

YDS-W5MA-IMX258 V1.0

13MP Sony IMX258 MIPI Interface Auto Focus Camera Module



Front View



Back View

Specifications

| | |
|---------------------------------|-------------------------------------|
| Camera Module No. | YDS-W5MA-IMX258 V1.0 |
| Resolution | 13MP |
| Image Sensor | IMX258 |
| Sensor Type | 1/3.06" |
| Pixel Size | 1.12 um x 1.12 um |
| EFL | 3.81 mm |
| F.NO | 2.20 |
| Pixel | 4224 x 3136 |
| View Angle | 74.4°(DFOV) 62.7°(HFOV) 48.7°(VFOV) |
| Lens Dimensions | 8.50 x 8.50 x 5.60 mm |
| Module Size | 47.50 x 8.50 mm |
| Module Type | Auto Focus |
| Interface | MIPI |
| Auto Focus VCM Driver IC | DW9763 |
| Lens Model | YDS-LENS-50013A1 |
| Lens Type | 650nm IR Cut |
| Operating Temperature | -20°C to +70°C |
| Mating Connector | AXT530124 |



YDS-W5MA-IMX258 V1.0

13MP Sony IMX258 MIPI Interface Auto Focus Camera Module



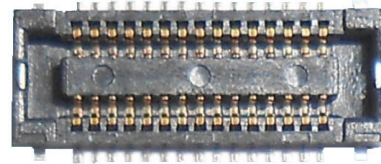
Top View



Side View



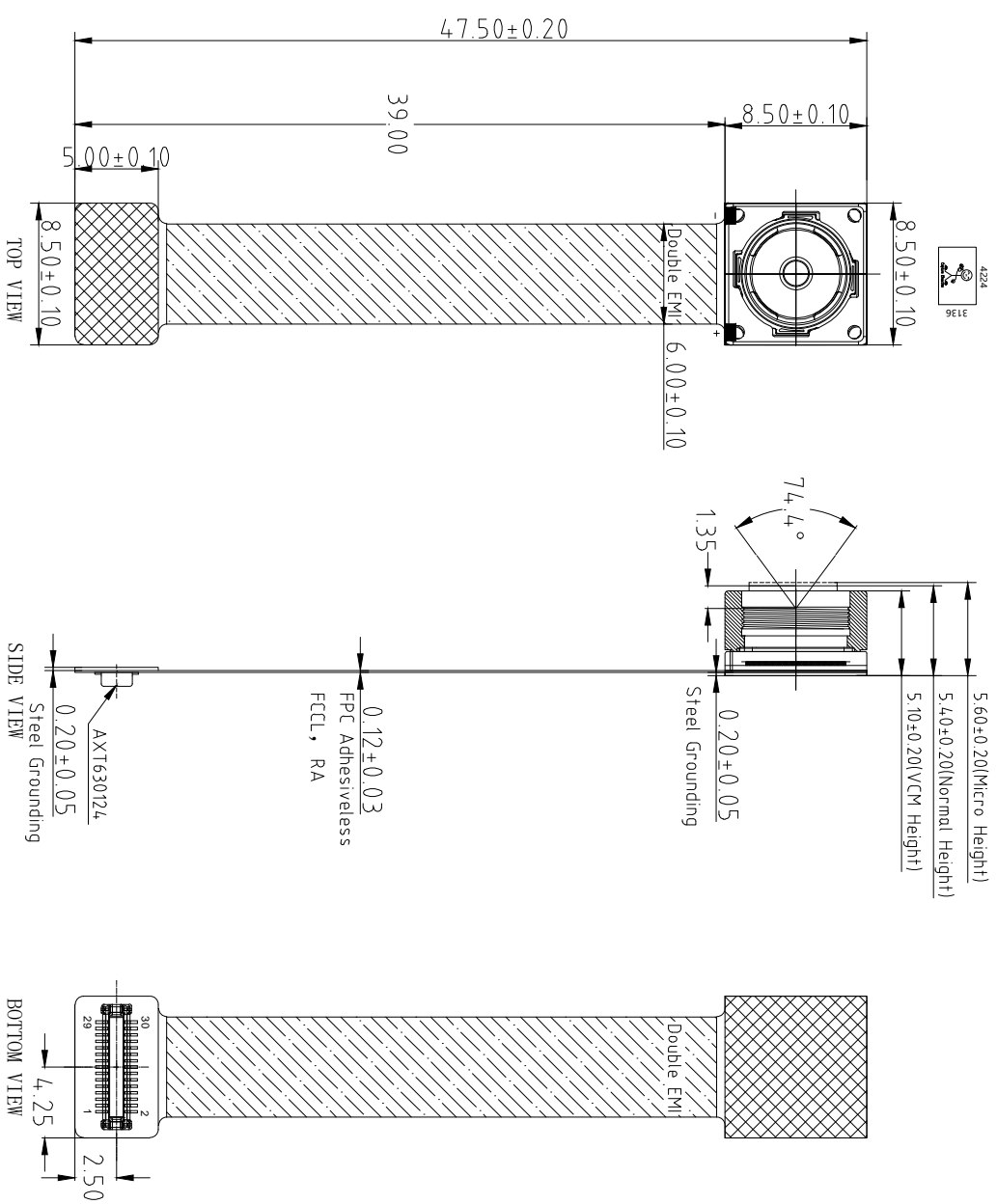
Bottom View



Mating Connector

| Version | Information | Date |
|---------|---------------|------------|
| V1.0 | First Version | 12-14-2020 |

| RoHS | |
|------|-----------|
| 0 | SIGNAL |
| 1 | GND |
| 2 | GND |
| 3 | GND |
| 4 | GND |
| 5 | AFVDD2.8V |
| 6 | AFEN |
| 7 | SDA |
| 8 | DOVDD1.8V |
| 9 | SCL |
| 10 | DVDD1.2V |
| 11 | GND |
| 12 | XSHUTDOWN |
| 13 | MCN |
| 14 | NC |
| 15 | MCP |
| 16 | GND |
| 17 | MD0N |
| 18 | MCLK |
| 19 | MD0P |
| 20 | GND |
| 21 | MD1N |
| 22 | FLASH |
| 23 | MD1P |
| 24 | AVDD2.8V |
| 25 | VPP(NC) |
| 26 | AGND |
| 27 | MD2N |
| 28 | MD3N |
| 29 | MD2P |
| 30 | MD3P |



NOTE:
 1.The device slave address:0x34;
 2.Driver IC and its I2C Address:
 DW9763; 0x18h;

Parameters:

1、Sensor specification:

Image Sensor: IMX258
 Pixel: 1.12um×1.12um
 Lens Type: 1/3.06
 Important Voltage Description: DVDD1.2V
 (external power supply);

2、Lens specification:

FOV: 74.4°(D);62.7°(H);48.7°(V)
 F/NO.: 2.2
 TV distortion: <1.5%
 Focal length: 3.85mm
 Composition: 5P+IR FILTER
 IR Cut Coating: 650nm±10nm@50%

| | | | | | |
|-------------|-----------|------------------|------------------|---------------|--------------|
| Designed By | Kevin | Model Name: | W5MA-IMX258 V1.0 | | |
| Checked By | Aouly_Yan | Projection Type: | Unit: mm | Material: | ----- |
| | | Third Angle | Scale: 1:1 | Sheet: 1 of 1 | Version: 1/0 |

3

3

2

2

1

A B C D E

[Product Brief]

Ver.1.0

IMX258

Diagonal 5.867 mm (Type 1/3.06) 13Mega-Pixel CMOS Image Sensor with Square Pixel for Color Cameras

Description

IMX258 is a diagonal 5.867mm (Type 1/3.06) 13 Mega-pixel CMOS active pixel type stacked image sensor with a square pixel array. It adopts Exmor R^{STM} technology to achieve high speed image capturing by column parallel A/D converter circuits and high sensitivity and low noise image (comparing with conventional CMOS image sensor) through the backside illuminated imaging pixel structure. R, G, and B pigment primary color mosaic filter is employed. By introducing spatially multiplexed exposure technology, high dynamic range still pictures and movies are achievable. It

equips an electronic shutter with variable integration time. It operates with three power supply voltages: analog 2.7 V, digital 1.2 V and 1.8 V for input/output interface and achieves low power consumption.

In addition, this product is designed for use in cellular phone and tablet pc. When using this for another application, Sony does not guarantee the quality and reliability of product. Therefore, don't use this for applications other than cellular phone and tablet pc. Consult your Sony sales representative if you have any questions.

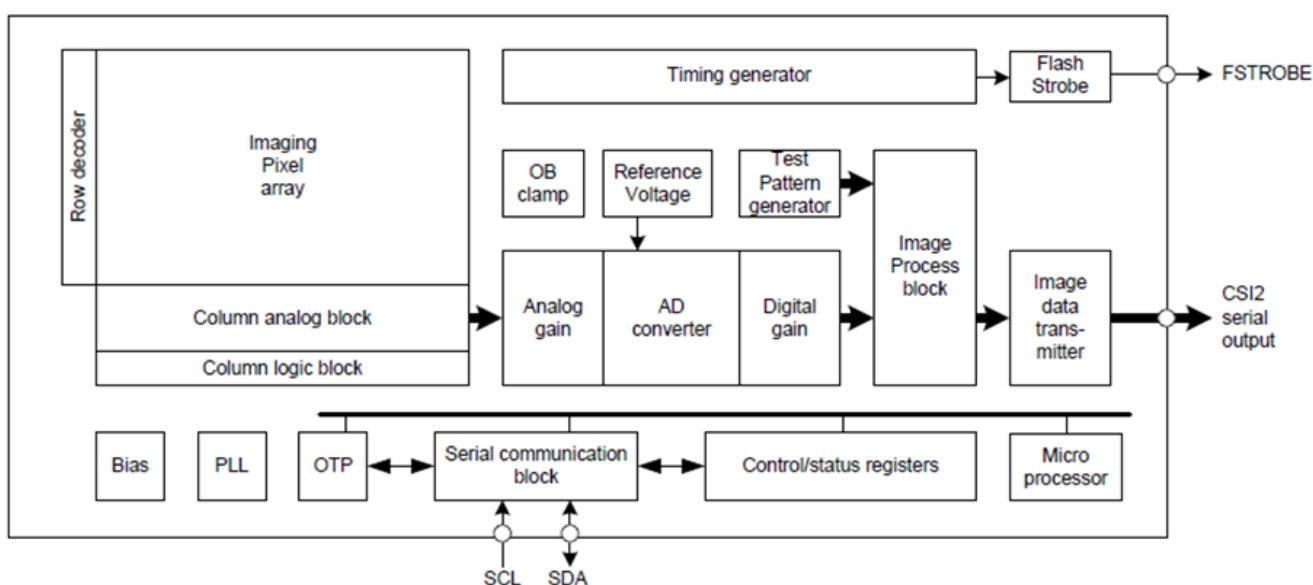
Functions and Features

- ◆ Back-illuminated and stacked CMOS image sensor Exmor R^{STM}
- ◆ Phase Detection pixel data output for Phase Detection Auto Focus
- ◆ High Dynamic Range (HDR) mode with raw data output.
- ◆ High signal to noise ratio (SNR).
- ◆ Full resolution @30fps (Normal / HDR). 4K2K @30fps (Normal / HDR) 1080p @60fps (Normal)
- ◆ Output video format of RAW10/8.
- ◆ Pixel binning readout and V sub-sampling function.
- ◆ Independent flipping and mirroring.
- ◆ CSI-2 serial data output (MIPI 2lane/4lane, Max. 1.3Gbps/lane, D-PHY spec. ver. 1.1 compliant)
- ◆ 2-wire serial communication.
- ◆ Two PLLs for independent clock generation for pixel control and data output interface.
- ◆ Dynamic Defect Pixel Correction.
- ◆ Fast mode transition. (on the fly)
- ◆ Dual sensor synchronization operation.
- ◆ 4K bit of OTP ROM for users.
- ◆ Built-in temperature sensor.

Device Structure

- ◆ CMOS image sensor
- ◆ Image size : Diagonal 5.867 mm (Type 1/3.06)
- ◆ Total number of pixels : 4224 (H) × 3192 (V) approx. 13.48 M pixels
- ◆ Number of effective pixels : 4224 (H) × 3144 (V) approx. 13.28 M pixels
- ◆ Number of active pixels : 4208 (H) × 3120 (V) approx. 13.13 M pixels
- ◆ Chip size : 5.990 mm (H) × 3.908 mm (V)
- ◆ Unit cell size : 1.12 μm (H) × 1.12 μm (V)
- ◆ Substrate material : Silicon

System block diagram



Exmor RS

* Exmor RS is a trademark of Sony Corporation. The Exmor RS is a Sony's CMOS image sensor with high-resolution, high-performance and compact size by replacing a supporting substrate in Exmor R™ which changed fundamental structure of Exmor™ pixel adopted column parallel A/D converter to back-illuminated type, with layered chips formed signal processing circuits.

1. General Description

The DW9763 is a single 10-bit DAC with 100mA output current sinking capability and embedded 8KByte eFlash memory. Designed for linear control of voice coil motors, the DW9763 is capable of operating voltage up to 3.3V.

The SAC (Smart Actuator Control) mode is applied to minimize the mechanical vibration. The SAC mode highly improves the actuator's settling time and tolerance coverage compared with conventional LSC (Linear Slope Control) mode. The DAC and eFlash are controlled via an I2C compatible serial interface.

The DW9763 incorporates with a POR (Power On Reset) circuit, power down mode. POR circuit gets to operate when VDD (supply power) turns on. The output current keeps 0mA until valid register value takes place. During the power down mode, it consumes current max.1uA.

The DW9763 is designed for auto focus and optical zoom for mobile camera, digital still camera, camcorders and other nano actuator applications.

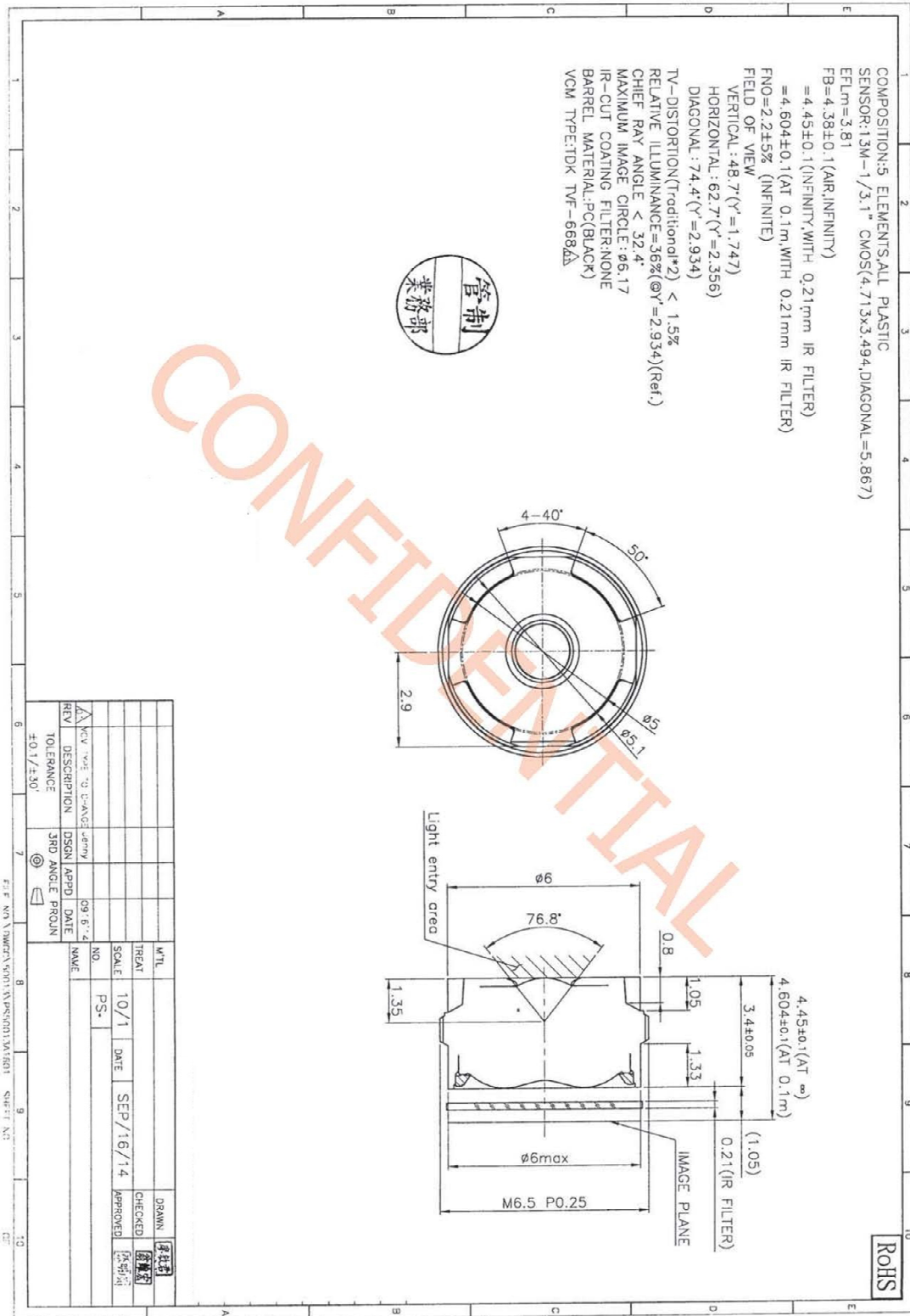
■ Features

- 10 bit resolution current sinking of 100mA for VCM
- SAC (Smart Actuator Control) mode
- Supply voltage range (VDD) : 2.3V to 3.3V
- Fast mode I2C interface compatible (1.8V interface available)
- Power down mode
- Power on reset (POR)
- Embedded 8KByte eFlash memory
- Package : 8 pin WLCSP
- Package Size : 0.77mm X 1.75mm X 0.3mm

■ Applications

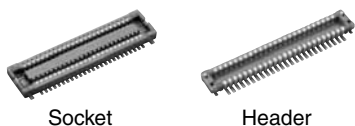
- Mobile camera
- Digital still camera
- Camcorder
- Web camera
- Nano actuator

YDS-LENS-50013A1



NARROW-PITCH, THIN AND SLIM CONNECTOR FOR BOARD-TO-FPC CONNECTION

NARROW PITCH (0.4 mm) CONNECTORS F4S SERIES



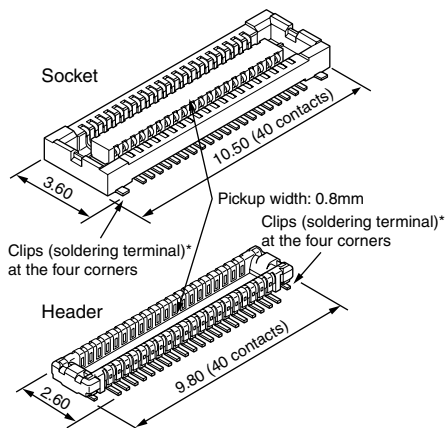
Compliance with RoHS Directive

FEATURES

1. Space-saving (3.6 mm widthwise)
The required space is smaller than our F4 series (40-contact type):

- Socket — 27% smaller,
- Header — 38% smaller

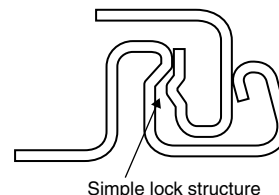
The small size contributes to the miniaturization of target equipment.



* Clips for preventing the solder joints from being removed

2. Highly reliable
TOUGH CONTACT has strong resistance to adverse environments.
(See Page 6 for details of the structure)
Note: If extra resistance to shock caused by dropping is required, we recommend using our previous F4 Series.

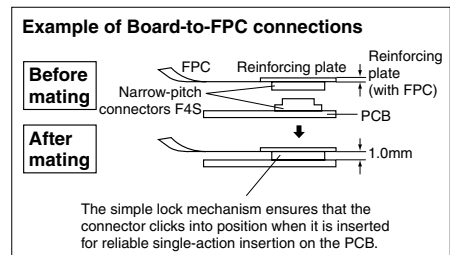
3. The simple lock structure gives tactile feedback that ensures a superior mating/unmating operation feel.



4. Gull-wing type terminals
The gull-wing type terminals facilitate automatic mounting inspections.
5. Connectors for inspection available
Connectors for inspection are available that are ideal for modular unit inspection and inspection in device assembly processes.

APPLICATIONS

Compact portable devices “Cellular phones, DVC, Digital cameras, etc”



ORDERING INFORMATION

AXT **4**

5: Narrow Pitch Connector F4S (0.4 mm pitch) Socket
6: Narrow Pitch Connector F4S (0.4 mm pitch) Header

Number of contacts (2 digits)

Mated height
<Socket>

- 1: For mated height 1.0 mm
- 2: For mated height 1.2 mm

<Header>

- 1: For mated height 1.0 mm
- 2: For mated height 1.2 mm

Functions

- <Socket, Header>
- 2: Without positioning bosses

Surface treatment (Contact portion / Terminal portion)

- <Socket>
- 4: Base: Ni plating Surface: Au plating (for Ni barrier available)
- <Header>
- 4: Base: Ni plating Surface: Au plating

Note: Please note that models with a mated height of 1.0 mm (7th digit of part number is “1”) and 1.2 mm (7th digit of part number is “2”) are not compatible.

AXT5, 6

PRODUCT TYPES

| Mated height | Number of contacts | Part number | | Packing | |
|--------------|--------------------|-------------|-----------|--------------|--------------|
| | | Socket | Header | Inner carton | Outer carton |
| 1.0mm | 10 | AXT510124 | AXT610124 | 3,000 pieces | 6,000 pieces |
| | 12 | AXT512124 | AXT612124 | | |
| | 14 | AXT514124 | AXT614124 | | |
| | 16 | AXT516124 | AXT616124 | | |
| | 18 | AXT518124 | AXT618124 | | |
| | 20 | AXT520124 | AXT620124 | | |
| | 22 | AXT522124 | AXT622124 | | |
| | 24 | AXT524124 | AXT624124 | | |
| | 26 | AXT526124 | AXT626124 | | |
| | 28 | AXT528124 | AXT628124 | | |
| | 30 | AXT530124 | AXT630124 | | |
| | 32 | AXT532124 | AXT632124 | | |
| | 34 | AXT534124 | AXT634124 | | |
| | 36 | AXT536124 | AXT636124 | | |
| | 38 | AXT538124 | AXT638124 | | |
| | 40 | AXT540124 | AXT640124 | | |
| | 42 | AXT542124 | AXT642124 | | |
| | 44 | AXT544124 | AXT644124 | | |
| | 46 | AXT546124 | AXT646124 | | |
| | 48 | AXT548124 | AXT648124 | | |
| 50 | AXT550124 | AXT650124 | | | |
| 54 | AXT554124 | AXT654124 | | | |
| 60 | AXT560124 | AXT660124 | | | |
| 64 | AXT564124 | AXT664124 | | | |
| 70 | AXT570124 | AXT670124 | | | |
| 80 | AXT580124 | AXT680124 | | | |
| 1.2mm | 10 | AXT510224 | AXT610224 | | |
| | 30 | AXT530224 | AXT630224 | | |
| | 40 | AXT540224 | AXT640224 | | |
| | 50 | AXT550224 | AXT650224 | | |
| | 80 | AXT580224 | AXT680224 | | |

- Notes: 1. Order unit: For mass production: in 1-inner-box (1-reel) units
 Samples for mounting check: in 50-connector units. Please contact our sales office.
 Samples: Small lot orders are possible. Please contact our sales office.
2. The above part numbers are for connectors without positioning bosses, which are standard. When ordering connectors with positioning bosses, please contact our sales office.
3. Please contact us for connectors having a number of contacts other than those listed above.

SPECIFICATIONS

1. Characteristics

| | Item | Specifications | Conditions |
|---|--|--|---|
| Electrical characteristics | Rated current | 0.3A/contact (Max. 5 A at total contacts) | |
| | Rated voltage | 60V AC/DC | |
| | Breakdown voltage | 150V AC for 1 min. | No short-circuiting or damage at a detection current of 1 mA when the specified voltage is applied for one minute. |
| | Insulation resistance | Min. 1,000MΩ (initial) | Using 250V DC megger (applied for 1 min.) |
| | Contact resistance | Max. 90mΩ | Based on the contact resistance measurement method specified by JIS C 5402. |
| Mechanical characteristics | Composite insertion force | Max. 0.981N/contacts × contacts (initial) | |
| | Composite removal force | Min. 0.165N/contacts × contacts | |
| Environmental characteristics | Contact holding force (Socket contact) | Min. 0.49N/contacts | Measuring the maximum force. As the contact is axially pull out. |
| | Ambient temperature | -55°C to +85°C | No freezing at low temperatures. No dew condensation. |
| | Soldering heat resistance | Peak temperature: 260°C or less (on the surface of the PC board around the connector terminals) 300°C within 5 sec. 350°C within 3 sec. | Infrared reflow soldering Soldering iron |
| | Storage temperature | -55°C to +85°C (product only) -40°C to +50°C (emboss packing) | No freezing at low temperatures. No dew condensation. |
| | Thermal shock resistance (header and socket mated) | 5 cycles, insulation resistance min. 100MΩ, contact resistance max. 90mΩ | Sequence 1. -55 ^{±3} °C, 30 minutes 2. ~, Max. 5 minutes 3. 85 ^{±3} °C, 30 minutes 4. ~, Max. 5 minutes |
| | Humidity resistance (header and socket mated) | 120 hours, insulation resistance min. 100MΩ, contact resistance max. 90mΩ | Bath temperature 40±2°C, humidity 90 to 95% R.H. |
| | Saltwater spray resistance (header and socket mated) | 24 hours, insulation resistance min. 100MΩ, contact resistance max. 90mΩ | Bath temperature 35±2°C, saltwater concentration 5±1% |
| H ₂ S resistance (header and socket mated) | 48 hours, contact resistance max. 90mΩ | Bath temperature 40±2°C, gas concentration 3±1 ppm, humidity 75 to 80% R.H. | |
| Lifetime characteristics | Insertion and removal life | 50 times | Repeated insertion and removal speed of max. 200 times/hours |
| Unit weight | | 20-contact type: Socket: 0.03 g Header: 0.01 g | |

2. Material and surface treatment

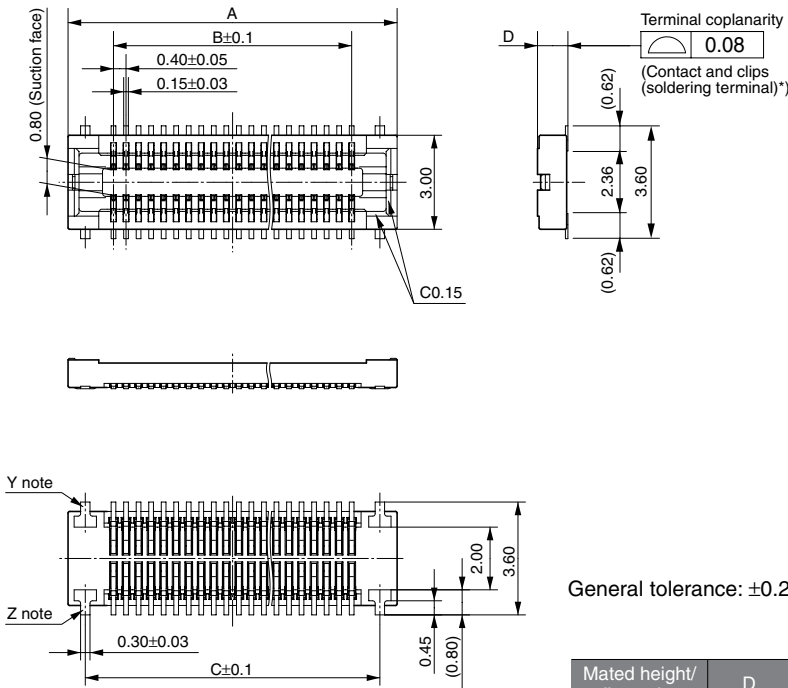
| Part name | Material | Surface treatment |
|------------------|---------------------|--|
| Molded portion | LCP resin (UL94V-0) | — |
| Contact and Post | Copper alloy | Contact portion: Base: Ni plating Surface: Au plating Terminal portion: Base: Ni plating Surface: Au plating (except the terminal tips) The socket terminals close to the portion to be soldered have nickel barriers (exposed nickel portions). Metal clips: Sockets: Base: Ni plating Surface: Pd+Au flash plating (except the terminal tips) Headers: Base: Ni plating Surface: Au plating (except the terminal tips) |

AXT5, 6

DIMENSIONS (Unit: mm) The CAD data of the products with a **CAD Data** mark can be downloaded from: <http://panasonic-electric-works.net/ac>

Socket (Mated height: 1.0 mm and 1.2 mm)

CAD Data



General tolerance: ±0.2

| Mated height/ dimension | D |
|----------------------------|------|
| 1.0mm | 0.97 |
| 1.2mm | 1.17 |

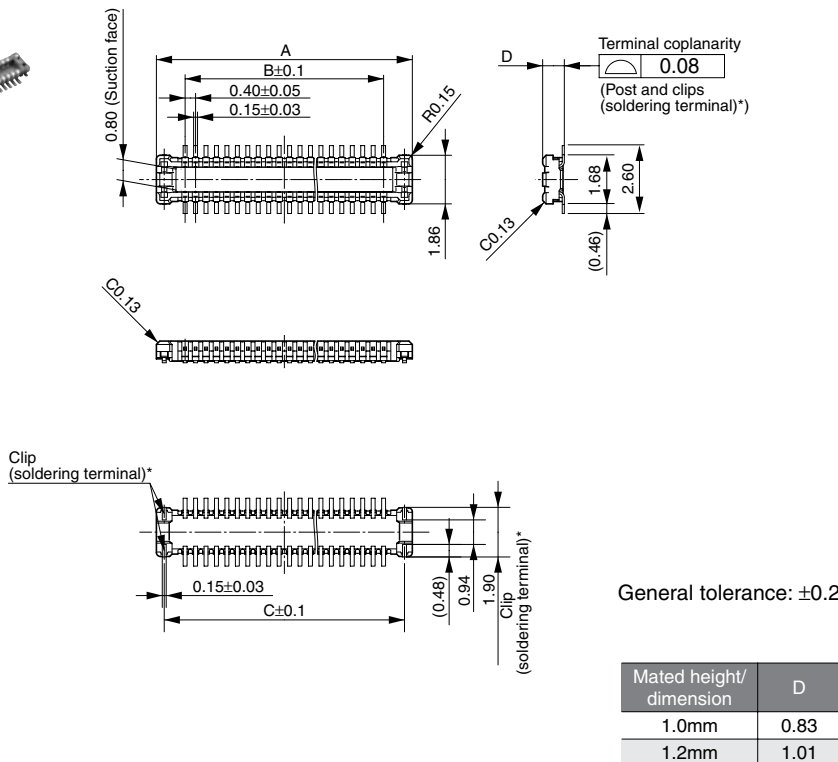
Note: Since the clip (soldering terminal)* has a single-piece construction, sections Y and Z are electrically connected.

Dimension table (mm)

| Number of contacts/ dimension | A | B | C |
|----------------------------------|------|------|------|
| 10 | 4.5 | 1.6 | 3.4 |
| 12 | 4.9 | 2.0 | 3.8 |
| 14 | 5.3 | 2.4 | 4.2 |
| 16 | 5.7 | 2.8 | 4.6 |
| 18 | 6.1 | 3.2 | 5.0 |
| 20 | 6.5 | 3.6 | 5.4 |
| 22 | 6.9 | 4.0 | 5.8 |
| 24 | 7.3 | 4.4 | 6.2 |
| 26 | 7.7 | 4.8 | 6.6 |
| 28 | 8.1 | 5.2 | 7.0 |
| 30 | 8.5 | 5.6 | 7.4 |
| 32 | 8.9 | 6.0 | 7.8 |
| 34 | 9.3 | 6.4 | 8.2 |
| 36 | 9.7 | 6.8 | 8.6 |
| 38 | 10.1 | 7.2 | 9.0 |
| 40 | 10.5 | 7.6 | 9.4 |
| 42 | 10.9 | 8.0 | 9.8 |
| 44 | 11.3 | 8.4 | 10.2 |
| 46 | 11.7 | 8.8 | 10.6 |
| 48 | 12.1 | 9.2 | 11.0 |
| 50 | 12.5 | 9.6 | 11.4 |
| 54 | 13.3 | 10.4 | 12.2 |
| 60 | 14.5 | 11.6 | 13.4 |
| 64 | 15.3 | 12.4 | 14.2 |
| 70 | 16.5 | 13.6 | 15.4 |
| 80 | 18.5 | 15.6 | 17.4 |

Header (Mated height: 1.0 mm and 1.2 mm)

CAD Data



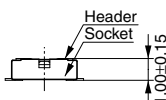
General tolerance: ±0.2

| Mated height/ dimension | D |
|----------------------------|------|
| 1.0mm | 0.83 |
| 1.2mm | 1.01 |

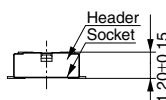
Dimension table (mm)

| Number of contacts/ dimension | A | B | C |
|----------------------------------|------|------|------|
| 10 | 3.8 | 1.6 | 3.2 |
| 12 | 4.2 | 2.0 | 3.6 |
| 14 | 4.6 | 2.4 | 4.0 |
| 16 | 5.0 | 2.8 | 4.4 |
| 18 | 5.4 | 3.2 | 4.8 |
| 20 | 5.8 | 3.6 | 5.2 |
| 22 | 6.2 | 4.0 | 5.6 |
| 24 | 6.6 | 4.4 | 6.0 |
| 26 | 7.0 | 4.8 | 6.4 |
| 28 | 7.4 | 5.2 | 6.8 |
| 30 | 7.8 | 5.6 | 7.2 |
| 32 | 8.2 | 6.0 | 7.6 |
| 34 | 8.6 | 6.4 | 8.0 |
| 36 | 9.0 | 6.8 | 8.4 |
| 38 | 9.4 | 7.2 | 8.8 |
| 40 | 9.8 | 7.6 | 9.2 |
| 42 | 10.2 | 8.0 | 9.6 |
| 44 | 10.6 | 8.4 | 10.0 |
| 46 | 11.0 | 8.8 | 10.4 |
| 48 | 11.4 | 9.2 | 10.8 |
| 50 | 11.8 | 9.6 | 11.2 |
| 54 | 12.6 | 10.4 | 12.0 |
| 60 | 13.8 | 11.6 | 13.2 |
| 64 | 14.6 | 12.4 | 14.0 |
| 70 | 15.8 | 13.6 | 15.2 |
| 80 | 17.8 | 15.6 | 17.2 |

• Socket and Header are mated



Mated height: 1.0 mm



Mated height: 1.2 mm



YDS CAMERA MODULE

your best camera partner

Camera Module Pinout Definition Reference Chart

| OmniVision | Sony | Samsung | On-Semi | Aptina | Himax | GalaxyCore | PixArt | SmartSens | Sensors |
|-------------------------------|--|---|-------------------------|---|------------------------------------|------------|--------|-----------|---------|
| Pin Signal | | Description | | | | | | | |
| DGND | GND | ground for digital circuit | | | | | | | |
| AGND | | ground for analog circuit | | | | | | | |
| PCLK | DCK | DVP PCLK output | | | | | | | |
| XCLR | PWDN | XSHUTDOWN | STANDBY | power down active high with internal pull-down resistor | | | | | |
| MCLK | XVCLK | XCLK | INCK | system input clock | | | | | |
| RESET | RST | reset active low with internal pull-up resistor | | | | | | | |
| NC | NULL | no connect | | | | | | | |
| SDA | SIO_D | SIOD | SCCB data | | | | | | |
| SCL | SIO_C | SIOC | SCCB input clock | | | | | | |
| VSYNC | XVS | FSYNC | DVP VSYNC output | | | | | | |
| HREF | XHS | DVP HREF output | | | | | | | |
| DOVDD | power for I/O circuit | | | | | | | | |
| AFVDD | power for VCM circuit | | | | | | | | |
| AVDD | power for analog circuit | | | | | | | | |
| DVDD | power for digital circuit | | | | | | | | |
| STROBE | FSTROBE | strobe output | | | | | | | |
| FSIN | synchronize the VSYNC signal from the other sensor | | | | | | | | |
| SID | SCCB last bit ID input | | | | | | | | |
| ILPWM | mechanical shutter output indicator | | | | | | | | |
| FREX | frame exposure / mechanical shutter | | | | | | | | |
| GPIO | general purpose inputs | | | | | | | | |
| SLASEL | I2C slave address select | | | | | | | | |
| AFEN | CEN chip enable active high on VCM driver IC | | | | | | | | |
| MIPI Interface | | | | | | | | | |
| MDN0 | DN0 | MD0N | DATA_N | DMO1N | MIPI 1st data lane negative output | | | | |
| MDP0 | DP0 | MD0P | DATA_P | DMO1P | MIPI 1st data lane positive output | | | | |
| MDN1 | DN1 | MD1N | DATA2_N | DMO2N | MIPI 2nd data lane negative output | | | | |
| MDP1 | DP1 | MD1P | DATA2_P | DMO2P | MIPI 2nd data lane positive output | | | | |
| MDN2 | DN2 | MD2N | DATA3_N | DMO3N | MIPI 3rd data lane negative output | | | | |
| MDP2 | DP2 | MD2P | DATA3_P | DMO3P | MIPI 3rd data lane positive output | | | | |
| MDN3 | DN3 | MD3N | DATA4_N | DMO4N | MIPI 4th data lane negative output | | | | |
| MDP3 | DP3 | MD3P | DATA4_P | DMO4P | MIPI 4th data lane positive output | | | | |
| MCN | CLKN | CLK_N | DCKN | MIPI clock negative output | | | | | |
| MCP | CLKP | MCP | CLK_P | DCKN | MIPI clock positive output | | | | |
| DVP Parallel Interface | | | | | | | | | |
| D0 | DO0 | Y0 | DVP data output port 0 | | | | | | |
| D1 | DO1 | Y1 | DVP data output port 1 | | | | | | |
| D2 | DO2 | Y2 | DVP data output port 2 | | | | | | |
| D3 | DO3 | Y3 | DVP data output port 3 | | | | | | |
| D4 | DO4 | Y4 | DVP data output port 4 | | | | | | |
| D5 | DO5 | Y5 | DVP data output port 5 | | | | | | |
| D6 | DO6 | Y6 | DVP data output port 6 | | | | | | |
| D7 | DO7 | Y7 | DVP data output port 7 | | | | | | |
| D8 | DO8 | Y8 | DVP data output port 8 | | | | | | |
| D9 | DO9 | Y9 | DVP data output port 9 | | | | | | |
| D10 | DO10 | Y10 | DVP data output port 10 | | | | | | |
| D11 | DO11 | Y11 | DVP data output port 11 | | | | | | |

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Cameras Applications



IMAGING DEVICES



Camera Reliability Test

| Reliability Inspection Item | | Testing Method | Acceptance Criteria | |
|-----------------------------|-----------------------------|---|-------------------------|-------------------------|
| Category | Item | | | |
| Environmental | Storage Temperature | High 60°C 96 Hours | Temperature Chamber | No Abnormal Situation |
| | | Low -20°C 96 Hours | Temperature Chamber | No Abnormal Situation |
| | Operation Temperature | High 60°C 24 Hours | Temperature Chamber | No Abnormal Situation |
| | | Low -20°C 24 Hours | Temperature Chamber | No Abnormal Situation |
| | Humidity | 60°C 80% 24 Hours | Temperature Chamber | No Abnormal Situation |
| | Thermal Shock | High 60°C 0.5 Hours Low -20°C 0.5 Hours Cycling in 24 Hours | Temperature Chamber | No Abnormal Situation |
| Physical | Drop Test (Free Falling) | Without Package 60cm | 10 Times on Wood Floor | Electrically Functional |
| | | With Package 60cm | 10 Times on Wood Floor | Electrically Functional |
| | Vibration Test | 50Hz X-Axis 2mm 30min | Vibration Table | Electrically Functional |
| | | 50Hz Y-Axis 2mm 30min | Vibration Table | Electrically Functional |
| | | 50Hz Z-Axis 2mm 30min | Vibration Table | Electrically Functional |
| | Cable Tensile Strength Test | Loading Weight 4 kg 60 Seconds Cycling in 24 Hours | Tensile Testing Machine | Electrically Functional |
| Electrical | ESD Test | Contact Discharge 2 KV | ESD Testing Machine | Electrically Functional |
| | | Air Discharge 4 KV | ESD Testing Machine | Electrically Functional |
| | Aging Test | On/Off 30 Seconds Cycling in 24 Hours | Power Switch | Electrically Functional |
| | USB Connector | On/Off 250 Times | Plug and Unplug | Electrically Functional |



Camera Inspection Standard

| Inspection Item | | Inspection Method | Standard of Inspection | | |
|------------------|----------|-------------------|-----------------------------|--|---------------------------------|
| Category | Item | | | | |
| Appearance | FPC/ PCB | Color | The Naked Eye | Major Difference is Not Allowed. | |
| | | Be Torn/Chopped | The Naked Eye | Copper Crack Exposure is Not Allowed. | |
| | | Marking | The Naked Eye | Clear, Recognizable (Within 30cm Distance) | |
| | Holder | Scratches | The Naked Eye | The Inside Crack Exposure is Not Allowed | |
| | | Gap | The Naked Eye | Meet the Height Standard | |
| | | Screw | The Naked Eye | Make Sure Screws Are Presented (If Any) | |
| | | Damage | The Naked Eye | The Inside Crack Exposure is Not Allowed | |
| | Lens | Scratch | The Naked Eye | No Effect On Resolution Standard | |
| | | Contamination | The Naked Eye | No Effect On Resolution Standard | |
| | | Oil Film | The Naked Eye | No Effect On Resolution Standard | |
| | | Cover Tape | The Naked Eye | No Issue On Appearance. | |
| | Function | Image | No Communication | Test Board | Not Allowed |
| | | | Bright Pixel | Black Board | Not Allowed In the Image Center |
| Dark Pixel | | | White board | Not Allowed In the Image Center | |
| Blurry | | | The Naked Eye | Not Allowed | |
| No Image | | | The Naked Eye | Not Allowed | |
| Vertical Line | | | The Naked Eye | Not Allowed | |
| Horizontal Line | | | The Naked Eye | Not Allowed | |
| Light Leakage | | | The Naked Eye | Not Allowed | |
| Blinking Image | | | The Naked Eye | Not Allowed | |
| Bruise | | | Inspection Jig | Not Allowed | |
| Resolution | | | Chart | Follows Outgoing Inspection Chart Standard | |
| Color | | | The Naked Eye | No Issue | |
| Noise | | | The Naked Eye | Not Allowed | |
| Corner Dark | | | The Naked Eye | Less Than 100px By 100px | |
| Color Resolution | | | The Naked Eye | No Issue | |
| Dimension | Height | The Naked Eye | Follows Approval Data Sheet | | |
| | Width | The Naked Eye | Follows Approval Data Sheet | | |
| | Length | The Naked Eye | Follows Approval Data Sheet | | |
| | Overall | The Naked Eye | Follows Approval Data Sheet | | |

YDSCAM Package Solutions

YDS Camera Module



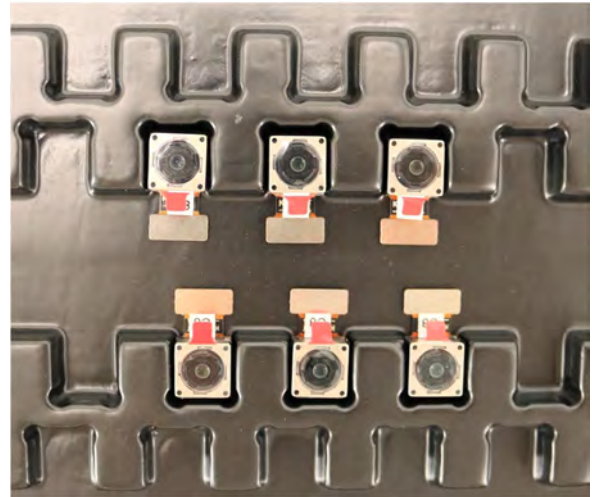
Complete with Lens Protection Film



Tray with Grid and Space

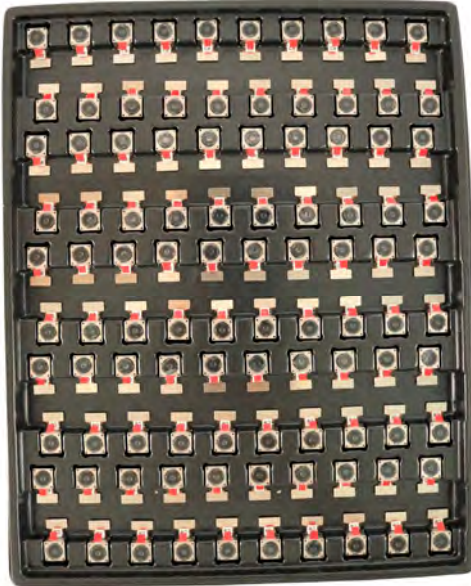


Place Cameras on the Tray

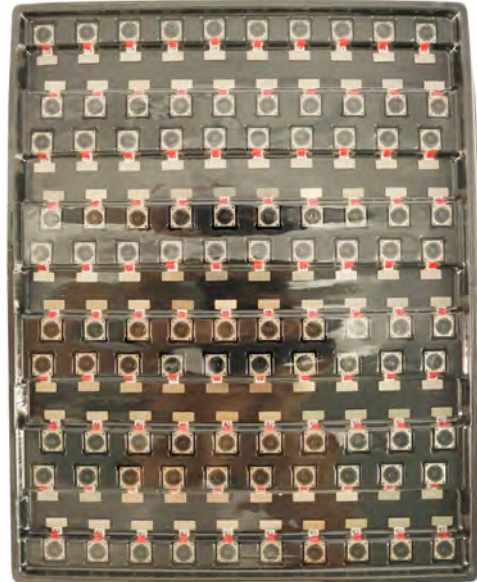


YDSCAM Package Solutions

Full Tray of Cameras



Cover Tray with Lid



Place Tray into Anti-Static Bag



Vacuum the Anti-Static Bag



YDSCAM Package Solutions

Sealed Vacuum Anti-Static Bag with Labels

1. Model and Description 2. Quantity 3. Manufacturing Date Code 4. Caution



YDSCAM Package Solutions

Place Foam Sheets Between Tray Bags



Foam Sheets are Larger Than Trays



Place Foam Sheets and Trays into Box



Foam Sheets are Tightly Fitting in Box



Seal the Carbon Box



Label the Carbon Shipping Box

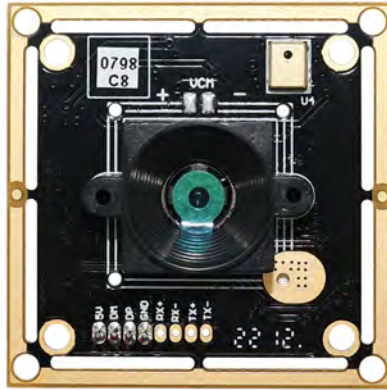




YDSCAM Package Solutions

USB Camera Module

Complete with Lens Protection Film



Place Camera Sample into Anti-Static Bag

Place USB Cameras into Tray



Seal the Tray with Anti-Static Bag

Label the Carbon Shipping Box



YDSCAM Package Solutions

Place Camera Sample into Anti-Static Bag



Place Connectors into Anti-Static Bag



Label the Sample Bags



Place Connectors into Reel



Place Samples into the Carbon Box



Place Connectors into the Carbon Box





YDS CAMERA MODULE

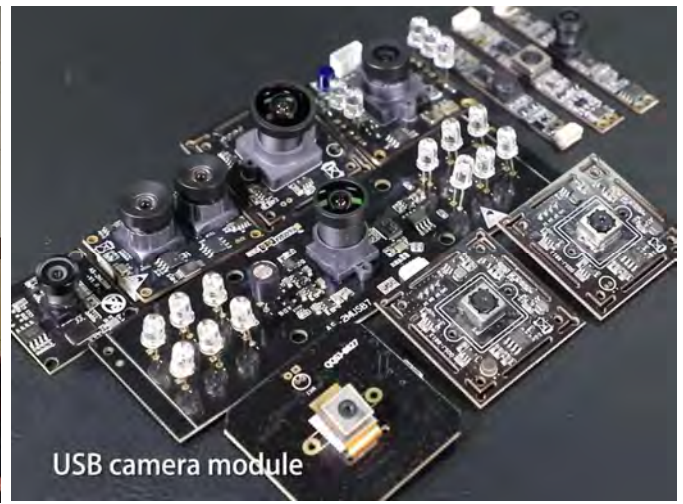
your best camera partner

Company YDSCAM

YingDeShun Co. Ltd. (YDS) was established in 2017, a next-generation technology driven manufacturer specialized in research, design, and produce of audio and video products. YDS is occupying 20,000 square feet automated plants with 100 employees of annual throughput 30,000,000 units cameras.

YDS provides OEM, ODM design, contract manufacturing, and builds the camera products. You may provide the requirements to us, even with a hand draft, our sales and engineering work together to meet your needs. We consider ourselves your last-term partner in developing practical and innovative solutions.

Our team covers everything from initial concept development to mass produced product. YDS specializes in customized camera design, raw material, electronic engineering, firmware/software development, product testing, and packing design. Our experienced strategic supply systems offer a robust and dependable manufacturing capacity for orders of various sizes.



Limited Warranty

YDS provides the following limited warranty if you purchased the Product(s) directly from YDS company or from YDS's website www.YDSCAM.com. Product(s) purchased from other sellers or sources are not covered by this Limited Warranty. YDS guarantees that the Product(s) will be free from defects in materials and workmanship under normal use for a period of one (1) year from the date you receive the product ("Warranty Period").

For all Product(s) that contain or develop material defects in materials or workmanship during the Warranty Period, YDS will, at its sole option, either: (i) repair the Product(s); (ii) replace the Product(s) with a new or refurbished Product(s) (replacement Product(s) being of identical model or functional equivalent); or (iii) provide you a refund of the price you paid for the Product(s).

This Limited Warranty of YDS is solely limited to repair and/or replacement on the terms set forth above. YDS is not reliable or responsible for any subsequent events.



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YDS Strength

Powerful Factory



Professional Service



Promised Delivery



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