K46E35R6 Online infrared thermal imaging thermometer

Technical Specifications

HJKIR

Contents

HJKIR

1 Product Description

K 46E35R6 online infrared thermal imaging thermometer adopts 12 μm uncooled infrared focal plane detector, high-performance infrared lens and signal processing circuit, and embeds advanced image processing algorithm. It has the characteristics of small size, low power consumption, fast startup, excellent imaging quality and accurate temperature measurement.

K 46E35R6 online infrared thermal imaging thermometer fully considers the requirements of high and low temperature working performance to ensure that the whole machine has excellent environmental adaptability.

K 46E35R6 online infrared thermal imaging thermometer features :

1. It has all-weather passive thermal imaging function, has strong smoke penetration performance, and can be used in a wide range of ambient temperature ;

2. High frame rate design allows observation of fast-moving targets ;

3. Adopt self-developed temperature measurement and correction algorithm to achieve accurate temperature measurement;

4. Output full-stream lossless 16-bit temperature data, provide client software and SDK development kit , facilitate customers to carry out secondary development and system integration, and fully carry out personalized temperature analysis of the measured target .

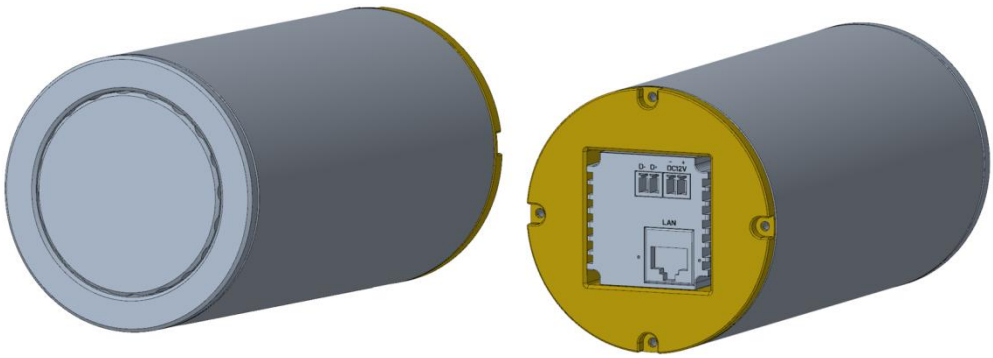

Figure 1 Overall view of online temperature measurement infrared thermal imager

2 Product Specifications

detector	
Detector Type	Uncooled focal plane microbolometer
Number of pixels	640 × 512
Pixel spacing	1 2 μm
Wavelength range	8～14μm
Thermal sensitivity (NETD)	≤50mk@30℃
Frame rate	≤50Hz (configurable)
Image processing and display	
Imaging time	≤1 5 S
Color Palette	Multiple color palettes including white hot, black hot, iron red, rainbow, etc.
Data Format	16-bit temperature data (full bit stream)
Temperature measurement analysis	
Temperature measurement accuracy	±2℃ or ±2%
Temperature measurement range	Normal temperature: -20℃～200℃ Medium temperature range: 50 ℃～ 650 ℃
Electrical Characteristics	
Data Interface	RJ45
Web Standards	100M/1000M (100M network needs to reduce frame rate)
Protocol support	UDP
Power interface	2EDGKD-3.81mm/2P
Input power voltage	5V ～12VDC
Communication interface	UART@ RS 485 (reverse control of PTZ and camera)
Steady-state power consumption	< 2.2 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	Macro lens 35 mm (F# 1.0)
Focus mode	Manual
Range	75mm
Magnification	2X
Minimum resolvable size	6 μ m
Object width	3.84mm
Object height	3.072mm

Physical properties	
Dimensions	ϕ 80 mm × 163 mm
weight	< 1kg
Mounting holes	M3 and four M4 at the bottom
Client	
Real-time temperature display	support
Various temperature measurement objects	support
Manual temperature window stretch	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

3 Electrical interface

3.1 Interface Diagram

The infrared thermal imager has three external interfaces, namely 2PIN SH interface (RS485), 2PIN SH interface (power supply) and RJ45 interface. The interface diagram is shown in the figure below.

- 2PIN SH connector (power supply) provides 5V ~12V power interface ;
- 2PIN SH connector (RS485) provides RS485 communication interface;
- RJ45 connector provides a network digital video output .

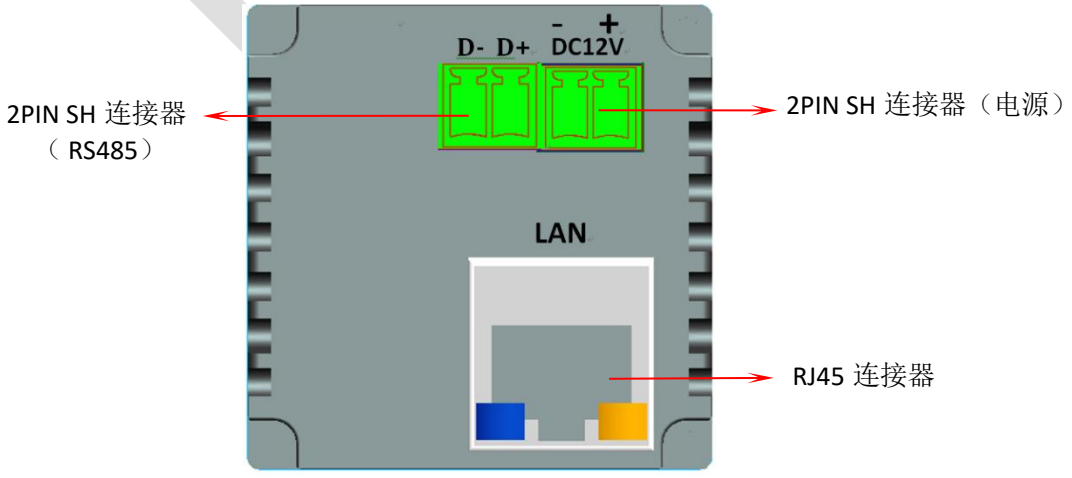

Figure 2 Interface diagram

3.2 Interface Definition

The infrared thermal imager has three external interfaces: two 2-pin SH connectors and one RJ45 connector . The RJ45 connector is a standard definition, the signal definition of the 2-pin SH connector (power supply) is shown in Table 1, and the signal definition of the 2-pin SH connector (RS485) is shown in Table 2.

Table 1 Signal definition of 2PIN SH connector (power supply)

Pin	Signal Name	Function	Description
1	DC12V+	Power	5V ~12V Input
2	DC12V -	Power	Digital Ground

Table 2 Signal definition of 2PIN SH connector (RS485)

Pin	Signal Name	Function	Description
1	D+	Communication	RS485 D+
2	D-	Conference	RS485 D-

4 Structural dimensions

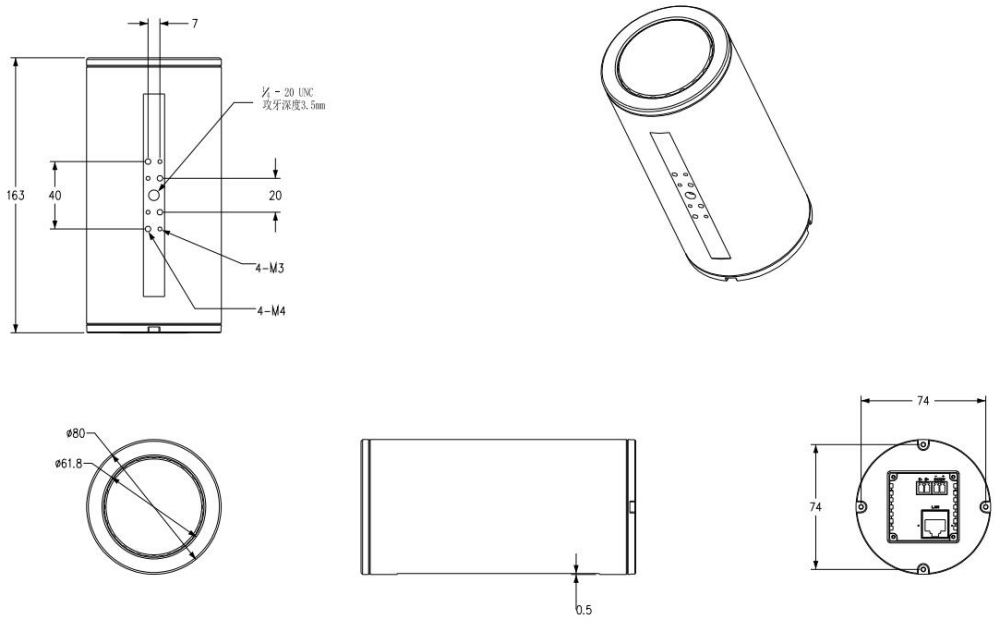

Figure 3 Structural dimensions