

SMARTAP AIRLINK

Flight Controller + AI Mission Computer + LTE Connectivity



SYSTEM SPECIFICATIONS

General

Supported vehicle types	Multirotor: Quad, Hex, Octo, Dodeca, Coaxial, Y Fixed Wing: Ailerons, flaps, elevons, V-tail, H-tail VTOL: Tailsitter, Multicopter planes, Tiltrotor
Navigation	Accelerometers, Gyroscopes, Magnetometer, GNSS, Rangefinders, Lidars, Optical Flow, Visual
IMU	3x-redundant, vibration dampened, temperature stabilized
GNSS	GPS, GLONASS, Galileo, BeiDou RTK (option)
Flight modes	Manual, Stabilize, GNSS-assisted, Autonomous waypoints, Guided, Terrain following
Flight Logging	SD card, up to 256 GB
Operating Temperature	-40°C...+50°C
ECCN	7E994

Flight Controller

Processor	STM32F765
Frequency	216 MHz
Flash memory size	2MB
RAM memory size	512 kB
IMU	3 accelerometers, 3 gyroscopes, 3 magnetometers, 2 barometers
Ethernet	10/100 Mbps, LAN w/ AI Mission Computer
UARTs	Telemetry 1 Telemetry 2 (AI Mission Computer) Telemetry 3 GPS 1 GPS 2 Extra UART Serial Debug Console
CAN	CAN 1 CAN 2
USB	MAVLink, Serial console
RC Receiver Input	SBUS, RSSI, PPM, Spektrum
PWM Output	16 channels

AI Mission Computer

CPU	6-Core: Dual-Core Cortex-A72 + Quad-Core Cortex-A53
GPU	Mali-T864, OpenGL ES1.1/2.0/3.0/3.1

VPU	4K VP8/9 and 4K 10bits H265/H264 60fps decoding
Power Management	Software reset, power down, RTC wake-up, sleep mode
RAM	Dual-Channel 4GB LPDDR4
Storage	16GB eMMC 5.1 Flash, microSD up to 256 GB
Ethernet	10/100/1000 Native Gigabit Ethernet
Wireless (WiFi/BT)	802.11a/b/g/n/ac / Bluetooth, 2x2 MIMO
USB	USB 3.0 Type-C
Video	4-Lane MIPI CSI (FPV Camera) 4-Lane MIPI CSI w/ HDMI input (Payload Camera)
Debug	Serial console (UART)

Video

Camera interfaces	FPV MIPI-CSI camera input (camera included) Payload HDMI camera input Ethernet IP based cameras USB Cameras
HDMI input	Native support with integrated FPGA converter
Video codec	1080p 60fps H.264/265 VP8/VP9

LTE Connectivity Module

LTE Standard	LTE Cat 4* UMTS/HSPA(+) and GSM/GPRS/EDGE <small>*LTE Cat 5 available Q3 2021</small>
Bands	EMEA: B1/B3/B7/B8/B20/B28A North America: B2/B4/B5/B12/B13/B14/B66/B71 Latin America / Australia: B1/B2/B3/B4/B5/B7/B8/B28 Japan: B1/B3/B8/B18/B19/B26 Other bands available on request
Data transfer rates	Downlink: 150 Mbps Uplink: 50 Mbps
SIM Cards	Integrated eSIM External MicroSIM card slot
Antenna technology	2x2 MIMO