

# Digital N

## Industrial Endoscope



## Introduction:

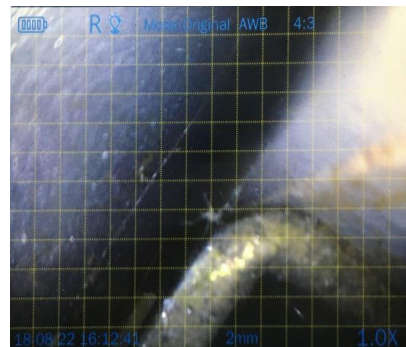
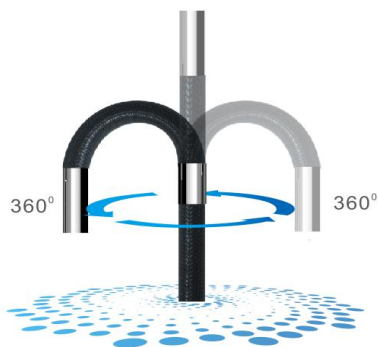
Digital N is based on normal N series, adopted latest digital platform and high brightness sensitive modules, which make color settings, white balance and picture annotations available.



1、 Intelligent image processing system to show very clean image.

2、 Color settings to meet different applications.

3、 Step by step rocker controlling system makes precise camera location.

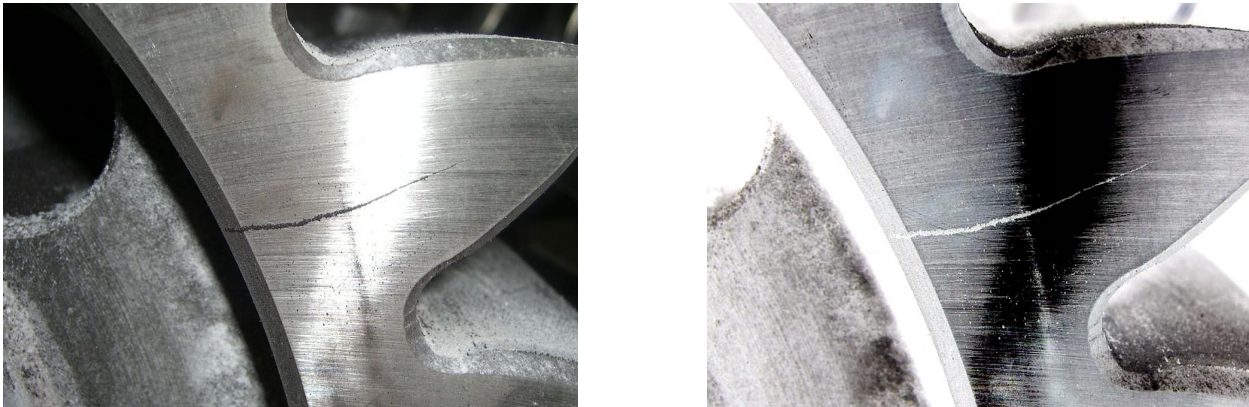


4、 Flexible Control electromagnetic rocker control structure, probe bends

5、 Customized settings, more user friendly.

6、 1mm、2mm、4mm three types rules to do basic measurement.

8、 Crack detection (the left is a conventional effect, the right is the reverse color display effect).



### **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
	Dimension/Weight	156*356*80mm/1.5KG
	Display screen	5" IPS LCD (640 x 480)
	Control lever/oriented control	Electric rocker with lens able to rotate in 360-degree, software navigation key/step-drive, fast and slow regulation, automatic set
	Functions	Photography, video, brightness control, locking and fine tuning
	Storage	32G high speed Micro SD card
	I/O port	Debug Port
	Battery/Standby time	Li on Battery 18650 x2 / 2.5 hours N-D
	Brightness control	5 degrees each for high and low brightness adjustment, 10 degrees in total
Software	Operation system	Real time multitasking operation system
	File management	File & Folder creation, naming, deleting Storing to SD card or USB ThumbDrive
	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	6 modes for different applications
	White balance	Automatic/manual white balance
	Exposure mode	Automatic/manual/shutter/aperture exposure
	Referencemeasure/upgrade	Grid reference/upgrade by Micro 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

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## Models for N-series

Model	Part No	Description											
		Diameter [mm]	Insertion Tube Length [m]	System Platform	Camera				Optic		Light		Probe Bending
					Location	Head Type	CMOS Sensor	Resolution	Depth of Field	Angle of View	Type	[Lux]	
N410FM	12141010	4	1	Non-digital	Front	PG	A	720X576	7 - 80mm	120°	LED	6,000	170±10°
	<b>12241010</b>	4	<b>1</b>	<b>Digital</b>	Front	PG	A	720X576	7 - 80mm	120°	LED	6,000	<b>170±10°</b>
N415FM	12141015	4	1.5	Non-digital	Front	PG	A	720X576	7 - 80mm	120°	LED	6,000	170±10°
	<b>12241015</b>	4	<b>1.5</b>	<b>Digital</b>	Front	PG	A	720X576	7 - 80mm	120°	LED	6,000	<b>170±10°</b>
N420FM	12141020	4	2	Non-digital	Front	PG	A	720X576	7 - 80mm	120°	LED	6,000	150±10°
	<b>12241020</b>	4	<b>2</b>	<b>Digital</b>	Front	PG	A	720X576	7 - 80mm	120°	LED	6,000	<b>150±10°</b>
N430FM	12141030	4	3	Non-digital	Front	PG	A	720X576	7 - 80mm	120°	LED	6,000	120±10°
	<b>12241030</b>	4	<b>3</b>	<b>Digital</b>	Front	PG	A	720X576	7 - 80mm	120°	LED	6,000	<b>120±10°</b>
N450FM	12141050	4	5	Non-digital	Front	PG	A	720X576	7 - 80mm	120°	LED	6,000	100±10°
	<b>12241050</b>	4	<b>5</b>	<b>Digital</b>	Front	PG	A	720X576	7 - 80mm	120°	LED	6,000	<b>100±10°</b>

Model	Part No	Description											
		Diameter [mm]	Insertion Tube Length [m]	System Platform	Camera				Optic		Light		Probe Bending
					Location	Head Type	CMOS Sensor	Resolution	Depth of Field	Angle of View	Type	[Lux]	
N610FM	12161010	6	1	Non-digital	Front	PB	A	720X576	7 - 80mm	120°	LED	20,000	170±10°
	<b>12261010</b>	6	<b>1</b>	<b>Digital</b>	Front	PB	A	720X576	7 - 80mm	120°	LED	20,000	<b>170±10°</b>
N615FM	12161015	6	1.5	Non-digital	Front	PB	A	720X576	7 - 80mm	120°	LED	20,000	170±10°
	<b>12261015</b>	6	<b>1.5</b>	<b>Digital</b>	Front	PB	A	720X576	7 - 80mm	120°	LED	20,000	<b>170±10°</b>
N620FM	12161020	6	2	Non-digital	Front	PB	A	720X576	7 - 80mm	120°	LED	20,000	150±10°
	<b>12261020</b>	6	<b>2</b>	<b>Digital</b>	Front	PB	A	720X576	7 - 80mm	120°	LED	20,000	<b>150±10°</b>
N630FM	12161030	6	3	Non-digital	Front	PB	A	720X576	7 - 80mm	120°	LED	20,000	120±10°
	<b>12261030</b>	6	<b>3</b>	<b>Digital</b>	Front	PB	A	720X576	7 - 80mm	120°	LED	20,000	<b>130±10°</b>
N650FM	12161050	6	5	Non-digital	Front	PB	A	720X576	7 - 80mm	120°	LED	18,000	110±10°
	<b>12261050</b>	6	<b>5</b>	<b>Digital</b>	Front	PB	A	720X576	7 - 80mm	120°	LED	18,000	<b>120±10°</b>
N680FM	12161080	6	8	Non-digital	Front	PB	A	720X576	7 - 80mm	120°	LED	18,000	100±10°
	<b>12261080</b>	6	<b>8</b>	<b>Digital</b>	Front	PB	A	720X576	7 - 80mm	120°	LED	18,000	<b>100±10°</b>

Model	Part No	Description											
		Diameter [mm]	Insertion Tube Length [m]	System Platform	Camera				Optic		Light		Probe Bending
					Location	Head Type	CMOS Sensor	Resolution	Depth of Field	Angle of View	Type	[Lux]	
<b>N610DM</b>	<b>12263010</b>	6	<b>1</b>	<b>Digital</b>	Front& Side	PD	A/A	720X576/ 720X576	F:7-80mm/ S3-30mm	F:100° /S:90°	Front&Side LED	F:5,000/ S10,000	<b>170±10°</b>
<b>N615DM</b>	<b>12263015</b>	6	<b>1.5</b>	<b>Digital</b>	Front& Side	PD	A/A	720X576/ 720X576	F:7-80mm/ S3-30mm	F:100° /S:90°	Front&Side LED	F:5,000/ S10,000	<b>170±10°</b>
<b>N620DM</b>	<b>12263020</b>	6	<b>2</b>	<b>Digital</b>	Front& Side	PD	A/A	720X576/ 720X576	F:7-80mm/ S3-30mm	F:100° /S:90°	Front&Side LED	F:5,000/ S10,000	<b>150±10°</b>
<b>N630DM</b>	<b>12263030</b>	6	<b>3</b>	<b>Digital</b>	Front& Side	PD	A/A	720X576/ 720X576	F:7-80mm/ S3-30mm	F:100° /S:90°	Front&Side LED	F:5,000/ S10,000	<b>130±10°</b>
<b>N650DM</b>	<b>12263050</b>	6	<b>5</b>	<b>Digital</b>	Front& Side	PD	A/A	720X576/ 720X576	F:7-80mm/ S3-30mm	F:100° /S:90°	Front&Side LED	F:5,000/ S10,000	<b>120±10°</b>
<b>N680DM</b>	<b>12263080</b>	6	<b>8</b>	<b>Digital</b>	Front& Side	PD	A/A	720X576/ 720X576	F:7-80mm/ S3-30mm	F:100° /S:90°	Front&Side LED	F:5,000/ S10,000	<b>100±10°</b>