



MISSION CATALOG · CB-000042

AIRPORT BIRD DETERRENCE MULTI-SPECTRUM ELECTRO-OPTICAL PLATFORM

The AGT-DMA351-TVC is a heavy-duty multi-spectrum electro-optical platform integrating HD visible and uncooled thermal cameras for all-we...

Model AGT-DMA351-TVC

KEY BENEFITS

- Integrates HD visible, uncooled thermal, and optional laser ranging modules in one platform
- Provides all-weather, all-time, all-dimensional detection, location, tracking, and identification
- Spherical design offers strong wind resistance, low vibration, and stable imaging
- Up/down split structure simplifies packing, transport, and weight distribution
- Modular design supports flexible detection channels and optical configurations
- Nitrogen-filled ball bin achieves IP67 protection for harsh field environments

DESCRIPTION

The AGT-DMA351-TVC is a heavy-duty dual-band electro-optical turntable designed for long-range detection and tracking in demanding environments. It combines a high-definition visible-light camera with an uncooled thermal imager to deliver day/night, all-weather situational awareness for airport bird deterrence, border defense, harbors, and critical infrastructure protection. The platform features a spherical, wind-resistant housing with an up/down split structure for easier transport and installation. Its modular design allows flexible configuration of detection channels and optical payloads, while a nitrogen-filled ball bin provides IP67 protection for reliable field operation. High-precision servo control, fast pan/tilt speeds, and intelligent tracking algorithms enable accurate target acquisition, tracking, and identification across wide coverage areas.

OVERVIEW

- Strong load capacity supports large-magnification visible cameras and large-aperture thermal imagers for ultra-long-range observation
- Wide detection spectrum combines HD visible and thermal imaging with multi-source data fusion
- Fast pan/tilt speed up to 80°/s with acceleration up to 100°/s² for quick target capture
- Wide coverage: azimuth 0°~360°, pitch -90°~+90° for full-dimensional, no-dead-zone detection
- High control precision with closed-loop servo and angle encoder, positioning accuracy up to 0.02°
- Tracking accuracy up to ±0.5 mrad using advanced acquisition/tracking algorithms and precision servo control
- Intelligent functions include hot alarm, intrusion alarm, target tracking, radar linkage, panoramic mosaic, and 3D zoom positioning
- Multiple redundant protection with internal temperature monitoring and industrial defroster
- Environmental adaptability with IP67 rating, anti-corrosion coating, and high-corrosion-resistant connectors

APPLICATIONS

- Airport bird deterrence and perimeter security
- Border and coastal defense
- Harbor and maritime surveillance
- Oil field security
- River lane monitoring
- Safe city and critical infrastructure protection

TECHNICAL SPECIFICATION

HOUSING	
IP rating	IP67
Nitrogen filled	Yes
Corrosion protection	High performance anti-corrosion paint
Connector	High anti-corrosion connector
ENVIRONMENT	
Internal temperature monitoring	Supported
Defroster	Directional industrial defroster
Harsh environment operation	Supported
PTZ	
Pan/tilt speed	Up to 80°/s
Acceleration	Up to 100°/s ²
Azimuth range	0° ~ 360°
Pitch range	-90° ~ +90°
Positioning accuracy	Up to 0.02°
Tracking accuracy	±0.5 mrad
Load capacity	Supports large magnification visible light camera, large aperture refrigeration thermal imager
Control system	High-precision closed-loop servo control system with precision angle encoder
THERMAL	
Detector type	5th generation FPAVOx uncooled detector
Detector array	640 × 512
Wavelength	7.5~14 μm

TECHNICAL SPECIFICATION

THERMAL	
NETD	40mK
Lens focal length	31 ~ 155mm
Optical zoom	5x continuous
Zoom type	Electric
Focus	Manual/auto
Focus algorithm	3A adaptive active focus algorithm
Trigger modes	Multiple
Lens mode	3CAM mode
Optical structure	AS + DOE optical structure
Image enhancement technology	SDE Digital Image Enhancement Technology
Enhancement levels	255
Pseudo-color count	16
Polarity	Hot black/hot white
AGC	Automatic gain control
Brightness adjustment	Supported
Contrast adjustment	Supported
Zoom range	1.0 ~ 8.0x continuous (step 0.1)
Relay doubling	Optical/electronic

TECHNICAL SPECIFICATION

THERMAL	
Hawk-eye diagram	Supported
Bad correction	Supported
Correction modes	Manual/background/auto
Gamma correction	Supported
Bright light protection	Sun damage protection
Field of view	20° × 15° ~ 4° × 3°
DETECTION	
Small boat (2.3×2.3 m) detection distance	13km
Human (1.8×0.5 m) detection distance	4.8km
RECOGNITION	
Small boat (2.3×2.3 m) recognition distance	3.4km
Human (1.8×0.5 m) recognition distance	1.3km
IDENTIFICATION	
Small boat (2.3×2.3 m) identification distance	1.7km
Human (1.8×0.5 m) identification distance	0.6km
VISIBLE	
Sensor type	Backlit ultra-low illumination star-level CMOS
Resolution	1920 × 1280
Minimum illuminance (color)	0.0005 lux
Minimum illuminance (B/W)	0.0001 lux
Minimum illuminance (IRON)	0 Lux
Lens focal length	8 ~ 500mm

TECHNICAL SPECIFICATION

VISIBLE	
Optical zoom	62x continuous
Zoom type	Mega HD electric zoom
Focus	Manual/auto
Focus algorithm	3A adaptive active focus algorithm
Visible spectral window	0.4-0.75 μm
NIR spectral window	0.8-0.95 μm
Electronic fog penetration	Supported
Optical fog penetration	Supported
White balance	Supported
Electronic shutter	Supported
Frame accumulation	Supported
Backlight compensation	Supported
Strong light suppression	Supported
Digital noise reduction	2D/3D
Electronic anti-shake	Supported
Wide dynamic	Supported
Heat wave drift suppression	Supported
LASER	
Ranging module	Optional

TECHNICAL SPECIFICATION

ENHANCEMENTS	
Automatic tracking	Supported
Hot alarm	Supported
Area intrusion alarm	Supported
Cross-border intrusion alarm	Supported
Target tracking	Supported
Small target recognition	Supported
Radar linkage	Supported
Panoramic mosaic	Supported
3D zoom positioning	Supported
Background management software	General Self developed

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

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