets	80
Protocols	Pelco-P, Pelco-D
Baud rates	2400/4800/9600/19200
Scanning	Variable speed scanning 0°/S~30°/S; apple peel scanning function
THERMAL	
Detector	5th generation UFPA VOx
Resolution	640×512
NETD	50mK (@25°C F1.0)
Spectral range	7.5~14μm
Startup time	<4 seconds
LENS	
Focal length	21~210mm
Optical zoom	10X

TECHNICAL SPECIFICATION

LENS	
FOV	16°×12°~1.6°×1.2°
Zoom / focus	Motorized zoom and focus (auto focus optional)
AS+DOE optical design	AS+DOE advanced optical design
3CAM precision design	3CAM high precision design
IFOV	0.08~0.85mrad
ENHANCEMENTS	
Image processing	SDE digital image processing
AGC	AGC
Pseudo color modes	10 pseudo color and B/W, B/W inverse
Digital amplification	2X digital amplification
Non-uniform correction	Non-uniform image correction
TEC	None, stable working temperature without TEC
DETECTION	
Vehicle detection range	17400m
Human detection range	6800m
RECOGNITION	
Vehicle recognition range	4800m
Human recognition range	1800m
CONSUMPTION	
Min consumption	40W (PT included)
Max consumption	120W (PT included)
POWER	
Input voltage	AC24V (DC12V option)

TECHNICAL SPECIFICATION

WEIGHT	
Weight	≤40kg (PT included)
INTERFACE	
RS-485	RS-485 (PELCO D, 2400bps)
RS-232	RS-232 optional
Remote OSD	Remote OSD
Video output	PAL/NTSC
Waterproof connector	Aviation waterproof connector
ENVIRONMENT	
Operating temperature	-25°C~+55°C (-40°C optional)
Storage temperature	-35°C~+75°C
Humidity	<90%
Anti-shock	0.2g (GB/T15211—2013 5.4 harshest level 2)
Anti-resistance	15g (GB/T15211—2013 5.3 harshest level 3)
Anti-lightning power	4000V
Anti-lightning signal	2000V
Salt spray pH	PH6.5~7.2
Salt spray duration	48 hours

COMMERCIAL TECHNICAL DATA

DATASHEET · EN

DOCUMENT CONTROL SHEET

ISSUING AUTHORITY

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MATRIX CODES · SCAN TO OPEN

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