

# MODEL-F OWA COMPLETE SYSTEM

Everything Needed to Build & Operate | December 2025

First Complete System

\$3,079

Per Aircraft (at 1k)

\$786

Ground Station

\$2,129

## Section 1: Aircraft Components

Category	Component	Specification	Qty	Price	NDAAs	Supplier
Frame	Carbon Frame	8" X-Frame 4mm CF	1	\$38	USA	ReadyMadeRC
Frame	Hardware	M3 steel screws/standoffs	1	\$5	USA	McMaster-Carr
Propulsion	Motors	KDE 2814XF-1050	4	\$260	Blue UAS	KDE Direct
Propulsion	Propellers	APC 8x4.5 plastic	4	\$10	USA	APC Propellers
Electronics	Flight Controller	TBS Lucid H7 NDAA	1	\$100	NDAA	Team BlackSheep
Electronics	ESC 4-in-1	TBS Lucid 8S NDAA 65A	1	\$75	NDAA	Team BlackSheep
Electronics	GPS	ARK TESEO GPS	1	\$65	Blue UAS	ARK Electronics
Video	VTX	TBS Unify Pro32 NDAA 800mW	1	\$40	NDAA	Team BlackSheep
Video	Camera	Fat Shark Aura	1	\$35	Blue UAS	Fat Shark
Video	VTX Antenna	TBS Triumph Stubby	1	\$15	NDAA	Team BlackSheep
Receiver	RC Receiver	TBS Crossfire Nano NDAA	1	\$28	NDAA	Team BlackSheep
Power	Battery	6S 2200mAh Samsung 40T	1	\$50	Allied	Custom Assembly
Power	Battery Strap	Rubberized 20mm	2	\$3	USA	GetFPV

Power	XT60 Connector	Main power	1	\$2	Allied	Amass
Payload	Release Servo	9g digital servo	1	\$8	USA	Domestic
Payload	Mount Plate	Aluminum 2kg rated	1	\$6	USA	In-house
Wiring	Silicone Wire	12-14AWG set	1	\$6	USA	BNTECHGO
Wiring	Connectors	JST, bullet, misc	1	\$5	USA	Various
Wiring	Zip Ties/Tape	Consumables	1	\$3	USA	3M/McMaster
Assembly	Labor	Build + configure	1	\$22	USA	In-house
Assembly	QC/Test	Hover test	1	\$10	USA	In-house
AIRCRAFT SUBTOTAL				\$786		

## Section 2: Ground Station (Reusable)

### 2A. Controller / Transmitter

Component	Specification	Qty	Price	NDAAs	Supplier
TBS Tango 2 Pro NDAAs	Crossfire built-in, USA made	1	\$260	NDAAs	Team BlackSheep
USB-C Cable	Charging/config	1	\$5	USA	Various
CONTROLLER SUBTOTAL			\$265		

### 2B. FPV Goggles

Component	Specification	Qty	Price	NDAAs	Supplier
Fat Shark HDO+	1920x1080 OLED, 50° FOV	1	\$650	Blue UAS	Fat Shark
ImmersionRC RapidFIRE	NDAAs diversity receiver module	1	\$180	NDAAs	ImmersionRC
Patch Antenna	Directional 5.8GHz (10km+)	1	\$35	USA	Lumenier/TBS
Omni Antenna	RHCP Stubby	1	\$25	USA	Lumenier/TBS
Goggle Battery	2x 18650 cells	2	\$12	Allied	Samsung/Molicel

Head Strap	Comfort strap	1	\$20	USA	Fat Shark
GOOGLES SUBTOTAL			\$922		

**Alternative Goggles:** Orqa FPV.One Race (\$500 NDAA/EU) or Orqa FPV.One Pilot (\$650 NDAA/EU) - Croatian made

2C. Long Range Antenna Upgrades

Component	Specification	Qty	Price	NDAA	Supplier
Crossfire TX Antenna	TBS Diamond NDAA	1	\$30	NDAA	TBS
Tripod	Lightweight aluminum	1	\$40	USA	Various
High Gain Video Antenna	Directional 5.8GHz	1	\$45	USA	Lumenier
ANTENNA SUBTOTAL			\$115		

Section 3: Support Equipment

3A. Charging Equipment

Component	Price
ISDT K1 Dual AC/DC Charger	\$120
24V 1000W Power Supply	\$80
Parallel Charging Board (6S x6)	\$25
Balance Lead Extensions	\$8
LiPo Safe Bags (x2)	\$20
Charger Leads	\$8
CHARGING TOTAL	\$261

3B. Tools & Field Equipment

Component	Price
Hex Driver Set (Wiha/Bondhus)	\$25
Prop Wrench (M5)	\$8
Portable Soldering Iron	\$50
Solder + Flux	\$15
Multimeter	\$30
Smoke Stopper	\$15
Pelican-Style Case	\$80
TOOLS TOTAL	\$223

3C. Recommended Spare Parts

Component	Qty	Price	Notes
Spare Props (APC 8x4.5)	8 sets	\$20	2 flights worth
Spare Motor (KDE 2814XF)	1	\$65	Emergency swap
Spare ESC (TBS Lucid 4in1)	1	\$75	Backup
Spare FC (TBS Lucid H7)	1	\$100	Backup
XT60 Connectors	10	\$10	Repairs
Wire Assortment	1	\$15	Repairs
Standoffs/Hardware	1	\$10	Repairs
Heatshrink	1	\$8	Repairs
VTX Antenna (TBS Triumph)	2	\$30	Spares
RX Antenna (Crossfire wire)	2	\$10	Spares

SPARES TOTAL

\$343

Section 4: Total System Cost

One-Time Costs (Ground Station + Support)

Category	Cost
Controller (TBS Tango 2 Pro NDAA)	\$265
Goggles (Fat Shark HDO+ + RapidFIRE + Antennas)	\$922
Antenna Upgrades (Long Range)	\$115
Charging Equipment	\$261
Tools & Field Equipment	\$223
Spare Parts Stock	\$343
TOTAL ONE-TIME	\$2,129

TOTAL TO BUILD & FLY ONE DRONE

\$3,079

Cost at Scale (Amortized Ground Station)

Units	Aircraft Cost	Amortized GS/Unit	Total/Unit
1	\$950	\$2,129	\$3,079
10	\$820	\$213	\$1,033
100	\$760	\$21	\$781
1,000	\$700	\$2	\$702

Section 5: Critical Suppliers (NDAA Compliant)

**KDE Direct**

**Products:** Motors  
sales@kdedirect.com

[Blue UAS](#)**Team BlackSheep**

**Products:** FC, ESC, VTX, RX, TX  
team-blacksheep.com

[NDAA \(USA\)](#)**ARK Electronics**

**Products:** GPS  
arkelectron.com

[Blue UAS](#)**Fat Shark**

**Products:** Goggles, Camera  
fatshark.com

[Blue UAS](#)**ImmersionRC**

**Products:** RapidFIRE Module  
immersionrc.com

[NDAA](#)**ReadyMadeRC**

**Products:** Frames, Misc  
readymaderc.com

[USA Dist](#)

## Section 6: Build Checklist

### Aircraft Build

- ☐ Frame assembled with hardware
- ☐ Motors mounted (verify rotation)
- ☐ ESC mounted and wired
- ☐ FC mounted and connected
- ☐ GPS mounted and connected
- ☐ VTX mounted with antenna
- ☐ Camera mounted and wired
- ☐ Receiver bound to TX
- ☐ Battery connector wired
- ☐ All wiring secured

### Pre-Flight Checklist

- ☐ Smoke stopper test passed
- ☐ Props installed (correct direction)
- ☐ Battery charged and strapped
- ☐ Controller bound and responding

- ☐ Video feed on goggles
- ☐ GPS lock acquired
- ☐ Arm switch functional
- ☐ Hover test completed

**Note:** All prices estimated at 1k quantity unless noted. NDAA compliance verified via research - confirm with suppliers before procurement. Complete system BOM - December 2025.