



Turing F1024

Uncooled Infrared Module

Turing F1024 uncooled infrared module has a built-in high-sensitivity VOx infrared detector, providing a consistently high-performance kernel, ultimate image algorithms, and technology of lens control, bringing a new experience for long-distance monitoring. The product can be widely used in application scenarios such as perimeter security, high-altitude observation, forest fire prevention, and water area monitoring.



Product Highlights

Powerful Detector Performance

- It has a built-in high-sensitivity VOx infrared detector, providing a consistently high-performance kernel, ultimate image algorithms, and technology of lens control, bringing a new experience for remote monitoring.
- The product can be widely used in application scenarios such as perimeter security, high-altitude observation, forest fire prevention, water area monitoring, and industrial temperature measurement..



Upgraded Image Algorithm

- The module has upgraded the image algorithm to the new generation and optimized it for special scenarios, such as forests, sea, sky, rainy, and foggy weather, providing customers with clear and sharp infrared images.



Providing Optimized Lens

- It supports athermalized prime lenses, prime electric focusing lenses, and continuous zoom lenses.
- It can realize electric focus, continuous zoom, automatic focus, and defocusing compensation functions, etc.



Multiple Interfaces

- It provides Ethernet, LVCMOS, BT.1120, and other video output interface options.
- Expandable SDI, USB, Cameralink, and HDMI interfaces.
- It provides an SDK, which is simple and easy to use, shortening the development cycle, improving efficiency, and reducing secondary development costs.



Specifications

Model	Turing F1024 Imaging
Performance Characteristics	
Detector Type	Uncooled VOx infrared detector
Resolution	1024×768
Pixel Pitch	12μm
Frame Rate	30Hz
Spectral Band	8~14μm
NETD	≤50mK@25°C,F#1.0
Image Adjustment	
Palette	Support (20)
Digital Zoom	1.0~4.0× continuous zoom (step size: 0.1)
Brightness/Contrast Adjustment	Manual/Automatic 0/Automatic 1
Image Processing	Non-uniformity correction, digital filtering noise reduction, and digital detail enhancement
Mirror Image	Horizontal/Vertical/Diagonal
Network Function	
Network Protocol	TCP/IP, UDP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, RTP, RTSP, RTCP, IGMP, SMTP, NTP, QoS, and other network protocols
Platform Access	ONVIF, GB28181, and SDK
Simultaneous Previewed Videos	Up to 20 channels
User Management	Up to 20 users, 3 levels: administrator, operator and user
Browser	Supports IE8+ and various languages
Intelligent Function	
Fire Point Detection	Support
Intelligent Video Taking	Support
Intelligent Alarm	Support abnormality detection and linkage alarm for network cable disconnection, IP address conflict, full memory, memory error, and illegal access
Intelligent Detection	Tripwire, border-crossing and regional intrusion detections, and other intelligent video analysis functions
Alarm Linkage	Video taking/Image capture/Email/Linked PTZ/Alarm output
Lens Control	
Lens Type	Athermalized/Prime electric focusing/Continuous zoom
Focus Mode	Manual/Automatic
Electric Focus	Support
Electric Zoom	Support
Digital	
Power Supply Range	5-24V DC (12V DC recommended)
Power Consumption	<2.4W (Typical, @25°C)
Digital Video	LVCMOS/LVDS/BT.1120/SDI
Communication Interface	RS-232/RS-485
Weight	102.7g (without lens)
Dimensions	45mm×45mm
Online	
Power Supply Range	12V DC ±10%
Power Consumption	<3.0W (Typical, @25°C)
Communication Interface	One RJ45 10M/100M adaptive Ethernet port, one RS-485
Alarm Interface	1-channel alarm input, 1-channel alarm output
Audio Interface	1-channel audio input, 1-channel audio output
Weight	180.9g (without lens)
Dimensions	45mm×45mm
Environment Adaptability	
Operating Temperature	-40°C~+60°C
Storage Temperature	-45°C~+85°C
Humidity	5-95%, non-condensing
Product Certification	RoHS2.0

Applications



Perimeter Surveillance



Forest Fire Prevention



Security Monitoring



Urban High-Altitude Observation

Raythink Technology Co., Ltd.

Company Address: No.5 Wanshoushan Road, Fulaishan Street, Yantai Area of China (Shandong) Pilot Free Trade Zone Postal Code: 264000

Official Website: <http://www.raythink-tech.com> Service Email: sales@raythink-tech.com

The information is for illustrative purposes only. The pictures and technical specifications are subject to change without notice. Sample No.: O2025-Turing F1024-2P001