FLYBOTIX

ASIO X
TECHNICAL SPECIFICATIONS

ASIO SOLUTION CONTENT

- 1x ASIO X Drone
- 1x 2.4GHz Remote Controller
- 2x 256GB microSD Card (U3)
- 2x Spare pair of propellers
- 3x Battery and safety transport bag
- 1x Dual Battery charger
- 1x Toolbox
- 1x User manual
- 1x Safety vest
- 1x Pre-flight and post-flight checklist
- 1x Transport box

DRONE

Configuration	Dual coaxial propellers	**Flight time**	Up to 20 minutes
Motors	2 brushless motors (maxon motors)	**Propellers**	Two propellers, Ø13"
Tilt system	Patented Electromagnetic tilting system (no swashplate, no servomotor)	**Max speed**	Assisted: 1 m/s (3.2 ft/s) Manual: 5 m/s (23 ft/s)
Navigation LEDs	2: red (port), green (starboard)	**Lighting LEDs**	8 panels
Dimensions	Ø425mm, H305mm, W406mm (Ø16.7 in , H12 in, W16)	**Wind speed resistance**	Up to 3 m/s (10 ft/s)
Payload sensors	In Gimbal: 1x RGB 4K camera, 1x IR camera 1x 3D Time of Flight (ToF) Lidar In Drone: 1x Radar 4x Gaz Sensors	**Gimbal tilt**	180° (±90°)
Materials	Carbon fiber, aerospace grade composites, 3D printed thermoplastics	**Sensors**	3x IMUs (High-grade + fallback) 1x magnetometer, 1x barometer, 6x distance sensors, 6x optical flow sensors 1x radar, 2x global shutter cameras (VIO)
Operating temperature	0°C to 40°C (32°F to 104°F)	**Operating frequencies**	2402 – 2480 MHz
Weight	1.150kg (2.53 lbs)	**EIRP**	< 20 dBm
Noise level	Hover: 80dB @ 1m (3.2 ft)	**Protection**	Dust and water projections
Control algorithms	Flight stabilization, Height Lock, Wall Lock, Tube Lock, Recovery, Rewind, Autoland	**Certifications**	CE, FCC

REMOTE CONTROLLER

Screen size	5.5"	**Connectivity**	microUSB, Wifi 2.4GHz
Screen mirroring	Yes	**Operating frequencies**	2402 – 2480 MHz
Joysticks	1 (2 for drone and 1 for payload)	**EIRP**	< 20 dBm
Weight	515 g (18 oz)	**Battery life**	4 h
Operating temperature	0°C to 45°C (32°F to 115°F)	**Battery capacity**	4950 mAh
Resolution	Full HD (1920 x 1080 px)		

BATTERY PACK

Battery type	Lithium Polymer (LiPo)	**Nominal voltage**	19 V
Energy	74.1 Wh	**Capacity**	3900 mAh
Charging time	1.10 h (100%), 40 min (80%)	**Storage temperature**	-25°C to 35°C (-13°F to 95°F)
Plane transportation	Approved for carry-on luggage	**Safety transport bag**	Yes
Life Time	100 charge cycles		

RGB CAMERA

Sensor type	CMOS Rolling shutter	**Sensor size**	1/2.3"
Sensor resolution	12.3 MP	**Still pictures resolution**	4056 x 3040 px
Video recording	4K: 3840x2160 px, 30 fps	**Video streaming**	720p, 30 fps
Formats	Video: MP4; pictures: JPG	**Effective resolution**	0.2mm at 30cm (1ft)
Field of view	153° diagonal, 121° horizontal	**Depth of field**	30cm (1ft) to infinity

IR CAMERA

Sensor type	FLIR Lepton 3.5 (radiometric)	**Sensivity**	<50 mK
Sensor resolution	160x120 px	**Wavelength**	8µm to 14µm
Field of view	71° diagonal, 57° horizontal	**Data recording**	MP4 video, 9fps
Temperature range	-10°C to 400°C (14°F to 750°F)		

GIMBAL SYSTEM

Maximum upwards inclination	+90°	**Total FOV**	273° vertical, 121° horizontal
Frontal view	93° diagonal, 121° horizontal	**Stabilization**	Active Pitch stabilization, Passive vibration damping
Unobstructed FOV	vertical : 185°, horizontal: 121° at pitch 0°, 50° at pich +-90°		

LIGHTING LEDs

Max luminosity	40, 000 lumens	**LED light temperature**	4000K, CRI 70
Dimmable	0-100% (levels > 20% available in strobe mode)	**Orientation**	Left / right / up / front / down (dimmed by software)
Nominal power	2x 15W (eq. 3min flight time reduction) at 100%		

VIO CAMERAS

VIO camera type (2x)	Mono Global shutter RGB
POV	150° diagonal, 127° Horizontal, 172x127 combined
Resolution	Up to 1280 x 800 px

3D LIDAR

3D LiDar FOV	106° x 86°
3D LiDar range	0.1 - 7m
3D LiDar framerate	5 fps

TRANSPORT CASE

Dimensions	66x54x39 cm3
Empty weight	11.5 kg
Total weight	16 kg