

MISSION-GRADE VISION FOR AUTONOMOUS DOMINANCE

UAV · UGV · USV / Imaging-Sensing / Digital Transmission



—MADE IN—
TAIWAN

Designed & Manufactured in Taiwan



Non-China Supply Chain Strategy

FPV Drone Platform

Compact, Agile, Mission Ready.

High performance FPV drones for reconnaissance, training and tactical missions

SENTINEL-5

Wheelbase	224 mm
Payload	1 - 1.5 kg
VTX	5.8G
Control Link	ELRS 915 + 2.4 GHz
FC	STM32F405
ESC	6S Input, 60A

AX-TD05FDG0XB000C



Heavy-Lift & Long-Endurance UAV Platform

Powerful. Reliable. Versatile.

10-inch and 15-inch UAV platforms for long range missions, heavy payload delivery and industrial applications.

SENTINEL-10

Wheelbase	415 mm
Payload	3 - 3.5 kg
VTX	5.8G
Control Link	ELRS 915 + 2.4 GHz
FC	STM32F405
ESC	6S Input, 60A

AX-TD10FDG0XB000C



SENTINEL-7

Wheelbase	305 mm
Payload	1.5 - 2 kg
VTX	5.8G
Control Link	ELRS 915 + 2.4 GHz
FC	STM32F405
ESC	6S Input, 60A

AX-TD07FDG0XB000C



SENTINEL-15

Wheelbase	647 mm
Payload	7.5 - 10 kg
VTX	5.8G
Control Link	ELRS 915 + 2.4 GHz
FC	STM32F405
ESC	8S Input, 100A

AX-TD15FDG0XB000C



UAV + AI Vision Solution

Smarter Perception. Superior Decision.

Integrate AI vision system with UAV platform to achieve real-time target detection, tracking and mission automation.



AI Target Detection

Real-time detection of vehicle, people and objects



Pixel Lock

Tap-to-lock target, maintain lock during movement



Onboard AI Processing

Low-latency inference for fast decision and response



Smart Tracking

Auto tracking with high accuracy and stability



Mission Automation

Waypoint, geofence and autonomous mission support



Taiwan-Made Smart UAV Batteries

High Performance • Mission Ready



High Energy Density

NMC for maximum flight endurance.



Safe & Reliable

High safety chemistry (LiFePO4) options for critical missions.



Long Cycle Life

Engineered for extended cycle life and mission durability.



Made in Taiwan

100% Taiwan-based supply chain. Non-China solution for global markets.

Product Lineup

PN SERIES - NMC

Model	Configuration	Nominal Voltage	Capacity
PN070	6S1P	22.2V	7Ah
PN100	6S1P	22.2V	10Ah
PN128	6S1P	22.2V	12.5Ah
PN150	6S1P	22.2V	15Ah
PN220	6S1P	22.2V	22Ah

PN SERIES - NMC (HIGH ENERGY)

PS106	6S1P	22.2V	10.2Ah
PS300	6S1P	22.2V	30Ah
PS600	12S1P	43.1V	60Ah



Designed for UAV

Optimized for multi-rotor, VTOL and fixed-wing UAV platforms.



Wide Operating Range

Charging: 0~45°C
Discharging: -20~60°C



Multiple Connectors

TW60 / TW90 / AS150
Custom options available.



Quality Assured

Strict quality control and reliability testing.

100% TAIWAN-BASED UAV SUPPLY CHAIN
RELIABLE. SECURE. MISSION READY.



LWIR Camera

Advanced Thermal Imaging Core for Diverse Applications

NEW Thermal Camera Series

AX-TFPTHE03/12-USB



USB 2.0

Digital Output

Lens 35mm

FOV 12°(H)

AX-TFPTHE03F



CVBS

Analog Output

Lens 9.1mm

FOV 48°(H)

FPS 50

AX-TFPTHE03-USB



USB 2.0

Digital Output

Lens 9.1mm

FOV 48°(H)

FPS 50

AX-TFPTHE03-MIPI



MIPI-CSI

Digital Output

Lens 9.1mm

FOV 48°(H)

FPS 50

Waterproof Thermal Camera

AX-TFPTHE03IP-USB



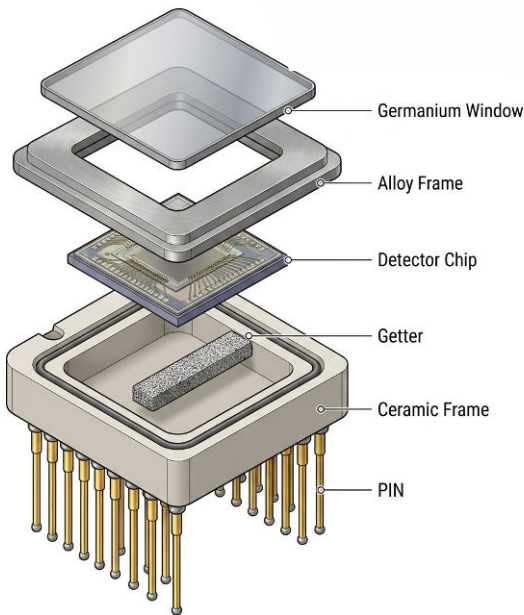
USB 2.0

Digital Output

Lens 9.1mm

FOV 48°(H)

Ceramic Vacuum Detector Packaging Process Illustration



Multiple Lens Options

USB 2.0

Digital Output

AX-TFPTHE02/USB



9mm 48.8°

AX-TFPTHE02/25-USB



19mm 23.2°

AX-TFPTHE02/32-USB



13.4mm 32°

AX-TFPTHE02/102-USB



4.5mm 102°

CVBS

Analog Output

AX-TFPTHE02F



9mm 46.21°

AX-TFPTHE02F/23



19mm 23°

AX-TFPTHE02F/32



13.4mm 32°

AX-TFPTHE02F/62



6.8mm 62°

Core Specifications

Detector

VOx

Resolution

640x512

Output

USB 2.0 Digital Output

CVBS Analog Output

MIPI-CSI Digital Output

NETD

≤40mK

Pixel Pitch

12μm

Feature

Packaging Method	Ceramic Vacuum Packaging (CVP)
Vacuum Stability	Long-term Stability (Key Advantage)
NETD Performance	Stable Long-term Performance
Thermal Drift	Low Thermal Drift
Moisture Resistance	High Moisture Resistance
Service Life	Extended Lifetime
Typical Applications	Industrial / Automotive / UAV / Defense

—MADE IN—
TAIWAN



FPV Drone Camera

Analog Camera

—MADE IN—
TAIWAN



AX-CUC102



Image Sensor
OmniVision

Resolution
1500TVL

FOV
110°(H) /140°(D)

Wide Power Input
DC 5-26V

AX-CUC102WB



W/B

Image Sensor
OmniVision

Resolution
1500TVL

FOV
110°(H) /140°(D)

Wide Power Input
DC 5-26V

AX-CUC107



Image Sensor
SONY IMX662

Resolution
1500TVL

FOV
80°(H) /100°(D)

Wide Power Input
DC 5-26V

AX-CUC107B



Wide Angle

Image Sensor
SONY IMX662

Resolution
1500TVL

FOV
105°(H) /125°(D)

Wide Power Input
DC 5-26V

AX-TUC01



Image Sensor
NOVATEK

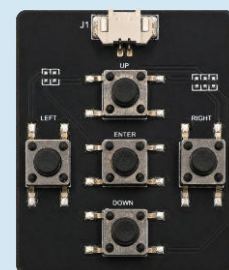
Resolution
1500TVL

FOV
110°(H) /140°(D)

Wide Power Input
DC 5-30V

OSD Control Board

AX-CUC-OSD



MIPI Camera Module Series

Sony STARVIS™ Sensor Solutions

Compact, high-performance MIPI Camera module designed for UAV, AI vision and embedded applications

AX-TUC03/M1



MIPI
CSI-2



Low-Light
Optimized



ISP
Customization



Low-Latency
Pipeline

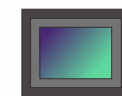


AI / EO-IR
Ready



Compact
Design

Supported SONY STARVIS™ Sensor



IMX662 2MP

1920 x 1080
1/2.8" 2.9μm



Global Shutter
IMX900 3.2MP

2064 x 1552
1/3.1" 2.25μm



IMX335 5MP

2592 x 1944
1/2.8" 2.0μm



IMX415 8MP

3840 x 2160
1/2.8" 1.45μm



IMX678 8MP

3840 x 2160
1/2.8" 2.0μm



IMX585 8MP

3856 x 2180
1/1.2" 2.9μm



IMX586 48MP

8000 x 6000
1/1.2" 0.8μm

Applications



UAV



UGV



EO/IR PLATFORM



ROBOTICS

EO/IR Module

Mission-Grade Vision.
Trusted Performance.



Long Range
Up to 5000M



Built-in IMU
Stabilization



Designed for
Gimbal Integration



Non-China
Mission-Ready



GEN 1	Specifications	New GEN 2
AX-TFPTHE01		AX-TFPTHE012
20MP Ultra HD	Image quality	48MP Ultra HD
Dual Camera Architecture	EO Architecture	Dual Camera Architecture
17.8x Optical Zoom + 2x Digital Zoom	EO Zoom	35.8x 17.9x Optical Zoom + 2x Digital Zoom
FOV Wide 80° / Tele 16°	FOV	FOV Wide 80° / Tele 16°
1920x1080	Resolution	1920x1080
✓	Built-in IMU	✓
USB 2.0 / High-Definition	Output interface	USB 3.0 / RTSP
Up to 3150M	Transmission Range	Up to 5000M
✓	Designed for Gimbal Integration	✓
NON-CHINA	Mission-ready Architecture	NON-CHINA
✓	Designed & Produced in Taiwan	✓
✓	Non-China Supply Chain	✓

Optional EO-Only Configuration

AX-TFPTHE01/EO-USB

AX-TFPTHE012/EO-USB **GEN 2**



EO Camera

IR Camera

USB 2.0

Digital Output

AX-TFPTHE02/USB

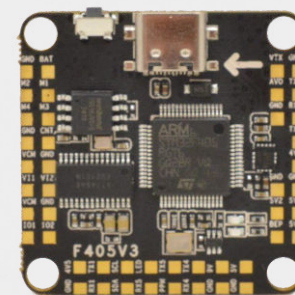
9mm 48.8°



Standard
IR Camera

Custom Options Available

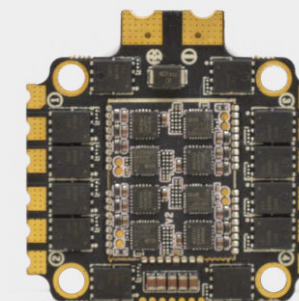
Flight Controller



AX-TFC405

- Processor : STM32**F405** for 7"&10"
- Optional STM32**F722** for 13"&15"
- IMU : ICM42688P
- Blackbox : 16MB onboard Flash
- Voltage Input : 2S-6SLiPo (11V-30V)
- BEC Output : 5V/1.5A, 9V/2A
- OSD : Support

ESC



AX-TESC/60A

- Firmware : AM32
- Persistent & Maximum current : 60A*4 / 60A(6S) for 7"&10"
- Optional 80A*4 / 80A(8S) for 13"
- Optional 100A*4 / 110A(8S) for &15"
- Galvanometer : Scale=100 Offset=00
- Size : 57.0 (W) x 53.0 (L) x 7.0(H)mm

ELRS Gemini- 2.4G/915M Dual Band

AX-TELRS-915/2.4GRX



AX-TELRS-915/2.4GTx



Protocol	ELRS-Gemini Dual-Band
Dimensions	17x28mm
Operating Frequency Band	915MHz + 2.4GHz
Refresh Rate	25Hz-200Hz
Operating Voltage	5V
Antenna Interface	IPEX2
Backhaul Power	50mW
Work Temperature	-30°C to +80°C

Q3
COMING
SOON!

Video Transmitter Module

5.8G
AX-TVTX5.8G/4W
3.3G
AX-CVTX3.3G/5W


Antenna

- Adjustable Power Levels
- CVBS video signal input
- Ultra-Wide Frequency Range
- High Stability
- Flexible Power Input
- Compact Design
- 48 channels
- Transmission distance : **8KM**

—MADE IN—
TAIWAN



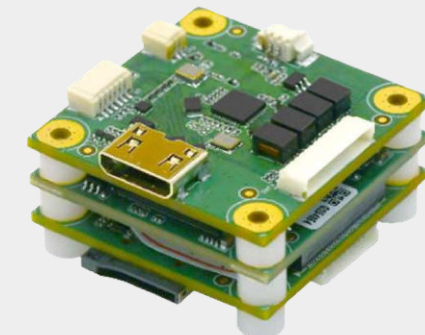
Supply Voltage	12-48V
Output	DC +5V
Antenna	SMA 5.8 / 3.3G High-Frequency
Input Impedance	50 Ω
Modulation type	FM
Supports Protocol	IRC Tramp
Frequency Range	5.8G : 5362-5945 MHz, covering 6 bands and 48 channels 3.3G : 3700-4160 MHz, covering 3 bands and 24 channels
TX Power Levels	5.8G : 4W 3.3G : 5W

AI Vision Video Processing

with LPDDR4 16GB Memory + Pixel Lock feature

AX-TAI6GON4-M1


Top side



Back side

Key Highlights

- LPDDR4 16GB Memory: Enhanced AI performance, system stability & real-time processing
- 2.5 TOPs AI + 4K Codec YOLO-based object detection for mission scenarios
- Ultra-Efficient Taiwan SoC Designed for long-duration, stable operation
- Real-Time Secure Streaming: Multi-protocol transmission for ISR applications
- Compact & Mission-Ready Design 36 × 36 mm for small UAV & frontline deployment

AI & Video Capability

- H.265 / H.264 Encoding (up to 64 Mbps)
- Up to 4K video processing capability
- Multi-resolution support (FHD / HD / CVBS)
- Local recording (Micro SD)

Streaming & System

- RTSP / RTMP / TS over IP / HLS (optional)
- NDI-HX (optional)
- Web UI configuration & firmware upgrade

Optional AI Function

- Tap-to-lock target selection
- Real-time AI tracking
- Maintains trajectory if target is lost
- Enhances precision in tactical operations

Mechanical

- Size: 36 × 36 × 20.6 mm
- Power Input: DC 12V

—MADE IN—
TAIWAN



Digital VTX Camera & Receiver System

For High-Speed UAV/UGV/USV Missions



Ultra-Low Latency
Clear Vision.
Trusted Performance.



Long Range
Up to 10km LOS
(High-Power Version)



Low-Light Ready
low-noise visuals even in low-light
environments

Camera & VTX

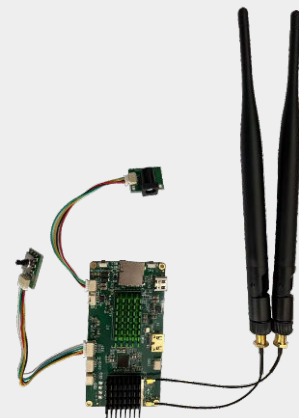
AX-DVTX



Compact Camera Module
with Built-in VTX

Receiver

AX-DVRX



High-Performance Digital
VRX Receiver

Digital 5.6-5.8GHz
Video Link

Display (Recommended)

AX-CM700MHD120



7-inch Full HD 120Hz
Port Video Monitor

OPTION Bracket

Camera Module & VTX Specification

Sensor	STARVIS2 Sensor
Camera Dimensions	19.8 × 19.8 mm
Communication Frequency	5.6 - 5.85 GHz
Transmit Power (EIRP)	Standard Version: 24 dBm (up to 8 km LOS) High-Power Version: 30 dBm (up to 10 km LOS)
Minimum latency	23 ms
VTX Module Dimensions	31 × 33 × 13 mm
Weight	33.7 g (without antennas)
Video Codec	H.264
Video Output Resolution	1080p@90/75/60/45fps 720p@120/90/75/60/45fps 720×480@120/90/75/60/45fps
Wide Voltage Input	7.4V - 24V
Typical Power Consumption	12V @ 1.3A

VRX Specification

Antenna Interface	IPEX × 2 / Directional Antenna (optional)
Output Interface	High-definition / MIPI DSI
Recording	Support (up to 64GB)
OSD	MSP OSD
Dimension	45 x 89 mm
Wide Voltage Input	7.4V - 24V

7-inch Full HD 120Hz Portable Video Monitor

AX-CM700MHD120



- 120Hz High Refresh Rate
- Smooth & Clear Real-time Image
- Perfect Pairing with VTX System
- Compact, Lightweight, Field-Ready

Lightweight UAV Gimbal Solution

Compact • Lightweight • High Stability • Easy Integration

TWO-AXIS

Gimbal

- Ultra-lightweight Design
- Compact Size
- 2-Axis Stabilization (Pitch, Yaw)
- Controllable Range
 - Pitch: -135° ~ +50°
 - Yaw: -75° ~ +75°
- Wide Voltage Input: 12V ~ 48V DC
- Dimensions (L × W × H): 40 × 48 × 54 mm
- Weight: 51g
- Inverted / Hanging Installation
- UART Control



THREE-AXIS

Gimbal

- Ultra-lightweight Design
- Compact Size
- 3-Axis Stabilization (Pitch, Yaw, Roll)
- Controllable Range
 - Pitch: -135° ~ +50°
 - Yaw: -75° ~ +75°
 - Roll: -50° ~ +50°
- Wide Voltage Input: 12V - 48V DC
- Dimensions (L × W × H): 40 × 69 × 53 mm
- Weight: 68g
- Inverted / Hanging Installation
- UART Control



Drone Camera Options

AX-CUC107



Sensor	SONY IMX662
FOV	80°(H)/ 100°(D)
Resolution	1500TVL
Power Input	DC 5-26V

Applications



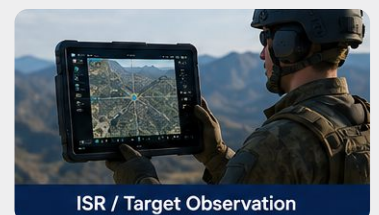
FPV Reconnaissance



Small UAV / VTOL



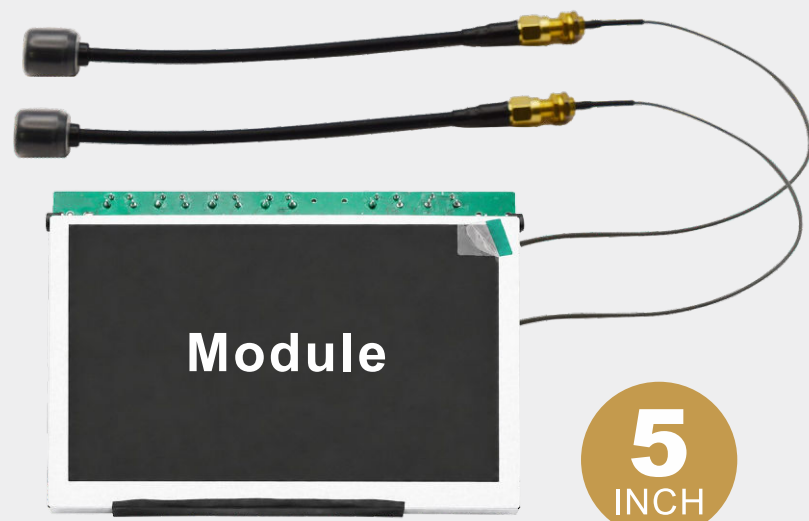
EO/IR Payload



ISR / Target Observation

FPV Ground Receiver Module

Modular platform optimized for 5-inch display systems.
Ideal for customers who want to integrate the board into goggles, monitors, or custom enclosures.



AX-CM50/5.8G-M1-RX

Viewing Module

- Screen Size: 5-inch TFT IPS Panel
- Aspect Ratio: 16:9
- Resolution: 800 × 480
- Brightness: 300 cd/m2
- Battery: 3000mAh Li-ion
(Type-C Charging Supported)
- With recording function
- AV output

RF Receiving Module

- Frequency Range: 5.8GHz Band
- Channels: 48 Channels
- Antenna Type: SMA × 2
- Tuning Method: Auto Search + Manual Selection
- Supported Format: Analog FPV (NTSC / PAL)

Choose Your Solution

Module Option

Buy the board (module)
for your own enclosure / goggles / display

Monitor Option

Ready-to-use 5-inch monitor with built-in receiver,
DVR and battery (JPP enclosure)



5-Inch FPV Monitor

with Built-in DVR & 5.8GHz Diversity Receiver

All-in-one solution with high-performance receiver and DVR
recording, designed for easy field use.



AX-CM50D/5.8GRX



AX-CUC107



FPV Goggles



Ground Station



Drone Testing



Field Deployment

Key Features

Built-in 5.8GHz Diversity Receiver

- Integrated dual-antenna 5.8GHz RX module
- Better RF reception stability
- Improved anti-interference performance
- Supports 48 channels with an auto-search function

Integrated DVR Recording Module

- Built-in Taiwan Novatek DVR solution
- Supports TF card recording
- Up to 256GB storage capacity
- Real-time video recording capability

Portable & Easy-to-Use Design

- Compact lightweight housing
- User-friendly button interface
- Suitable for field deployment
- Built-in rechargeable lithium battery

Multiple Video Input Support

- 5.8GHz RF wireless video reception
- CVBS video input via 3.5mm connector

Propeller 7"/10"/ 15"

High Efficiency • Low Vibration • Maximum Thrust

7
INCH

AX-TD7-7040

10
INCH

AX-TD10-1050

15
INCH

AX-TD15-1507

Premium Carbon Fiber Frames

7" / 10" / 13" / 15"

Built with T300 grade material, our drone frames offer outstanding durability, lightweight performance, and precision engineering. Ideal for racing, freestyle, and professional aerial photography.

7
INCH

AX-CFV7

10
INCH

AX-CFV10

13
INCH

AX-CFV13

15
INCH

AX-CFV15

13
INCH

Multiple Sizes: From 7 to 15 inches, fit for various flight missions.

Customizable carbon fiber size, weave(plain/twill) and finish (glossy / matte)

IP Encoding Box

ACC-THDM/IPU



Camera

USB
High-Definition

Box

IP(RTSP)
H.265

- 4K60 High-definition to IP/UVC
- Hardware Compression
- A/V Input Interface : 1 x High-definition
- A/V Output Interface: 1 × RJ45
- 1 × USB3.0 Type B (UVC) output

Professional Video Signal Conversion & Distribution Solutions

ACC-THDM2/SHD



- Dual High-definition inputs with simultaneous High-definition and 3G-SDI outputs
- Supports PIP / PBP multi-view display
- Built-in up/down scaling, interlace ↔ progressive conversion, and frame rate conversion
- Supports up to 1080p60 across SD, HD, and 3G-SDI formats
- Plug & play, compact size (128 × 63.6 × 26 mm)

ACC-THDM104



- Distributes 1 × High-definition input to 4 × High-definition outputs with reclocking
- Supports 4K60 (4096 × 2160 / 3840 × 2160) and full HD formats
- Built-in color space conversion (4:4:4 / 4:2:2 / 4:2:0) and scaling
- Downsamples 4K to 1080p for legacy displays; supports High-definition 3D formats
- Plug & play, USB control, compact size (140.8 × 63.6 × 26 mm)

ACC-TMAV/SH



- Converts DVI-I, Component, S-Video, and Composite video to High-definition and dual SDI outputs
- Universal up/down/cross conversion with aspect ratio (4:3 / 16:9) control and ROI
- Supports SD, HD, and Full HD formats up to 1080p60
- Dual SDI outputs (3G-SDI / HD-SDI / SD-SDI) plus High-definition output
- Plug & play design, compact size (153 × 63.6 × 26 mm)