

SPECTRA L06NT

640×512 Uncooled LWIR Network Imaging Module

Overview

Spectra L06NT is a high-accuracy infrared module for general IP networks. Combining infrared array temperature measurement with IP networking, it supports a wide range of standard network protocols and ships with a rich, easy-to-use SDK. Compact and small in size, it delivers high measurement accuracy and a wide temperature range for integration into security monitoring, industrial inspection and other thermometry terminals that require online network support.



640×512

RESOLUTION



12 μm

PIXEL PITCH



≤20 mK

NETD



45×45 mm

DIMENSIONS

Key Features

Accurate Measurement, Sensitive Perception

- 640×512 full-array temperature output with accuracy of ±2°C or ±2% of reading (whichever is greater)
- Wide measurement range of −20°C–+150°C and 100°C–+550°C, with custom extended ranges available

Broad Compatibility, Always Online

- Supports common network protocols including TFTP, RTP, RTCP, RTSP, ONVIF, DHCP, GB/T 28181, UPnP and NTP
- Supports H.264 / H.265 / MJPEG video encoding

On-Board Storage, Easy Development

- Supports 32 GB on-board storage and Windows / Linux SDK
- PoE power supply and multiple serial communication options

Typical Applications



Security Monitoring



Outdoor Night Vision



Industrial Inspection



Machine Vision



Technical Specifications

Detector Performance

Sensitive Material	Vanadium oxide (VOx)
Resolution	640×512
Pixel Pitch	12μm
Spectral Band	8μm ~14μm
Typical NETD	≤20mK

Image Processing

Effective Pixels	640×512
Stream	25Hz/30Hz
Video Encoding	H.264/H.265/MJPEG
Bit Rate	100 K–8 Mbps configurable
Image Coding	JPEG
Boot-up Time	≤10s
Digital Video Format	YUV420+Matrix-TEMP
Image Algorithms	NUC/DRC/DNS/DDE/SFFC
Image Display	10 (white-hot / lava / iron-red / hot-iron / medical / arctic / rainbow-1 / rainbow-2 / red-trace / black-hot)

Protocols & Storage

Network Protocols	TFTP, RTP, RTCP, RTSP, ONVIF, DHCP, GB/T 28181, UPnP, NTP
Storage	32G EMMC
SDK / API	Windows / Linux

Electrical Interfaces

Standard Connector	12PIN(A1257WV-S-12P)+RJ45
Communication Interface	RS-232 / RS-422 / RS-485 (PELCO-D), 4800 bps
Network	100M / 1000M Ethernet

Temperature Measurement

Ambient Temp. for Measurement	-10°C~+50°C
Measurement Range	-20°C~+150°C, 100°C~+550°C; extended ranges on request
Measurement Accuracy	±2°C or ±2% (whichever is greater)
Region Temperature	Region measurement with max / min / average output

Power Supply

Supply Range	DC 9–15 V; PoE
Typical Power	3W@23±3°C

Physical / Lens

Bare Dimensions (mm)	45 mm×45 mm
4.8 mm fixed	FOV 77.3°×65.2° · IFOV 2.5 mrad DRI (est.) 340/110/57 m
7 mm fixed	FOV 57.5°×47.4° · IFOV 1.71 mrad DRI (est.) 500/170/83 m
9.1 mm fixed	FOV 45.8°×37.3° · IFOV 1.32 mrad DRI (est.) 640/210/110 m
13 mm fixed	FOV 32.9°×26.6° · IFOV 0.92 mrad DRI (est.) 920/310/150 m
25 mm fixed	FOV 17.5°×14.0° · IFOV 0.48 mrad DRI (est.) 1800/590/300 m
Shock	Half-sine 40 g / 11 ms, 3 axes
Vibration	5.35 g random vibration, 3 axes 6 directions
Ingress Protection	Window IP67

D/R/I: estimated detection / recognition / identification range (m), Johnson criteria at 50% probability, standard human target 1.7 m × 0.5 m; actual range varies with scene and target.

Environmental

Operating Temp.	-40°C ~ +70°C
Storage Temp.	-45°C ~ +85°C
Humidity	5%–95%, non-condensing

Certifications

RoHS / REACH	ROHS2.0/REACH
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Specifications subject to change without notice.

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