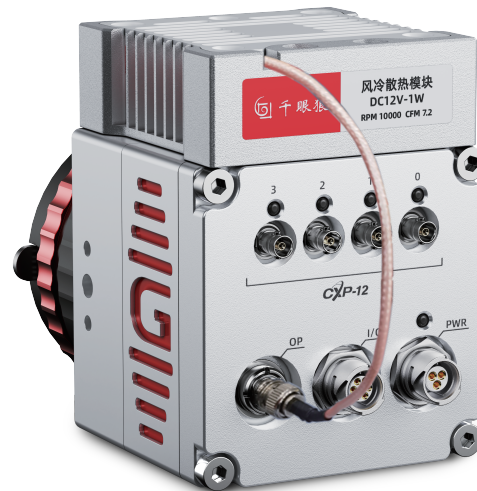


GR220M 1920×1088 @2200fps

GR210M 1920×1088 @1000fps

GR120M 1024×1024 @2000fps

GR110M 1024×1024 @1000fps



Product Introduction

High-speed camera with real-time transmission and small size, GR series using the CXP12 interface based on the CXP2.0 data transmission standard, realizing real-time transmission of high-quality images and non-destructive data.

Core Features

■ High-speed Real-time Transmission/Processing/Control

Using the CXP12 interface based on the CXP2.0 protocol, through four HD-BNC connectors for data and control interaction, the image and data of not less than 4GB/s are transmitted to the image collector or other host devices in real time, with the massive memory of the industrial computer, to achieve long-term high-speed machine vision image real-time processing, control and application.

■ Flexibility and Ease of Use

The minimization size of 65×65×61mm and the ultra-light weight design of only 500g support more flexible applications in the field of high-speed machine vision, and can be used with various types of fixtures placed on the edge, top and inside of the cabinet, and other scenarios of the high-speed production line production cabinet.





■ Excellent Image Quality

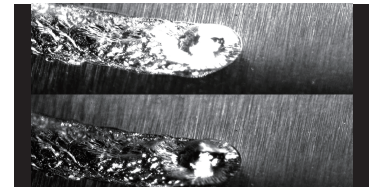
Provide 2200fps image acquisition capability at 1080P HD resolution, pre-gamma correction and bad spot correction algorithm to FPGA chip, real-time correction of acquired image data, ensuring high-speed machine vision industry also has excellent image quality.

■ Intelligent Image Triggering

GR series is equipped with intelligent image triggering function, a triggering method based on image brightness. The software automatically triggers image acquisition by detecting whether the gray value of the interest area exceeds the set brightness threshold, which is suitable for high-speed monitoring of the image brightness sudden change scene in the target area.

■ EDR Double Exposure

In order to avoid the problem of local overexposure due to improper exposure parameters, the GR series is equipped with the EDR function to detect whether the image is highlighted in a single frame, and immediately switch to the low exposure time exposure in the next frame exposure, ensuring that the camera still effectively captures the subject under the light and dark switch.



■ B-code Alignment

The GR series is connected through the B code in the internal synchronization mode, and the starting time of rising edge exposure is aligned with the arrival time of the B code second, so as to realize the accurate remote synchronization of the multi-point camera, which can replace the external synchronization cable, and is suitable for the synchronous observation of the camera aligned in the whole second.

■ Flexible Lens Interface

The GR series body adopts the M45 threaded port design, and flexibly supports the F and C mount lenses through the adapter ring, which is suitable for high-speed real-time monitoring and destructive testing in the field.

■ High and Low Temperature Working Conditions

GR series parts selection according to high and low temperature standards, from incoming materials, semi-finished products, finished products, out of the warehouse, practice the quality control measures of the whole process, with heating module, calmly cope with the needs of outdoor shooting in low temperature environment.



Typical Applications

Industrial fault real-time detection



Artificial heart valve fatigue test



Destructive field test



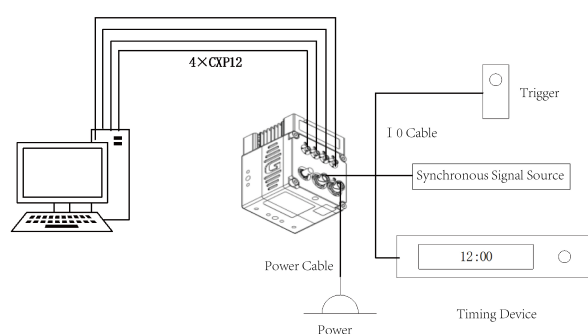
Shooting Speed and Exposure Time

Model	GR220M	GR210M	GR120M	GR110M
Sensor type	CMOS	CMOS	CMOS	CMOS
Typical resolution @ frame rate	1920×1088@2200fps	1920×1088@1000fps	1024×1024@2000fps	1024×1024@1000fps
Pixel size	9μm	9μm	9μm	9μm
Shutter type	Global shutter	Global shutter	Global shutter	Global shutter
Min. exposure time	1μs	1μs	1μs	1μs
Automatic exposure	Support	Support	Support	Support

Connection and Signal

Interface name	Description	No.	Definition	Level standard
PWR	Power input	1、3	Input power negative (GND)	GND
		2	Input power positive (+24V)	+24V
I/O	Control signal	1	DC IRIG_B code input	TTL 5V
		2	SYNC_IN, synchronization signal input	TTL 5V
		3	GND, signal reference ground	GND
		4	TRIG_IN, trigger signal input	0-12V
		5	SYNC_OUT, synchronization signal output	TTL 5V
		6	GND, signal reference ground	GND
OP	Power output	-	Controllable power output interface	+12V
CXP	Data connection	-	CoaXPress 2.0 interface	CXP2.0, support for PoCXP

Hardware System Construction



Data Transmission and Storage

Model	GR220M	GR210M	GR120M	GR110M
Data interface	4-way CXP12	2-way CXP12	2-way CXP12	1 way CXP12
Transmission bandwidth	>4GB/S	>2GB/S	>2GB/S	>1GB/S
Data storage	Real-time storage	Real-time storage	Real-time storage	Real-time storage
Customizable industrial computer	7TB~30TB	7TB~30TB	7TB~30TB	7TB~30TB

Mechanical Parameter

Model	GR220M	GR210M	GR120M	GR110M
Lens interface	C、F	C、F	C、F	C、F
Dimensions W x H x D	≤65×65×61mm	≤65×65×61mm	≤65×65×61mm	≤65×65×61mm
Weight	≤500g	≤500g	≤500g	≤500g
Mounting hole	Bottom: 1/4 hole x 2 Side: 1/4 hole x2 (1 for each side)	Bottom: 1/4 hole x 2 Side: 1/4 hole x2 (1 for each side)	Bottom: 1/4 hole x 2 Side: 1/4 hole x2 (1 for each side)	Bottom: 1/4 hole x 2 Side: 1/4 hole x2 (1 for each side)
Cooling mode	External fan (removable)	External fan (removable)	External fan (removable)	External fan (removable)

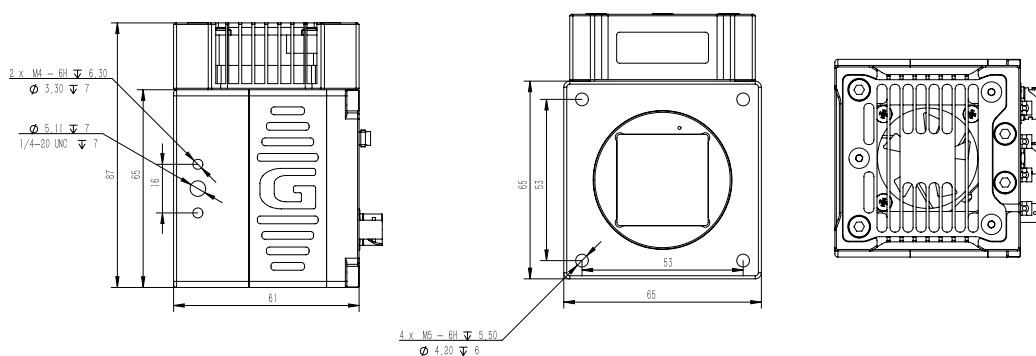
Electrical Parameter

Model	GR220M	GR210M	GR120M	GR110M
Power supply mode	CXP cable power supply / 24VDC	CXP cable power supply / 24VDC	CXP cable power supply / 24VDC	CXP cable power supply / 24VDC
Power consumption	≤15W	≤15W	≤15W	≤15W

Environmental Parameter

Model	GR220M	GR210M	GR120M	GR110M
Working temperature	0°C~40°C	0°C~40°C	0°C~40°C	0°C~40°C
High and low temperature customization	Support	Support	Support	Support
Working humidity	0~95%	0~95%	0~95%	0~95%
Class of protection	IP64	IP64	IP64	IP64

Installation Dimension Drawing



Quality Service

- Professional technical support services
- Strong custom development capability
- Fast shipping within 14 working days for standard products
- 24-hour after-sales service
- Promises 1 month fast repair within the warranty period, will provide a substitute device if can not repair it within this time