

TQM-1M Series

UnCooled Thermal Imaging Camera Module

SPECIFICATIONS

* Specifications are subject to change without notice.

DETECTOR

Detector Type	Uncooled Micro Bolometer, 640x480
Pixel Pitch	12μm
Spectral Response	8μm ~ 14μm (LWIR)
Frame rate	30Hz
Thermal Time Constant	<10ms
NETD	Room Temperature Condition - Performance Grade: ≤ 50mK
Operability	≥ 99.5%

VIDEO

Video Format	All Digital Standard Format applied - CVBS 720x480i60, 720x576i50 - BT.1120 SEP16 1280x720p30
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FUNCTION

Calibration	Manual/Interval/Auto Mode Selectable
Image Enhance	Brightness, Contrast, Equalization, Edge, CLAHE
Image Utility	Auto Focus, DIS, DNR
Colorization	3EA (Gray, Jet, Plasma)
D-Zoom	X1.0 ~ X4.0 (per X0.1)

MECHANICAL

Dimensions (WxHxD)	50mm x 50mm x 50mm (without lens)
Weight	150g (without lens)

ELECTRICAL

Power Consumption	3.5 W
Power Supply	12V

ETC

Operating Temperature	-32°C ~ +60°C
Storage Temperature	-40°C ~ +65°C
Command & Control	RS232
NUC	Factory Calibrated, Periodic Shutter Calibration



TQM-1M is an Intelligent Thermal Engine Module applied with Cutting Edge GPU Processor. This elaborated module, provides User's friendly Development Characteristics such as various interfaces & video format, easy mount and a multiple of optical lens options for customer's camera systems.

FEATURES

- Automotive Certificated SoC Processor Applied (AEC-Q100)
- User's selectable optical FOVs
- Various IR Image Processing and Standard Digital Video Interfaces
- Designed for commercial and Military Environments

APPLICATIONS

This module is the most suitable for EST Camera and SWaP-C applications, which are Hand-held Thermal Imaging Systems, Surveillance, UAV/Drone, Automotive Night Vision and etc.

LENS OPTION

D : Detection R : Recognition I : Identification * Actual range may vary depending on camera setting, environmental conditions and type of monitor used.

Lens Focal length	6.2mm	19mm	26-105mm	15-150mm	25-225mm
HFOV	75°	22.8°	17.1°~4.1°	29°~2.9°	17.7°~1.9°
F/#	F/1.0	F/1.03	F/1.6	F/0.85-1.35	F/0.95~1.5
DRI Human 0.5 x 1.7 m	D : 280m R : 70m I : 30m	D : 680m R : 180m I : 90m	D : 3.83km R : 0.9km I : 0.48km	D : 5.47km R : 1.29km I : 0.68km	D : 8.2m R : 1.93km I : 1.02km
DRI Vehicle 2.3 x 2.3 m	D : 570m R : 150m I : 80m	D : 1,260m R : 350m I : 180m	D : 10.85km R : 2.25km I : 1.19km	D : 15.46km R : 3.21km I : 1.7km	D : 23.19km R : 4.81km I : 2.56km
Dimensions (Unit : mm, DxL)	Ø30 x 17.96	Ø30 x 19.78	Ø82 x 119	Ø187 x 214.75	Ø200 x 270.9
Weight	30g	35g	550g	3.2kg	4.13kg



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