LC16H2 High frame rate long wave cooling infrared thermal imaging thermometer

Technical Specifications

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LC16H2 High Frame Rate Long Wave Refrigerated Infrared Thermal Imaging Thermometer

Technical Specifications

1 Product Description

LC16H2 high frame rate long-wave cooled infrared thermal imaging thermometer adopts high-performance long-wave HgCdTe cooled infrared detector, which has the characteristics of high sensitivity, fast response speed and high frame rate, and can obtain the infrared thermal distribution of fast-moving targets; the product has rich data interfaces and professional data analysis software, and can be widely used in various scientific research fields.

Figure 1 Product image of LC16H2 high frame rate long wave cooling infrared thermal imaging thermometer

2 Features

- Cooled long wave detector;
- 640×512 resolution;
- Full resolution frame rate 200Hz;
- Adapt to various lenses including standard, wide-angle, telephoto, and microscopic lenses;
- The highest temperature can reach 2000℃;
- 16-bit digital output;
- Can output Cameralink digital video and network video at the same time.

3 Product Specifications

Detector	
Detector Type	Long-wavelength cooled MCT focal plane detector
Refrigeration method	Stirling closed loop refrigeration

Number of pixels	640 × 512
Pixel spacing	1 5 μm
Wavelength range	7.7 ～ 9.5 μm
Thermal sensitivity (NETD)	≤ 25 mk@30℃
Frame rate	200Hz (full resolution output)
Cooling time	≤7.5min@25℃
F-number	F2
Image processing and display	
Color Palette	Multiple color palettes including white hot, black hot, iron red, rainbow, etc.
Contrast, brightness	Automatic/Manual
Data Format	16-bit temperature data (full bit stream)
Electronic Amplification	2X, 4X
Temperature measurement analysis	
Temperature measurement accuracy	±2℃ or ±2%
Temperature measurement range	-20℃～ 2000 ℃
Electrical Characteristics	
Data Interface	RJ45 , Cameralink, Serial port
Web Standards	Gigabit and 10GbE
Protocol support	UDP
Input power voltage	DC 24±2V
Steady-state power consumption	< 25 W
Reverse polarity protection	have
Over-voltage and under-voltage protection	have
Environmental parameters	
Operating temperature	-40 ℃～ + 60 ℃ (-20 ℃～ + 60 ℃ to ensure temperature measurement accuracy)
Storage temperature	-50 ℃～ + 70 ℃
Temperature shock resistance	5℃/min (-40℃～ + 60℃)
Vibration resistance	4.3g, 2 hours for each of x, y and z axes
Shock resistance	Acceleration 30g, half sine wave, pulse width 6ms, impact 3 times in the installation direction
humidity	≤95%(non-condensing)
Lenses	
focal length	25mm, 50mm, 100mm, 200mm and other focal length lenses are available
Focus mode	Manual /Electric
Physical properties	
Dimensions	Length × width × height: 205mm × 100mm × 160mm (excluding lens)
weight	≤5kg
Mounting holes	Universal tripod mount
Client	
Real-time temperature display	support
Various temperature	support

measurement objects	
Alarm function	support
Record/Photograph/Playback	support
SDK development package	
Operating Environment	Support win32, x64 , Linux (x86 /ARM)
Data Acquisition	16-bit temperature data (full stream) through callback function

4 Structural dimensions

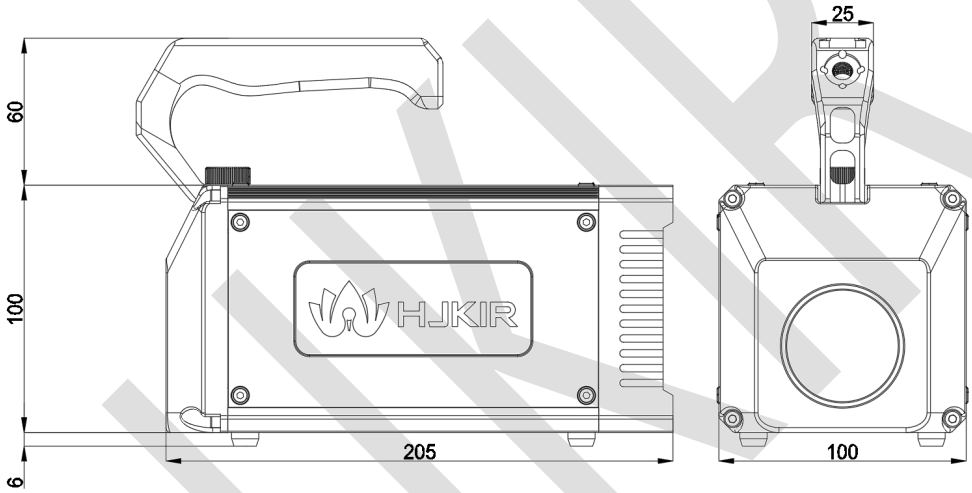

Figure 2 LC16H2 high frame rate long wave cooling infrared thermal imaging thermometer structure size diagram

5 Interface Diagram

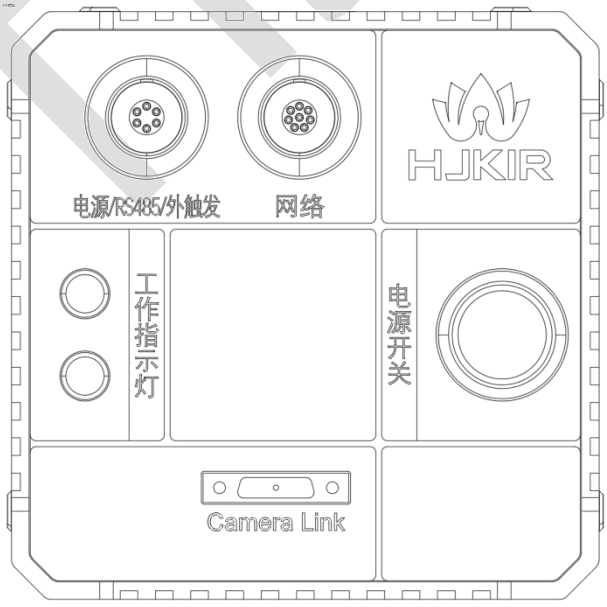

Figure 3 Interface diagram of LC16H2 high frame rate long wave cooling infrared thermal imaging thermometer

6 Software Features

1. Real-time infrared video display: can display full radiation thermal images in real time around the clock.

2. Temperature curve: Supports drawing real-time temperature curves of global or specific temperature measurement objects, thereby helping users to determine temperature trends. The real-time temperature changes of key areas of the coal pile can be previewed in real time on the dashboard interface ;

3. Temperature tracking: supports high and low temperature tracking function, automatically analyzes the temperature change trend of the entire thermal image or a specific area , automatically captures the highest/lowest temperature point, and discovers potential danger areas early ;

4. Temperature marking: Supports high temperature marking function, which can

automatically mark high temperature locations on the image, helping users to find the location of over-temperature points more quickly so as to make corresponding decisions accurately;

5. Custom temperature alarm: supports 11 different alarm types. According to the temperature changes of the object to be measured, it is mainly divided into 11 types: over-temperature alarm, temperature rise alarm, temperature drop alarm, high temperature interval alarm, low temperature alarm, low temperature interval alarm, temperature range alarm, regional temperature difference quotation, average temperature alarm, etc. Help users quickly grasp the temperature changes of the object to be measured, so as to achieve early warning and early processing ;

6. Alarm capture: Supports alarm capture, records alarm instant images, and records alarm videos. When an alarm event occurs, the system will automatically capture the current monitoring screen and record alarm videos;

7. Data storage: Alarm data , detection data, and file data are stored on the corresponding data pages for users to quickly call and analyze;

8. Multi - dimensional data supervision: The system can be divided into alarm data, detection data, and file data. It can be classified and managed according to the different data generation methods, so that data analysis can be carried out more targetedly;

9. Historical data analysis: The system can analyze offline the pictures and videos stored manually and automatically when the alarm is triggered, so that users can trace back the temperature changes of the measured target and use this as a basis to determine the cause of the abnormal situation.

10. Automatic recovery: supports automatic recovery after power failure and restart , and automatically saves the last device connection properties;

11. Temperature measurement correction: support temperature correction , you can manually set the temperature measurement parameters and correct the temperature measurement accuracy ;

12. System management: System operation management can set system language, file storage, alarm data preservation, account management, role permissions and other multi-dimensional data, and record system operation logs .

7 Configuration List

Serial number	name	model	unit	quantity	Remark
1	High frame rate long wave cooling infrared thermal imaging thermometer	LC16H2	tower	1	With lens
2	Power adapter	GST60A	indivual	1	
3	Network cable	CAT6	root	1	Standard 3m
4	Cameralink Video Cable	custom made	root	1	Standard 3m
5	Tripod	-	indivual	1	Optional
6	Client Software	IRT	set	1	Installation CD included
7	Instructions for use and maintenance	-	Book	1	
8	Certificate of conformity, warranty card	-	Book	1	
9	Factory inspection report	-	Books	1	