

AI-controlled terminal guidance system designed to be mounted on FPV drones, including interceptors.

The operator controls the drone, identifies the target, then switches to strike mode.

SmartPilot Lite takes control, tracks the target, and strikes, while the operator retains authority.

COMPATIBLE FLIGHT CONTROLLERS

PX4

MAVLINK

ArduPilot

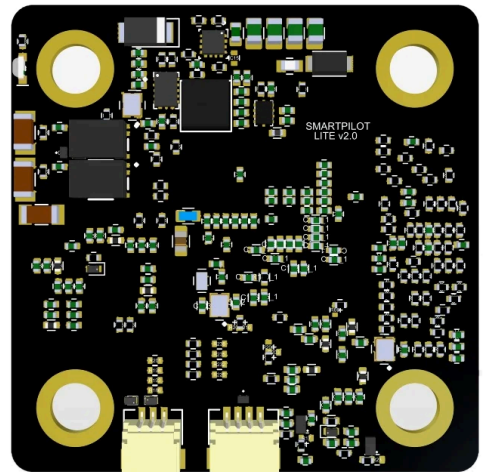
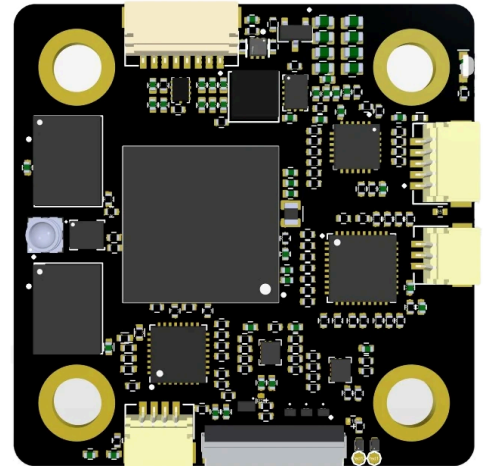
MAVLINK

Betaflight

MSP · CRSF

INAV

MSP · CRSF



Terminal interception depends on rare pilot skill and uninterrupted video and control links. Terrain, latency, and electronic warfare can disrupt the final approach, keeping strike success below 15%.

Onboard Video Processing

Captures Full HD video from digital cameras at up to 60 FPS and SD video from analog cameras at up to 30 FPS, then outputs the processed feed to an analog VTX or over Ethernet to an IP radio.

Onboard Detection & Tracking

Supports operator-authorized engagement of aerial and ground targets, whether moving or stationary, with onboard detection and tracking.

Closed-Loop Terminal Guidance

Reads real-time flight telemetry and generates roll, pitch, yaw rates, and throttle commands to drive the flight controller in real time.

Onboard Inertial & Pressure Sensing

A 6-axis ICM-45686 IMU and a BMP585 barometer on the board complement the flight controller's telemetry.

PROCESSOR & COMPUTE

Main MCU	STM32N657X0	CPU	1× Cortex-M55 @ 800 MHz
Internal NPU	0.6 TOPS Neural-ART	Internal GPU	NeoChrom 2.5D
Storage	64 MB Octo-SPI NOR flash	Internal RAM	4.2 MB internal SRAM
Power input	Regulated 5 V from FC BEC ≥ 3 A · reverse-polarity protected	External RAM	64 MB external PSRAM

ONBOARD SENSORS

IMU	6-axis ICM-45686 (accelerometer + gyroscope)	Barometer	BMP585 absolute pressure sensor
-----	--	-----------	---------------------------------

VIDEO INPUT & OUTPUT

Analog camera	CVBS · JST-SH 4-pin	Digital camera	MIPI CSI-2 via FFC · up to 1920×1080 (1080p)
USB camera	USB 2.0 HS host (UVC) · 4-pin header	IPEX camera	Digital camera via IPEX connector
Analog video out	CVBS · PAL / NTSC to VTX	Pipeline	HW deinterlacer + TBC
Format	NTSC 720×480 @ 60i · PAL/SECAM 720×576 @ 50i	Modality	Thermal & optical

COMMUNICATIONS & FC INTEGRATION

UART	2× UART (connector + solder pads) · 3.3 V or 5 V logic	FC link	UART @ 921600 · MAVLink or MSP
RC link	UART · CRSF direct receiver	VTX OSD	MSP DisplayPort over the FC UART
Ethernet	10/100 Mbps · video output to IP radios	Bus	I ² C ×1 · SPI ×1 (solder pads)
Debug	SWD on solder pads		

CONNECTORS

Power in	8-pin · 5 V input (4× VIN, 4× GND)
CSI camera	22-pin FFC, 0.5 mm · 2-lane MIPI CSI-2, camera I ² C + power
Analog camera in	4-pin · CVBS in, 5 V camera power, control, GND
Analog video out	3-pin · CVBS out to VTX, control, GND
USB camera	4-pin · USB 2.0 HS (5 V, D-, D+, GND)
Ethernet	5-pin · 10/100 (TX±, RX±, shield)
UART 1	3-pin · TX, RX, GND
Solder pads	UART 2 · SPI · I ² C · SWD / reset · boot

MECHANICAL & ENVIRONMENT

Form factor	42 × 42 × 9 mm	Mount	30.5 mm M3 dual stack
Vibration	FPV-class soft mount	Weight	19 g
Compatibility	7"–15" FPV dual stack	Operating	–20 to +70 °C

*Specifications are subject to change without prior notification.