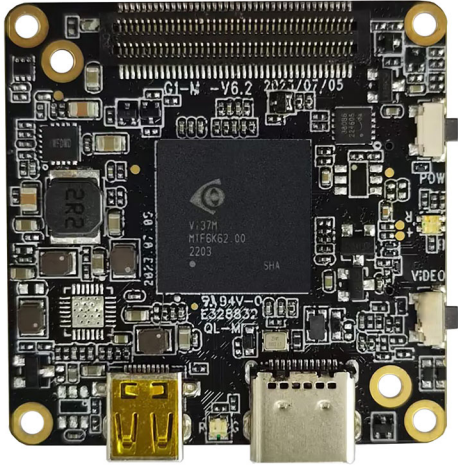
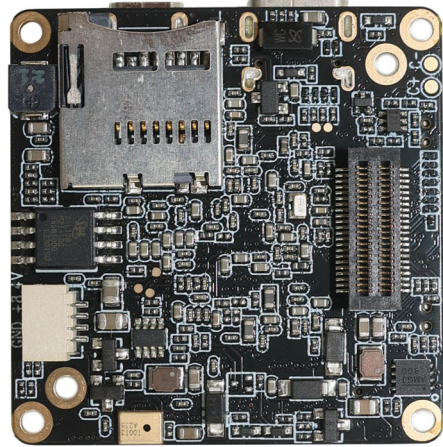


**YDS-G1M9 V6.2****iCatch V39 Ai-Powered Image Processing SoC Master Board**

Front View



Back View

**Overview**

Equipped with iCatch V39, built-in 2GB DDR3, supports up to 4K@60FPS (differential), 4K@30FPS, 1080P@120FPS H.264 encoded video. Onboard support Type-C, HDMI, TF memory card, recording, 2 control buttons, buzzer, battery power supply, etc.

This master board extension also supports WiFi, LCD display, CVBS, lens module, UART, I2C, SPI, PWM, MIC and other expansion interfaces. The board size is 38x38mm. Widely used in drones, mini DV, wearable devices, sports cameras, face recognition, USB cameras and other camera products.



## YDS-G1M9 V6.2

### iCatch V39 Ai-Powered Image Processing SoC Master Board

#### Hardware Specifications

<b>Model No.</b>	<b>YDS-G1M9 V6.2</b>
<b>Main Control Chipset (DSP)</b>	iCatch V39
<b>Image Sensor Interface</b>	MIPI
<b>Battery Voltage</b>	7.4V - 7.7V High Voltage Lithium Battery
<b>Storage Type</b>	External TF Card, Supports 8GB - 512GB Class 10 and Above, U3 is Recommended
<b>Type-C Port</b>	Type-C USB 5V Connection to Computer USB Mode Connection to PCCAM (Camera) Mode
<b>LED Indicator Type</b>	Three Color Light (Red, Green, Blue)
<b>2 Control Button Type</b>	Power Button (A), OK Button (B)
<b>Power Supply</b>	Supports 3 Power Supply Methods At The Same Time (1) 5V USB to Type-C Port Power Supply (2) 9V-24V WiFi Board or Network Port board Power Supply (3) 6.8V-8.4V Battery Power Supply (The 3-Axis Gimbal Version Does Not Support 5V USB)
<b>Operating Temperature</b>	-10°C to +60°C Without Housing
<b>Storage Temperature</b>	-20°C to +80°C
<b>Humidity</b>	20% to 80%
<b>PCB Dimensions</b>	38 x 38 mm
<b>PCB Screw Hole Spacing</b>	External (34mm x4), Internal (28mm x2)
<b>PCB Screw Hole Diameter</b>	2 mm
<b>Optional Camera Configuration</b>	(1) YDS-G1M9 V6.2 + Camera (2) YDS-G1M9 V6.2 + Camera + YDS-G1WF V6.3 WiFi Board (3) YDS-G1M9 V6.2 + Camera + YDS-G1NK V6.3 Ethernet Board
<b>Supportive Image Sensors</b>	13MP: IMX258 12MP: IMX377 OS21D40 IMX577 IMX386 IMX378 8MP: IM317 5MP: IMX335 2MP: IMX290 IMX385
<b>Optional Extension Ports</b>	WiFi, Ethernet Network Port, Display, Audio IC, Lens Module, UART, I2C, SPI, PWM, MIC, etc.

## YDS-G1M9 V6.2

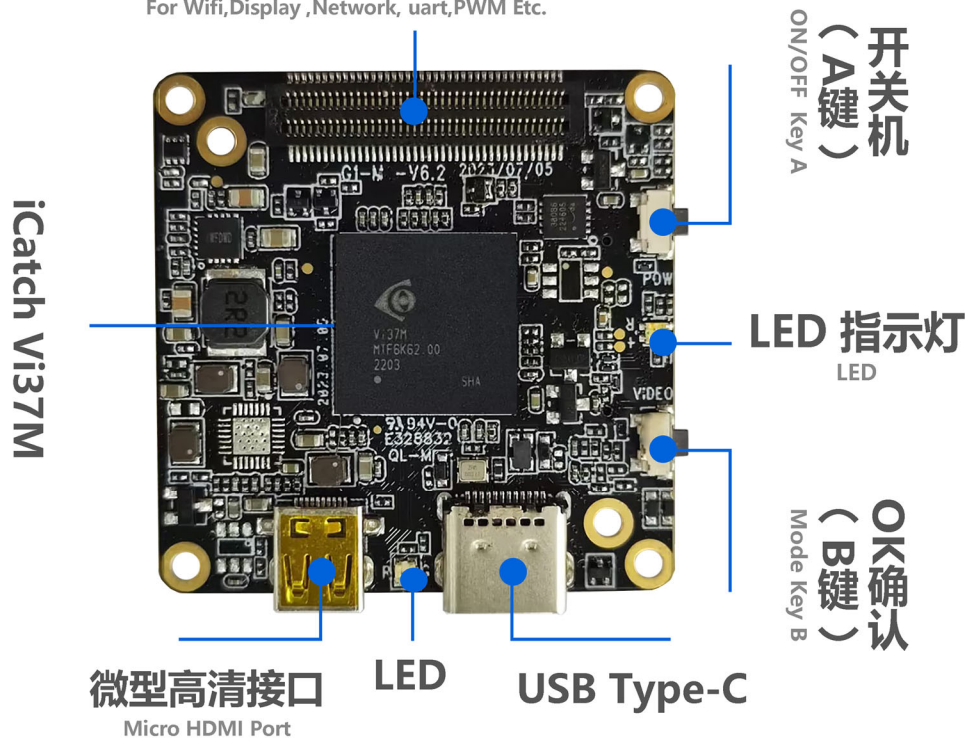
### iCatch V39 Ai-Powered Image Processing SoC Master Board

#### Photo Image Settings

<b>Resolution</b>	20MP, 13MP, 12MP, 10MP, 8MP, 5MP, 3MP, 2MP
<b>Time Lapse Photography</b>	OFF, 3S, 5S, 7S
<b>Continuous shooting</b>	OFF, 3-Shot, 7-Shot, 15-Shot, 30-Shot
<b>White Balance</b>	Auto, Sunny, Cloudy, Fluorescent, Incandescent
<b>Power Frequency</b>	50Hz, 60Hz
<b>Exposure Compensation</b>	EV 0.0, EV 3.0, EV 7.0, EV 10.0, EV 13.0, EV 17.0, EV 20.0, EV -3.0, EV -7.0, EV -10.0, EV -13.0, EV -17.0, EV -20.0
<b>Time Lapse Photo Interval</b>	OFF, 1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 10S, 13S, 15S, 20S, 25S, 30S, 40S, 1min
<b>Time Lapse Duration</b>	No Limit, 1min, 3min, 5min, 10min, 20min, 30min, 1hr, 2hr, 3hr, 5hr
<b>Photo Time Watermark</b>	OFF, Date, Date and Time

#### Wifi、显示屏、网口、uart、PWM等扩展接口

For Wifi, Display, Network, uart, PWM Etc.





## YDS-G1M9 V6.2

### iCatch V39 Ai-Powered Image Processing SoC Master Board

#### Video Settings

<b>Resolution</b>	16:9 (4K, 2.7K, 1080P, 720P) 4:3 (1440P) Currently Only IMX377 Sensor Supports 1440P
<b>Frame Rate</b>	24FPS, 25FPS, 30FPS, 48FPS, 50FPS, 60FPS, 120FPS, 240FPS
<b>Slow Motion Recording</b>	OFF, 4K2X, 1080P4X, 720P8X
<b>Fast Motion Recording</b>	OFF, 2X, 5X, 10X, 15X, 30X
<b>Automatic Recording</b>	OFF, ON
<b>Time Lapse Video Mode</b>	OFF, 1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 10S, 13S, 15S, 20S, 25S, 30S, 40S, 60S
<b>Time Lapse Duration</b>	No Limit, 1min, 3min, 5min, 10min, 20min, 30min, 1hr, 2hr, 3hr, 5hr
<b>Pre-recording</b>	OFF, ON (for Option ON, 5 Seconds of Video is Pre-recorded)
<b>EIS Anti-Shake</b>	OFF, ON
<b>Image Quality Enhancement</b>	Super Good, Very Good, Normal (Referral to Actual Video Effect Quality, Not for Preview)
<b>Image Rotation</b>	Normal, Vertical, Horizontal (for Recorded Video)
<b>Recording Time</b>	No Limit, 1min, 5min
<b>Automatic Screen Off</b>	OFF, 60S, 180S, 300S
<b>Light Metering Mode</b>	Center, Multi-point, Single Point
<b>Video Recording File Time</b>	No Limit, 1min, 5min
<b>Loop Recording</b>	OFF, ON
<b>Recording Volume</b>	0, 1, 2, 3
<b>Video Time Watermark</b>	OFF, Date, Date and Time



## YDS-G1M9 V6.2

### iCatch V39 Ai-Powered Image Processing SoC Master Board

#### System Settings

<b>Automatic Shut Down</b>	OFF, 1min, 3min, 5min, 10min, 15min
<b>USB Auto Power On</b>	Turn ON, Turn OFF
<b>Languages</b>	English, Simplified Chinese, Traditional Chinese (Select Language Through Configuration File in the Card)
<b>Button Touch Tone</b>	Turn ON, Turn OFF
<b>Automatically Turn On WiFi</b>	Turn ON, Turn OFF
<b>WiFi Frequency Bands</b>	2.4GHz or 5GHz (Dual Band Single Channel)
<b>Display Brightness</b>	Low, Medium, High Brightness (for Touch Screen)
<b>Display Setting</b>	Conventional Display, Full Screen Display (for Touch Screen)
<b>Fill Light A (White Light)</b>	Auto, OFF, ON (for Use with Fill Light Board)
<b>Fill Light B (Infrared Light)</b>	Auto, OFF, ON (for Use with Fill Light Board)
<b>IR Cut Settings</b>	Auto, OFF, ON (for Use with IR Cut Function Modules)
<b>Special Effects</b>	Original Image, Black and White, Natural, Negative, Warm Tones, Contrast (for Touch Screen)
<b>White Balance</b>	Auto, Sunny, Cloudy, Fluorescent, Incandescent
<b>Date and Time</b>	Year, Month, Day, Hour, Minute
<b>Format</b>	No, Yes
<b>Reset</b>	No, Yes
<b>Card Information</b>	Displays Video Card Capacity and Free Space
<b>Device Information</b>	Displays Firmware Version

#### Gimbal Functions and Settings

<b>Gimbal Functions</b>	Centering, Calibration
<b>Sensitivity</b>	Follow Softly, Follow Sensitively
<b>Follow Mode</b>	Full Follow, Heading Follow, Heading and Pitch Follow
<b>Pitch Axis Control</b>	Turn ON, Turn OFF



## YDS-G1M9 V6.2

### iCatch V39 Ai-Powered Image Processing SoC Master Board

#### Camera Features

<b>Continuous Shooting</b>	Long Press the OK Button (B) to Shoot Continuously, Release Button to Stop Shooting Continuously
<b>Snapshot</b>	During Recording, Long Press the OK Button (B) to Capture the Video. Release Button to Stop Snapshot
<b>HDMI Output Resolution</b>	4K@30FPS 1080P@60FPS/30FPS 720P@60FPS
<b>Video Start and Stop Function</b>	Short Press the Power Button (A) to Pause or Continue Video Recording
<b>USB Camera Resolution</b>	H.264: 4K@30FPS, 1080P@120FPS, 720P@60FPS (Dependency on Sensor Type and UVC Protocol)  MJPG: 5760x3240@10FPS, 4000x3000@10FPS 4K@30FPS, 1080P@30FPS, 720P@30FPS YUY2: 480P@30FPS (Supports Modification of UVC Output on Configurations)
<b>USB Flash Drive</b>	USB Mode when Connected to Computer
<b>Inverted Mode</b>	By Placing a Configuration File in the Card, You Can Modify the Displayed or Captured file and Flip it 180 degrees
<b>WiFi Mode</b>	AP Mode, STA Mode Set WiFi Mode by Putting Configuration Files in the Card or Enter the Menu to Set This Item Through the Touch Screen
<b>Configuration IP Address</b>	By Placing a Configuration File in the Card, You Can Modify the IP and Gateway Address of the Camera. Default is Static IP. Optional on Dynamic IP.
<b>RTSP Video Stream Address</b>	By Placing a Configuration File in the Card, You Can Modify the RTSP video stream address. If There is No Configuration File in the Card, the Default Port is 554.



## YDS-G1M9 V6.2

### iCatch V39 Ai-Powered Image Processing SoC Master Board

#### USB Type-C Interface:

This interface supports USB standard 5V power input, which can power the master board and charge the battery (recommended 7.4V-7.7V battery). Connecting to a computer can directly read files in the TF card and use it as a USB flash drive. It can also be used as a PCCAM USB camera.

The USB interface retains one camera control serial port UART3 and one camera debugging serial port UART1 (the serial port function can be used with the G1-USB serial port debugging board).

#### Connecting to the Computer USB Flash Drive Mode:

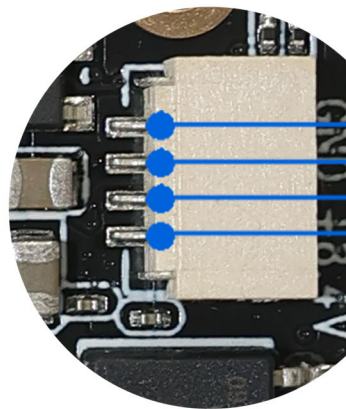
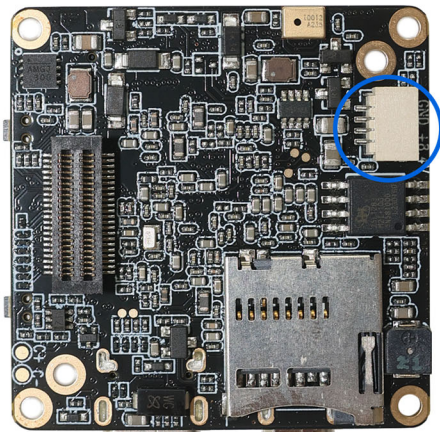
Insert the TF card, connect the other end of the USB to the computer, and automatically enter the USB flash drive mode after booting by default.

#### Connecting to the Computer PCCAM Mode:

Insert the TF card, connect the other end of the USB to the computer, and automatically enter the USB flash drive mode after booting. Short press the OK button (A) to switch to PCCAM camera mode. (Right-click the computer "Computer", click the left button in the pop-up prompt box to enter "Management", "Device Manager", and you can see the name of the camera identified in "Image Device" camera. Open the camera tool "amcap.exe" to see the current device preview screen).

#### Battery Power Supply:

6.6V (low power shutdown) to 8.8V, 7.4-7.7V high-voltage and high-density batteries are recommended  
Special note: the battery power supply can support up to 12V; but this does not include the gimbal version, the stable power supply voltage of the gimbal version is 8V.



BAT -  
BAT +

Battery 7.7V-8.8V  
电池供电

## YDS-G1M9 V6.2

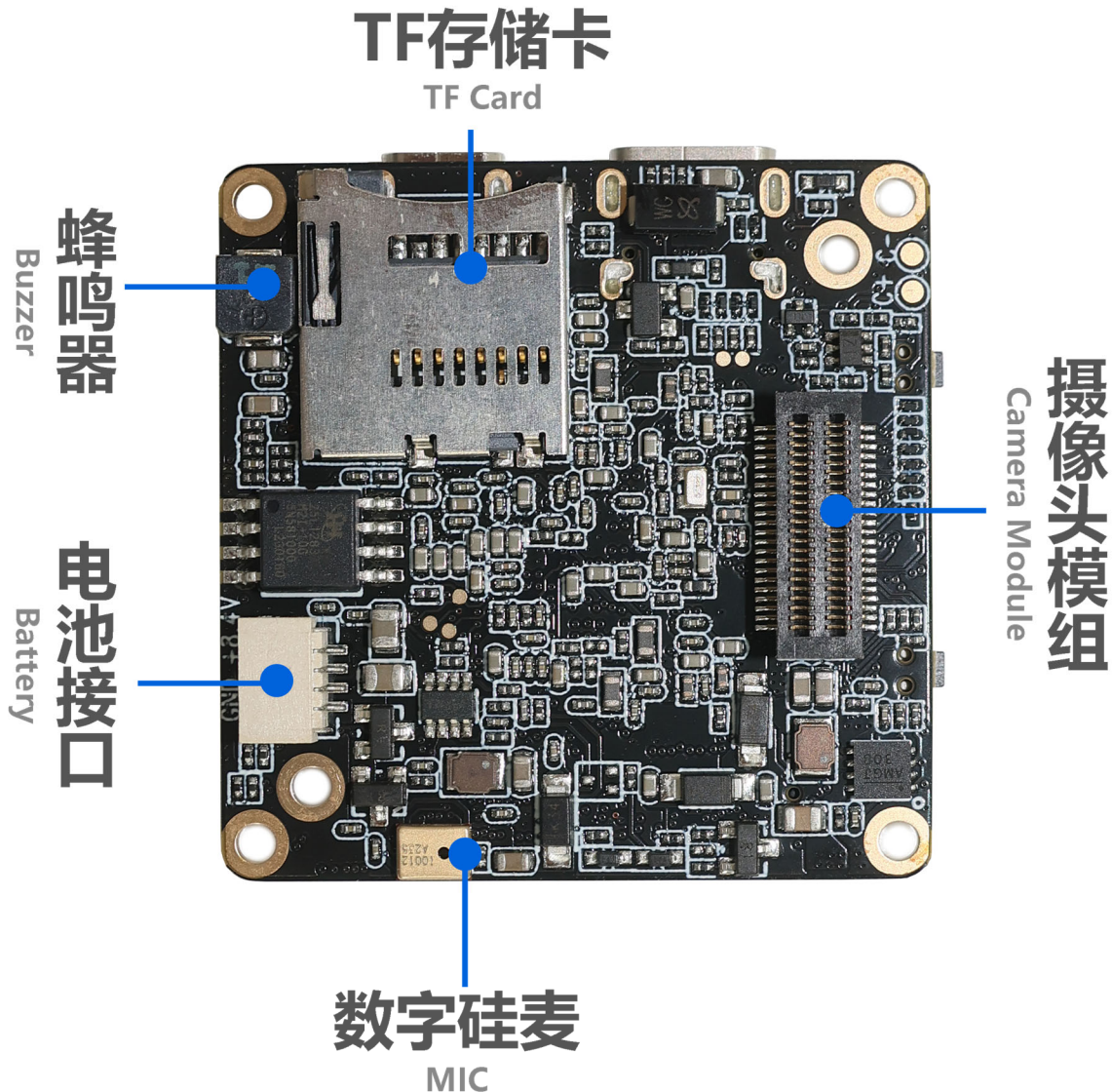
## iCatch V39 Ai-Powered Image Processing SoC Master Board

**Charge the Battery:**

Use a power adapter (5V2A recommended) to charge the battery of the machine. The red light will be on during charging and the green light will be on when fully charged.

**Camera Module:**

This interface can be used to expand multiple MIPI sensors, IR-CUT function, LED fill light, serial port UART2, battery power output, micro three-axis gimbal and other functions.







## YDS-G1M9 V6.2

### iCatch V39 Ai-Powered Image Processing SoC Master Board

#### Button Instructions:

Button	Mode or Status	Functional Operation
<b>Button A</b> Power Mode	Power ON / OFF	Long Press 1 Second Power ON / OFF
	Standby	Short Press on Switch Mode Video Recording, Snapshot, Playback, Settings
	Setting Mode (with Touch Screen)	Short Press to Scroll Down Menu (After Pressing Button B to Enter Setting)
	Video Recording	Short Press to Pause or Continue Recording
<b>Button B</b> Confirmation OK Video Recording	Standby	In Video Standby Mode, Long Press 3 Seconds to Turn ON / OFF WiFi Mode. Default WiFi is OFF. In Video Recording Mode, Short Press to Start Recording In Snapshot Mode, Short Press to Start Taking Photo Long Press to Start Continue Shooting Release to Stop Continue Shooting
	Video Recording	Short Press to Stop Recording and Save the File Long Press 2 Seconds (Less than 4 Seconds) to Take a Single Frame Shot, Release to Stop Taking Frame Shots Long Press 5 Seconds to Take Continues Frame Shots, Release to Stop Taking Frame Shots
	Setting Mode (with Touch Screen)	Short Press to Confirm and Enter Setting Mode Long Press 2 Seconds to Return Double-Click to Switch Between Settings: Photo / Video / System / 3-Axis Gimbal
	Playback Mode (with Touch Screen)	Short Press to Scroll Up Menu Double-Click to Play / Pause Video or Audio Files Click 3 Times to Mark or Unmark Files. If File is Marked, then the File is Locked and Not Erasable Long Press to Prompt Option to Delete Current File (Long Press to Delete, Short Press to Return) After Entering, Long Press Again to Delete
	Shutdown	Press and Hold to Enter the USB Burning Mode
<b>Reset Function</b>	Standby or Working	Press Button A and B at the Same Time to Shutdown



## YDS-G1M9 V6.2

### iCatch V39 Ai-Powered Image Processing SoC Master Board

#### LED Indicator Description:

Functions	Color	Power On	Video Mode	Video Recording	Photo Mode	Photo Snapshot	Playback Mode	Setting Mode
LED Indicator	Red	Always On	Always On	Flashing			Always On	
	Green				Always On	Flash Once	Always On	
	Blue						Always On	Always On

Note: When the device is powered without a TF card inserted, the function indicator light flashes yellow.

#### Buzzer Sound Description:

Operation Mode	Power On	Power Off	Switching Mode	Start Video Recording	Start Stop Recording	Photo Snapshot	Menu Setting	Menu Scroll Down	Exit Menu Setting
Buzzer Sound	3 Beeps	5 Beeps	1 Beep	1 Beep	2 Beeps	1 Beep	1 Beep	1 Beep	1 Beep

Special Note: When the touch screen is not in use, you can modify the setting parameters through the configuration file. Put the configuration file, such as "CameraConfig\_G1A.ini" (the specific configuration file name will vary depending on the lens module) in the root directory of the TF card, and you can modify the corresponding function options in the configuration file. After saving the changes, shut down the machine and restart it to take effect.