Raythink

Turing F1920
HD Uncooled Infrared Module
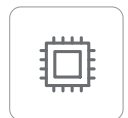
The brand-new Turing F1920 is equipped with the world's first 8μm 1920×1080 HD infrared detector, and the NETD as low as 30mK. Combined with our self-developed efficient large-array image algorithm, the device provides customers with more subtle, sharper, and clearer thermal images. It supports multiple lenses and applies the lens control technology, offering a comprehensive observation solution within a range of 1m~15000m in fields such as perimeter security, high-altitude observation, oil field monitoring, forest fire prevention and scientific research in universities.

Product Highlights

High-pixel, High-integration

- 2 megapixels, 1920×1080 HD resolution, large FOV, providing an immersive experience
- Video output interface options including network interfaces, LVCMOS, BT.1120 and MIPI, with extensions for interfaces such as SDI, USB, Camera Link, and HDMI
- Gigabit network interface, multiple SDKs, facilitating customers to launch simple, efficient integrated secondary development at a low cost

Quick Focus, Quick Recognition

- New lens control technology for ≤1s automatic focus, full focus in all temperature ranges
- Quick recognition algorithm within 50ms

Multi-lens Adaptability, Multi-scenario Application

- Multiple athermalized prime lenses with a max FOV of 82°, prime electric focusing lenses, and continuous zoom lenses
- 8μm infrared detector for further recognition in fields of perimeter security, high-altitude observation, oil field monitoring
- Rich image style options for ideal image effect in scenarios such as border & coastal surveillance and forest fire prevention

Stable Output, Steady Images

- Stable and reliable 30Hz data stream output to monitor targets in each frame
- Standard electronic anti-shake technology to provide stable images even in strong wind or at high altitudes

Specifications

Product Model	Turing F1920
Performance Characteristics	
Detector Type	Uncooled VOx Infrared Detector
Resolution	1920×1080
Pixel Pitch	8μm
Frame Rate	30Hz
Spectral Band	8～14μm
NETD	≤30mK@25°C, F#1.0
Palette	Support (20)
Digital Zoom	1.0~8.0× continuous zoom (step size: 0.1), supporting zooming in any area
Image Processing	Non-uniformity correction/Brightness and contrast adjustment/Temporal filtering noise reduction/Spatial filtering noise reduction/Digital detail enhancement/Image style switch
Mirroring	Horizontal/Vertical/Diagonal
Electronic Anti-shake	Support
Fire Alarm	Support
High Light Protection	Support
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, SDK
Browser	Chrome, Edge, Firefox, etc. in various languages
Intelligent Video Taking	Support
Intelligent Alarm	Abnormality detection and linkage alarm for network cable disconnection, IP address conflict, full memory, memory error, illegal access
Intelligent Detection	Tripwire, regional intrusion, target tracking, and other intelligent video analysis functions
Alarm Linkage	Video taking/Image capture/Email/Linked PTZ/Alarm output
Lens Type	Athermalized/Prime electric focusing/Continuous zoom
Focus Mode	Manual/Automatic (focus time ≤ 1s near clear points)
Electric Focus	Support
Electric Zoom	Support
Digital	
Power Supply Range	5-24V DC (12V DC recommended)
Power Consumption (Typical, @25°C)	≤3.8W
Digital Video	LVCMOS/BT.1120/MIPI, with extensions for SDI, USB, Camera Link, HDMI
Communication Interface	RS-232/RS-485
Weight	165g±5g (without lens)
Dimensions	55mm×55mm
Online	
Power Supply Range	12V DC ± 10%
Power Consumption (Typical, @25°C)	≤6.5W
Communication Interface	One 10M/100M/1000M 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	240±10g (without lens)
Dimensions	55mm×55mm×53mm
Physical Characteristics	
Operating Temperature	-40°C～+70°C
Storage Temperature	-45°C～+85°C
Humidity	5-95%, non-condensing
Product Certification	RoHS2.0

Applications

Perimeter Security · High-altitude Observation · Oil Field Monitoring · Forest Fire Prevention · Scientific Research in Universities

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