Skydio X2D

RUGGED, FOLDED AIRFRAME

LWIR THERMAL IMAGER WITH 8X ZOOM

4K HDR COLOR IMAGER WITH 16X ZOOM

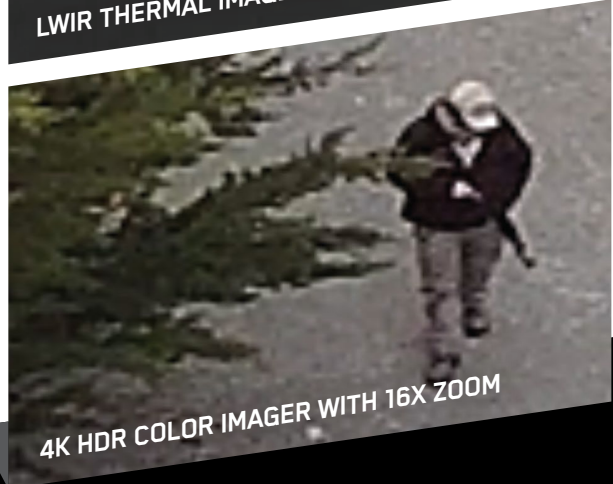## Skydio X2D uses unmatched AI to turn every operator into an expert pilot

Skydio X2D is the ultimate reconnaissance tool. X2D pairs breakthrough autonomy software with a ruggedized airframe with folding arms for easy "pack and go" transportation, a thermal camera, and expected up to 35 minutes of flight time. X2D is equipped with six 4k navigation cameras for 360 degree obstacle avoidance and a dual sensor payload that includes 12MP color and 320x256 LWIR sensors. Built to exceed the Short-Range Reconnaissance (SRR) requirements for the U.S. Army, X2D helps military operators and federal agencies perform reconnaissance, search and rescue, and security patrol missions. Designed, assembled, and supported in the USA, X2D turns anyone into an expert pilot.

RANGE	OBSTACLE AVOIDANCE	FLIGHT TIME
expected up to **10** km	**360°** **45** megapixel	expected up to **35** min

X2D & Controller Specs
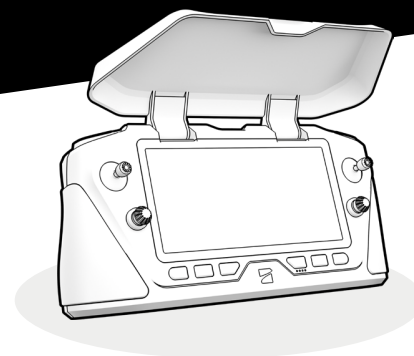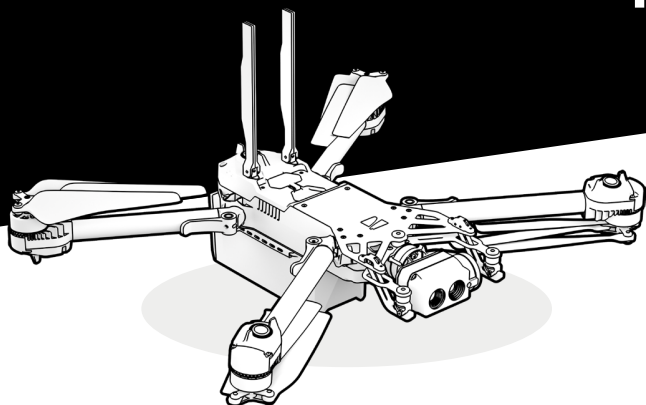
AIRCRAFT

DIMENSIONS (UNFOLDED, FLYING)	26.1" X 22.4" X 8.3"
DIMENSIONS (FOLDED, NO BATTERY)	11.9" X 5.5" X 3.6"
WEIGHT	1325 g
COLOR CAMERA	4K60P HDR Camera with 16x zoom
THERMAL CAMERA	320p LWIR Thermal Imager with 8x zoom

SKYDIO AUTONOMY

MAIN PROCESSOR	NVIDIA Tegra X2 SOC
GPU	256-core NVIDIA Pascal™ GPU
CPU	Dual-Core NVIDIA Denver 2 64-bit CPU Quad-Core ARM®-A57 MPCore
RAM	4 GB 128-bit LPDDR4
OBSTACLE AVOIDANCE COVERAGE	Omnidirectional and above/below Super fisheye lenses for 360° view
3D WORLD MODEL UPDATE RATE	> 1 million points per second
WORLD MODEL-TO-ACTION UPDATE RATE	500 iterations per second
ONBOARD AI	9 custom deep networks used in flight
USER-SELECTABLE SUBJECTS FOR TRACKING	People and motor vehicles
OBJECT TRACKING AND IDENTIFICATION	Up to 10 simultaneous objects of interest
CALIBRATION	Automated online calibration of lens parameters, camera rotations, wind speed, and air density

HANDSET

DIMENSIONS	10.75" x 5.25 x 3.0"
WEIGHT	1130 g
INPUT	Dual 2-axis joysticks, dual rockers & 10 buttons
SENSORS	GPS, Barometer, Compass, Gyro, ACC
MEMORY	256 GB disk, 12 GB RAM
PROCESSOR	Qualcomm Snapdragon 855

CONTROLLER SOFTWARE

OPERATING SYSTEM	Android 9
APPLICATIONS	Skydio, QGroundControl
WIRELESS LINKS	4G LTE, Wifi, Bluetooth
WIRED LINKS	USB 3.1, (via dongle) HDMI, SD, Ethernet
OPERATING FREQUENCIES	1.8 / 5 GHz
MAX RANGE	Expected up to 10 km / expected up to 6 km
CHANNEL BANDWIDTH	1/2/4/5/8/10/20 MHz
VIDEO	Up to 1080p60, 20 Mbps
ENCRYPTION	AES-256 for 1.8GHz, AES-128 for 5GHz

SYSTEM SECURITY

SD CARD ENCRYPTION	AES-CBC algorithm using unique file encryption keys (FEKs) encrypted using Open SSL (2048-bit key RSA). Decryption keys never stored on vehicle.
WIRELESS CONNECTION	AES-256 for 1.8GHz, AES-128 for 5GHz
FIRMWARE	Signed and Encrypted
MEDIA ENCRYPTION	Encrypted SD Cards with physical Yubikey
CONTROLS	Ability to provision and deprovision devices
INFRASTRUCTURE	Key provisioning burned-in at time of manufacture