Product Description

ATP8730 is an ultra-high-resolution, high speed, short-wave infrared series micro-optic spectrometer with a maximum working range of 900-1700nm. The actual working range can be customized. It adopts a 1024-pixel InGaAs array detector, and the optical path has a resolution of 30pm. Special dual sampling processing circuit is developed to reduce the noise of the CCD sensor and thus improve the signal-to-noise ratio (SNR). ATP8730 spectrometer receives SMA905 fiber input light or free space light. The measurement spectral data can be outputted through the USB2.0/3.0 or UART port.

Key Features

- 1024-pixel InGaAs detector
- Ultra-high frame rate: 30KHz
- Maximum spectral range: 900-1700nm (customized)
- Minimum spectral resolution: 30 pm (related to the width of the incident slit)
- Integration time: 10μs - 256s.
- Power supply: DC 5V@<1A
- Power interface: USB power supply
- ADC depth: 16 bits
- ADC sampling rate: 10 MHz
- Optical input interface: SM905 optical fiber
- interface or free space input
- Data output interface: USB3.0 and UART
- 20-pin extended interface
- Off-SMA trigger signal

Typical Applications

- Monitoring of the laser wavelength
- Optical communication wavelength monitoring
- High-speed ion luminescence monitoring
- Food sorting, moisture, protein, fat and fiber detection of crops
- Paper sorting
- Online monitoring of Chinese medicine production
- Solar panel inspection

Performance Specifications

Sensor	
Type	Linear array InGaAs CCD, Down to -20ºC
Detection spectral range	900-1700 nm
Effective Pixels	1024
Optical parameters	
Max wavelength range	900-1700nm, Different ranges can be customized
Optical resolution	30 pm ~ 2 nm (Depends on slit, spectral range)
Max dynamic range	>1400
Optical path parameters	
Optical design	f/4 Asymmetric C-T optical path
Focal length	70 mm for incidence / 150 mm for output
Incident slit width	5, 10, 25, 50, 100, 150, 20μm Optional, other sizes can be customized
Incident light interface	SMA905 Optical fiber interface, free space
Electrical parameters	
Integration time	10μs - 256s
Maximum frame rate	>30 KHz
Data output interface	USB 3.0
ADC depth	16bit
Power supply	5VDC±5%
Working current	<1A
Operating temperature	-20°C ~ +45°C
storage temperature	-30°C ~ +70°C
Maximum working humidity	< 90%RH（No condensation）
Physical parameter	
Size	200×75×50 mm
Weight	1.5 kg

1. Dimensions

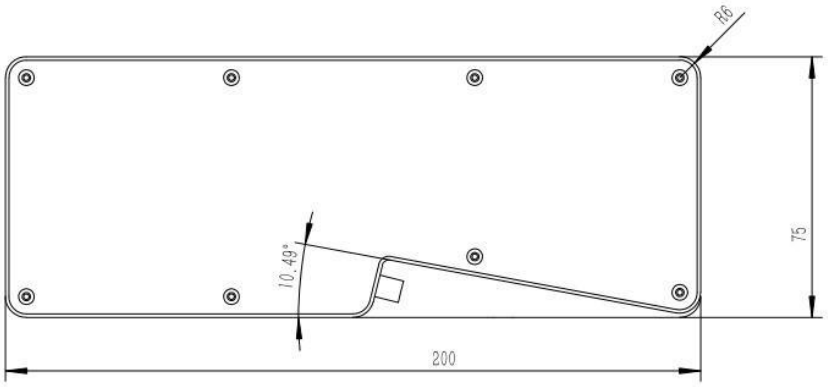

Figure 1 Dimensions of ATP8730 (front)

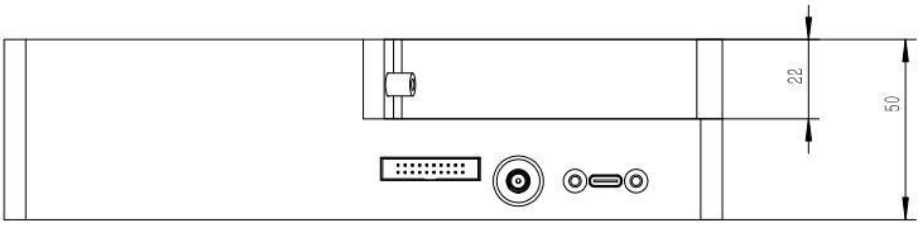

Figure 2 Dimensions of ATP8730 (side)

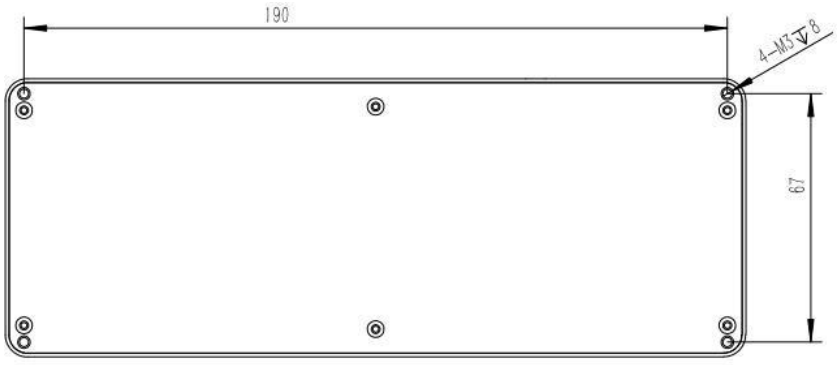

Figure 3 Location hole map of ATP8730