

# P-series

## High-definition Industrial Endoscope



## Introduction:

P series industrial videoscope is a creative one composed of a flexible tube and a small - size body. Its CMOS image process system with 1,000,000 pixels provides ultra clarity and a perfect original display. A component design with 8 - inch ultra clear touch screen, 100,000 LUX brightness, an electronic magnetic rocker which can adjust omnidirectionally for 360°, and its lower price, 30% - 50% cheaper than similar specifications, which helps the P Series enjoy its superiority.

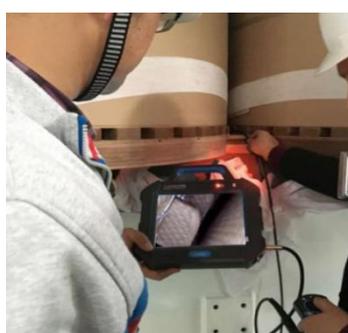
## Technical Advantages:



1、 Intelligent image processing system with megapixels module to show super clean image.

2、 Built-in color setting and module automatically identify systems.

3、 One base unit can match all kinds of probes.



4、 Fiber and LED with 10 degree brightness adjustment.

5、 8 inch high resolution screen, image visible under sun light.

6、 Side lens, dual lens ,forward view lens and UV light are available, optional probe diameter 2.2mm, 2.8mm, 4.0mm, 6mm.

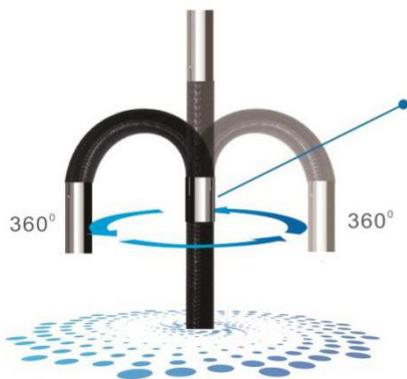


### Locking automatically and fixed position memory

Holding on for 3 seconds to lock when probe bent; Open fixed position memory function after locking. Probe will bend around locking point when the rocker is operated again.

### Electromagnetic rocker control structure

Probe bends arbitrarily for 360°, so flexible that a controller can easily control probe with one thumb.



### Electronic magnetic rocker which can adjust omnidirectionally for 360°

Step by step rocker controlling system provides precise camera location.



original



high rendition



short distance



long distance

presetting four color setting modes



Variety Choices - front LED , side LED, dual lens with both front and side LED, fiber+LED are all available to meet different demands.

## Application field:

### 1. Aviation & Space Industry

It can be used to inspect regularly turbine, blades, engine, surface of welding and conductor pipes, combustion chamber in plane, and in development and manufacture of rocket.

### 2. Electrical Production and Construction Unit

It can be used to detect and monitor defects of important apparatus such as turbine, pipes.

### 3. Petro - Chemical and Pressure Container Industries

It can be used to inspect reserve tanks, heat exchangers and tank trucks in oil refinery, pipes in chemical plant and containers, steel cylinders and pipes in special inspection unit and pressure container plant.

### 4. Railway, Ship, Construction Engineering and Research Unit

Railway/Ship: It can be used to inspect electrical locomotive, air - conditioner, turbine, heater, gas - engine and flames of boiler.

Construction Engineering: It can be used to inspect erosion and fouling of pipes, rust of concrete iron, break of support shaft and bridge connection part; to observe caves inside tunnel and construction model; to diagnose erosion and blockage of running water pipe.

Research Unit: It can be used in observation, research, trial, archaeological work and etc.



## Specifications:

	Category	Description
System	Dimension/Weight	246*321*123mm/2.3KG
	Display screen	8" IPS industrial HD touch LCD screen with resolution 1024*768(ratio 4:3)
	Control lever	Electric rocker with lens able to rotate in 360-degree,automatic set, direction fine tuning adjustable
	Functions	Photography, video, brightness control, locking and fine tuning
	Storage	32G high speed SD card (UP TO 128G)
	I/O port	SD card, VGA port (1024*768) ,charge and mini USB
	Battery/Standby time	Four 18650 Lithium batteries(replaceable)
	Brightness control	5 degrees each for high and low brightness adjustment,10 degrees in total
	Combining form	Monitor + probe Separable group

	Compatibility	Support different diameter probes
Software	Operation system	Real time multitasking operation system
	User interface	Touch screen operation menu
	File management	Support image and video play, delete, format memo and naming
	Image control	Zoom in/out(1.0X-1.5X,5 steps),playback, picture freeze-frame, image reversal, mirror image
	Image format/Video format	JPEG,JPG/AVI(record date and time)
	Language	English/Chinese/Korean/German/Russian/Japanese
	Color settings	4 modes for different applications
	White balance	Automatic/manual white balance
	Exposure mode	Automatic/manual/shutter/aperture exposure
	Upgrade	Upgrade by SD card service pack
Operating environment	Monitor working temperature	-10~50°
	video probe working temperature	-20~70°
	Relative humidity	Highest 90%,no condensation
	Waterproof	Monitor IP54/video probe IP67

## Models for P-series(1)

Model	Part No	Description										
		Diameter [mm]	Insertion Tube Length [m]	Camera				Optic		Light		Probe Bending
				Location	Head Type	CMOS Sensor	Resolution	Depth of Field	Angle of View	Type	[Lux]	
P210FN	13220010	2.2	1	Front	PM	D	640X480	3-50mm	120°	LED	3,500	130±10°
P215FN	13220015	2.2	1.5	Front	PM	D	640X480	3-50mm	120°	LED	3,500	120±10°
P310FN	13230010	2.8	1	Front	PA	E	624*624(1:1)/ 624*500(5:4)	3 - 50mm	120°	LED	8,000	130±10°
P315FN	13230015	2.8	1	Front	PA	E	624*624(1:1)/ 624*500(5:4)	3 - 50mm	120°	LED	8,000	120±10°
P320FN	13230020	2.8	1	Front	PA	E	624*624(1:1)/ 624*500(5:4)	3 - 50mm	120°	LED	8,000	110±10°
Model	Part No	Description										
		Diameter [mm]	Insertion Tube Length [m]	Camera				Optic		Light		Probe Bending
				Location	Head Type	CMOS Sensor	Resolution	Depth of Field	Angle of View	Type	[Lux]	
P410SM	13241010	4	1	Side	SC	C	1280*720(16:9)/1	3-30mm	90°	LED	20,000	170±10°
P415SM	13241015	4	1.5	Side	SC	C	1280*720(16:9)/1	3-30mm	90°	LED	20,000	170±10°
P420SM	13241020	4	2	Side	SC	C	1280*720(16:9)/1	3-30mm	90°	LED	20,000	150±10°
P430SM	13241030	4	3	Side	SC	C	1280*720(16:9)/1	3-30mm	90°	LED	20,000	120±10°
Model	Part No	Description										
		Diameter [mm]	Insertion Tube Length [m]	Camera				Optic		Light		Probe Bending
				Location	Head Type	CMOS Sensor	Resolution	Depth of Field	Angle of View	Type	[Lux]	
P415FM	<b>13244015</b>	4	<b>1.5</b>	Front	TC	C	<b>1280X720</b>	<b>8-150mm</b>	120°	<b>Fiber + LED</b>	<b>80,000</b>	<b>170±10°</b>
P420FM	13241020	4	2	Front	PH	A	1024X768	7- 80mm	120°	LED	6,000	150±10°
	<b>13244020</b>	4	2	Front	TC	C	<b>1280X720</b>	<b>8-150mm</b>	120°	<b>Fiber + LED</b>	<b>70,000</b>	<b>150±10°</b>
P430FM	13241030	4	3	Front	PG	A	1024X768	7- 80mm	120°	LED	6,000	120±10°
	<b>13244030</b>	4	3	Front	TC	C	<b>1280X720</b>	<b>8-150mm</b>	120°	<b>Fiber + LED</b>	<b>70,000</b>	<b>120±10°</b>
P450FM	13241050	4	5	Front	PH	A	1024X768	7- 80mm	120°	LED	6,000	110±10°

## Models for P-series(2)

Model	Part No	Description										
		Diameter [mm]	Insertion Tube Length [m]	Camera				Optic		Light		Probe Bending
				Location	Head Type	CMOS Sensor	Resolution	Depth of Field	Angle of View	Type	[Lux]	
P610FM	13261010	6	1	Front	PB	A	1024X768	7 - 80mm	120°	LED	20,000	170±10°
	<b>13264010</b>	6	<b>1</b>	Front	<b>TE</b>	<b>C</b>	<b>1280X720</b>	<b>8-150mm</b>	120°	<b>Fiber + LED</b>	<b>80,000</b>	<b>170±10°</b>
P615FM	13261015	6	1.5	Front	PB	A	1024X768	7 - 80mm	120°	LED	20,000	170±10°
	<b>13264015</b>	6	<b>1.5</b>	Front	<b>TE</b>	<b>C</b>	<b>1280X720</b>	<b>8-150mm</b>	120°	<b>Fiber + LED</b>	<b>80,000</b>	<b>170±10°</b>
P620FM	13261020	6	2	Front	PB	A	1024X768	7 - 80mm	120°	LED	20,000	150±10°
	<b>13264020</b>	6	<b>2</b>	Front	<b>TE</b>	<b>C</b>	<b>1280X720</b>	<b>8-150mm</b>	120°	<b>Fiber + LED</b>	<b>70,000</b>	<b>150±10°</b>
P630FM	13261030	6	3	Front	PB	A	1024X768	7 - 80mm	120°	LED	20,000	120±10°
	<b>13264030</b>	6	<b>3</b>	Front	<b>TE</b>	<b>C</b>	<b>1280X720</b>	<b>8-150mm</b>	120°	<b>Fiber + LED</b>	<b>70,000</b>	<b>120±10°</b>
P650FM	13261050	6	5	Front	PB	A	1024X768	7 - 80mm	120°	LED	18,000	110±10°
P680FM	13261080	6	8	Front	PB	A	1024X768	7 - 80mm	120°	LED	18,000	100±10°
Model	Part No	Description										
		Diameter [mm]	Insertion Tube Length [m]	Camera				Optic		Light		Probe Bending
				Location	Head Type	CMOS Sensor	Resolution	Depth of Field	Angle of View	Type	[Lux]	
P610DM	13263010	6	1	Front& Side	PD	A/A	720X576/ 720X576	F: 7-80mm /S: 3-30mm	F:100° /S: 90°	Front&Side LED	F5,000 /S10,000	170±10°
P615DM	13263015	6	1.5	Front& Side	PD	A/A	720X576/ 720X576	F: 7-80mm /S: 3-30mm	F:100° /S: 90°	Front&Side LED	F5,000 /S10,000	170±10°
P620DM	13263020	6	2	Front& Side	PD	A/A	720X576/ 720X576	F: 7-80mm /S: 3-30mm	F:100° /S: 90°	Front&Side LED	F5,000 /S10,000	150±10°
P630DM	13263030	6	3	Front& Side	PD	A/A	720X576/ 720X576	F: 7-80mm /S: 3-30mm	F:100° /S: 90°	Front&Side LED	F5,000 /S10,000	120±10°
P650DM	13263050	6	5	Front& Side	PD	A/A	720X576/ 720X576	F: 7-80mm /S: 3-30mm	F:100° /S: 90°	Front&Side LED	F5,000 /S10,000	110±10°
P680DM	13263080	6	8	Front& Side	PD	A/A	720X576/ 720X576	F: 7-80mm /S: 3-30mm	F:100° /S: 90°	Front&Side LED	F5,000 /S10,000	100±10°
Model	Part No	Description										
		Diameter [mm]	Insertion Tube Length [m]	Camera				Optic		Light		Probe Bending
				Location	Head Type	CMOS Sensor	Resolution	Depth of Field	Angle of View	Type	[Lux]	
P610UV	13266010	6	1	Front	UV	E	624*624(1:1)/ 624*500(5:4)	3 - 50mm	120°	LED	UV:80mW, 365nm	130±10°
P615UV	13266015		1.5									120±10°
P620UV	13266020		2									110±10°