

SKYFEND

Drone Defense System for Strategic Zones

**Complete Key-Area Protection Solution
with Anti-Drones and Drones**



Skyfend is a subsidiary company of Autel Group. Autel is a listed company in Shenzhen, China, founded in 2004. It has achieved a 5-year compound growth rate of 30%+, with strong R&D capabilities.

Automotive Business



Digital Maintenance

Automotive Aftermarket
Smart Devices



Digital Energy

New Energy Vehicles
Solar Power Storage and
Charging

Air-Ground Integrated Security Sector

- Autel Robotics Co.,Ltd.(Founded in 2014)
- **Skyfend (Founded in 2020)**
- Daohe Tongtai Robotics Co., Ltd.(Founded in 2024)



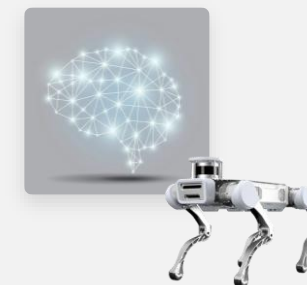
Autel Robotics

UAV
Smart Payload Mounting
Skydome Platform



Skyfend

Electronic Countermeasures
Skyshield Platform



Daohe Tongtai Robotics

Multimodal recognition
Embodied Large model Agents

Skyfend Intelligent Solutions overview

SKYFEND

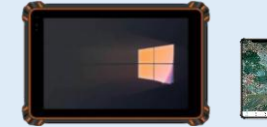
Presen-
tation
Layer



C2 Cloud



C2 PC



Portable C2 Tablet/APP

Platform
Layer

**Sky
Shield**

Command and Control (C2)		Situational Awareness		Multi-Terminal Collaboration		Data Warehouse		Algorithm Model	
Device On/Off	Calibration	Target Detection	Target Recognition	Location Sharing	Situational Awareness Sharing	Spatial Geography	Detection Data	Multi-Intelligence Early Warning	Threat Assessment
Parameter Setup	Tracking Video	Threat Alert	Video Tracking	Data Trend	Coordinated Scheduling	Electromagnetic Environment	Flight Path	Trajectory Prediction	Location Prediction

Network
Layer



Device
Layer

Mitigation



Portable RF Jamming



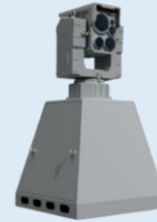
Vehicle-Mounted
RF Jamming



Portable GNSS
Spoofing



Fixed GNSS
Spoofing



Laser



Interception
UAV

Detection and Jamming
Integration



Portable RF Detection
& Jamming Integration



Vehicle-Mounted RF Detection &
Jamming Integration

Actuator



AI Drone

Detection



Portable RF
detection



Vehicle-Mounted
RF detection



Fixed RF
Detection



Short-range radar



Mid-range radar



Radar-Visual Fusion

RC Signal
Detection



Airborne RF
Detection



Fixed RF Detection
And Jamming Integration



Fixed all-in-one
Device

System Configuration

Sentry with TACEDGE tactical intelligence platform: new generation, modular and intelligent tower-based counter-UAS systems, forming a complete defense chain against various types of drone threats.

The system is composed of three specialized towers, each responsible for **detection, disruption, and engagement tasks**.

Detection Tower: Integrates RF detection, radar, and visual recognition sensors. Powered by the TACEDGE AI engine, it enables multi-source data fusion and intelligent target identification.

Soft-Kill Tower: Equipped with RF jamming and GPS spoofing modules, it can precisely disrupt drone communication links and navigation systems.

Hard-Kill Tower: Deploys laser systems and interceptor drones (Drone Killer), providing efficient and safe physical neutralization of high-threat targets.

TACEDGE platform: intelligent core, built on an edge computing architecture, offers automated target analysis, threat warnings, and strategic decision-making capabilities.

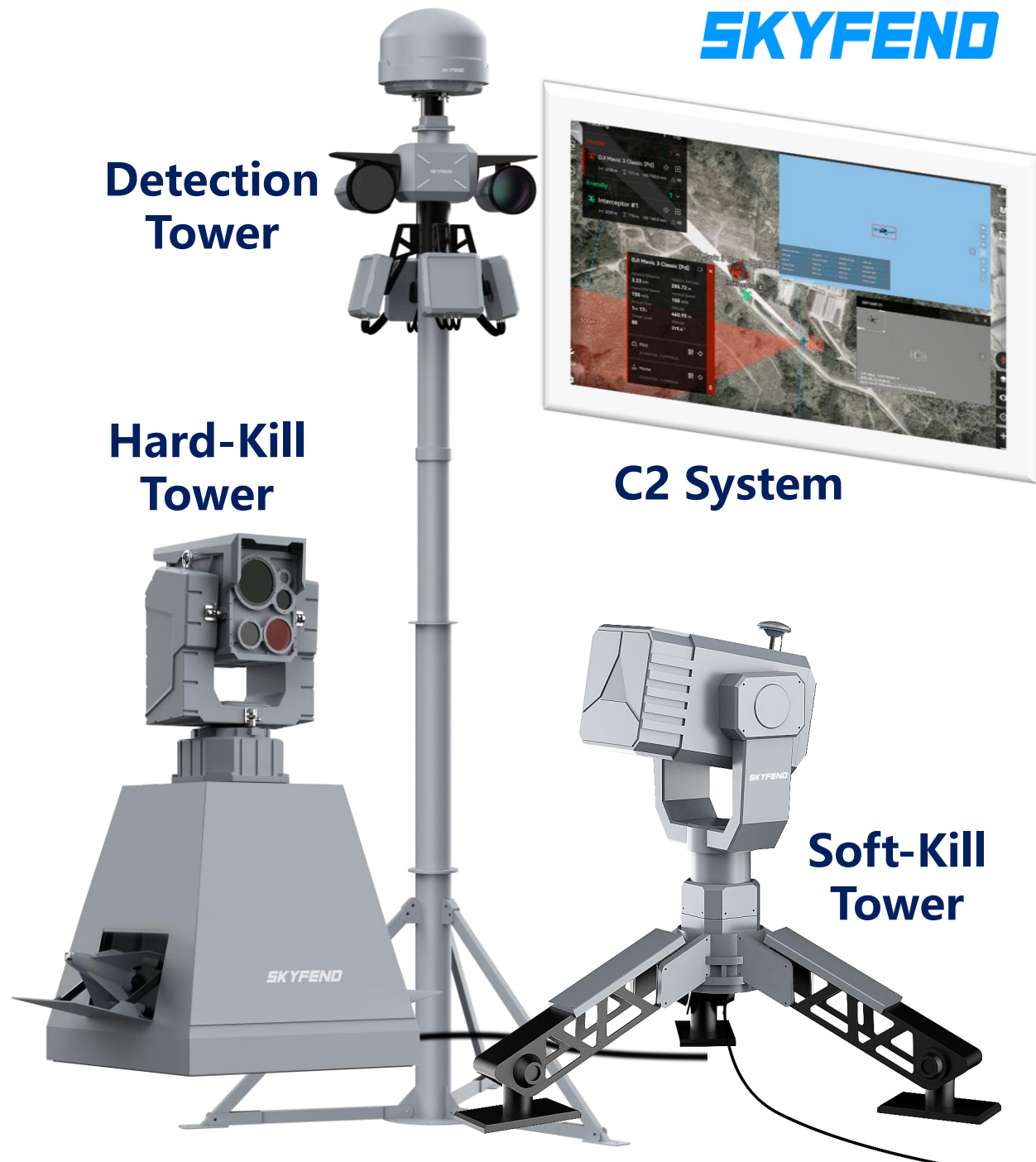
Support multi-tower collaborative deployment and remote command control, **border protection, energy infrastructure, military bases, and urban security zones.**

**Detection
Tower**

**Hard-Kill
Tower**

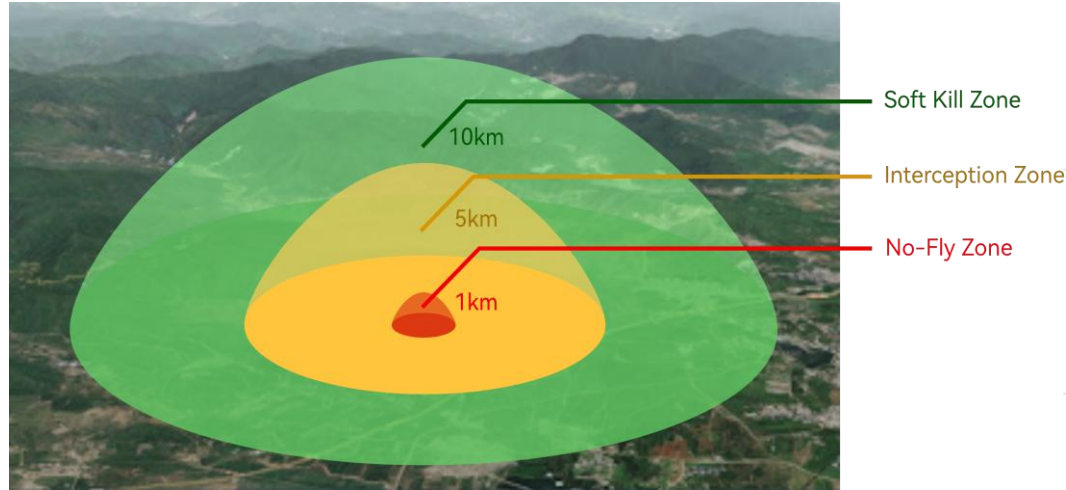
C2 System

**Soft-Kill
Tower**



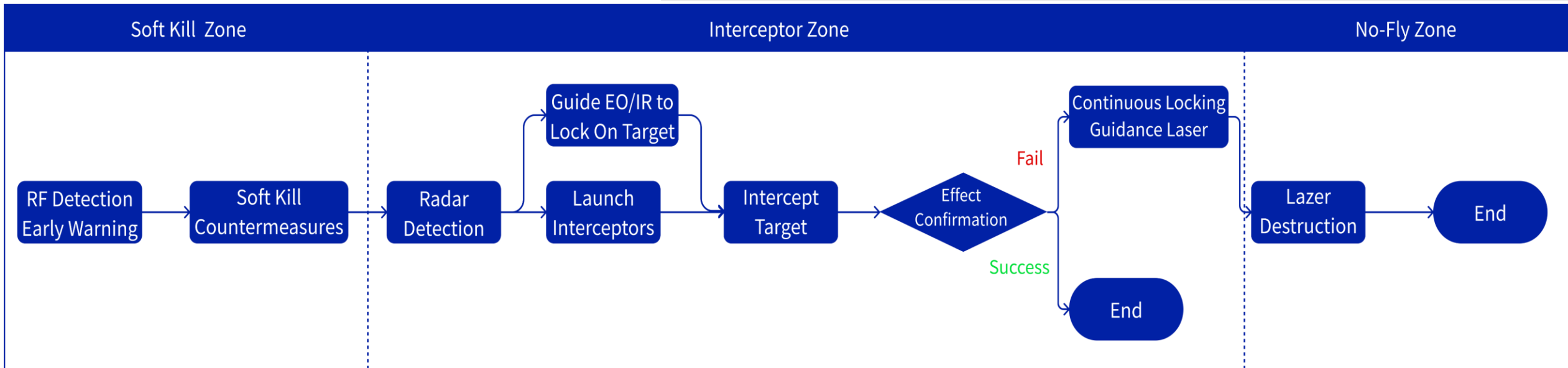
System Introduction

System Configuration



Zone	Capability Composition	Capability Description
Soft Kill	- RF Detection - RF Jamming - GNSS Spoofing	It is capable of countering the vast majority of non-silent drones. RF Detection can detect and orient intrusive non-silent UAVs within 10km in real time. Based on this information, the target UAV is countered by RF Jamming and Spoofing.
Intercep-tion	- Radar - EO/IR - Interceptor	This zone can effectively intercept silent and anti-jamming drones. Radars detect the intrusive non-silent UAV within 5km and track its position in real time, so as to guide the optical detection to lock it. After locking the target, the system will autonomously launch Interceptors to intercept the target, and provide the interception results with videos.
No-Fly	Laser	This layer can destroy intruder drones with accurate hard-kill. For targets that are not successfully intercepted, the detection system is able to accurately lock them, so as to guide the laser equipment to destroy the target ultimately.

Workflow



Specifications—Radar

SKYFEND

Parameters	Indicators
radar waveform	Pulse Doppler
Scanning method	Azimuth electronic scanning, elevation electronic scanning
Scanning range (single side)	Azimuth: 0°~90°; Elevation: 0°~30°; up to 75° on demand;
Working frequency band	X-band (9.2 GHz ~ 9.8 GHz)
Radar power	≥10 km （RCS≥0.5m ² ）
Ranging range	15km
Ranging blind area	200m
Maximum measuring height	5000m
Speed range	1m/s~120m/s
Tracking accuracy	range: < 10m,speed: 0.6m/s, Azimuth: < 0.5° （RMS） Elevation: < 0.5° （RMS）
target capacity	≥200
target refresh rate	TWS≤6s, TAS≤0.5s
weight	≤15kg(single side)
Power consumption	≤350W
size	≤345mm*345mm*145mm
Operating temperature range	-40℃ ~ +60℃
IP rating	IP66



Specifications—EO/IR

SKYFEND

	Parameters	Indicators
EO	Image resolution	1920*1080 @50fps/60fps
	lens focal length	F12.3-800mm (65X)
	Daytime performance	①Detection : ≥25KM; tracking : ≥20KM; recognition : ≥15KM @Civilian airliner ②Detection: ≥6KM; tracking: ≥5.5KM; recognition : ≥4KM @drone0.6m*0.6m
IR	Detector type	Uncooled
	Image resolution	640*512; image encoding: 1280*1024
	lens focal length	F30-150mm
	Night performance	①Detection : ≥18KM; tracking : ≥15KM; recognition : ≥12KM @Civilian airliner ②Detection: ≥2.6KM; tracking: ≥2.2KM; recognition : ≥1.5KM @drone0.6m*0.6m
Servo turntable	Turntable type	Servo direct drive, PID feedback
	Horizontal range, speed	0°~360° speed: 0.05°~80°/s
	Pitch range, speed	-45°~+70° (-90°~+90° Optional) speed: 0.05°~60°/s
	Preset stop accuracy	±0.01°
General system	Preset stop accuracy	IP66
	Operating temperature	-35℃ ~ +60℃
	Power consumption	AC220V / DC48V ; ≤240W (max) ;
	Weight	≤80Kg



Specifications—RF Detection

SKYFEND

Parameters	Indicators
Detection model	Commercial model: DJI, Autel, FIMI, Parrot, etc. FPV image transmission brand: TBS, RushFPV, PandaRC, Matekeey, RXC, SpeedyBee, iFlight, etc. FPV flight control brand: TBS, ELRS, Foxeer, etc.
Detection Range	10km (DJI Mavic 3 drone with SRRC standard under sighting conditions, without strong signal interference)
Frequency band	0.3~6GHz
Qty. of drones that can be detected simultaneously	≥10
Detection time	<3s
Direction finding accuracy	<5° (0.3~2.0GHz, rms) ; <3° (2.0~4.0GHz, rms) ; <2° (4.0~6.0GHz, rms)
VIDEO INTERCEPTION MODEL	RushFPV, Matekeey, RXC, TBS, SpeedyBee, PandaRC, iFlight and other analog image transmission models
IP rating:	IP66
Operating temperature:	-20~60°C
Dimensions (∅ × H):	700 mm × 400 mm
Wieght:	30kg



Specifications—RF & GNSS Jamming

SKYFEND

Parameters	Indicators
Jamming frequency band	0.3GHz-7.7GHz
Jamming power at each frequency band	0.3GHz-2GHz 100Wx2 digital source
	2GHz-4GHz 100Wx2 digital source
	4GHz-6GHz 100Wx3 digital source
	0.8GHz-1GHz 20W Analog source
	2.1GHz-2.6GHz 20W Analog source
	4.9GHz-6GHz 40W Analog source
Countermeasure radius	10Km
Jamming-to-control ratio	Commercial drone: DJI Mavic 3 (0.5w) 1:1
Coverage angle	Horizontal 25°, and vertical 25°
Weight	150kg
Power supply mode	220V AC
Operating time	24/7
Operating temperature	-40~70° C
Storage temperature	-40~70° C
IP rating	IP 67



Specifications—Spoofers

SKYFEND

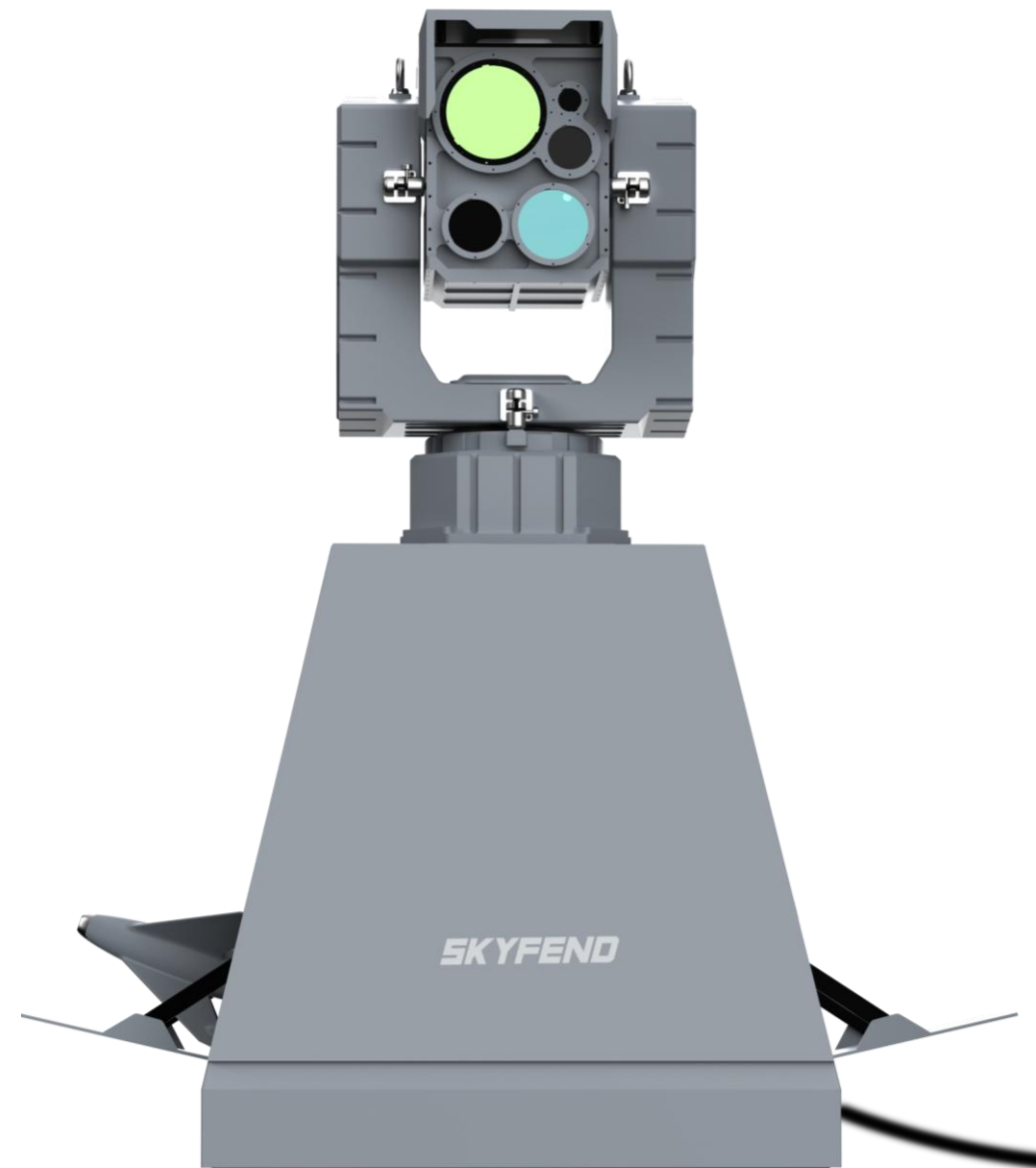
Parameters	Indicators
Supported Frequencies	GPS(L1, L2, L5) BDS(B1I, B1C, B2I, B3I) Galileo(E1, E5A, E5B) Glonass(G1, G2) QZSS(L1C/A) IRNSS(NavIC)(L5)
Signal Power	80W
Effective range	10Km
Startup Time	3min~5min
IP rating	IP66
Power supply	220V-AC
Power consumption	450W
Operating temperature	-20℃~+60℃



Specifications—Laser

SKYFEND

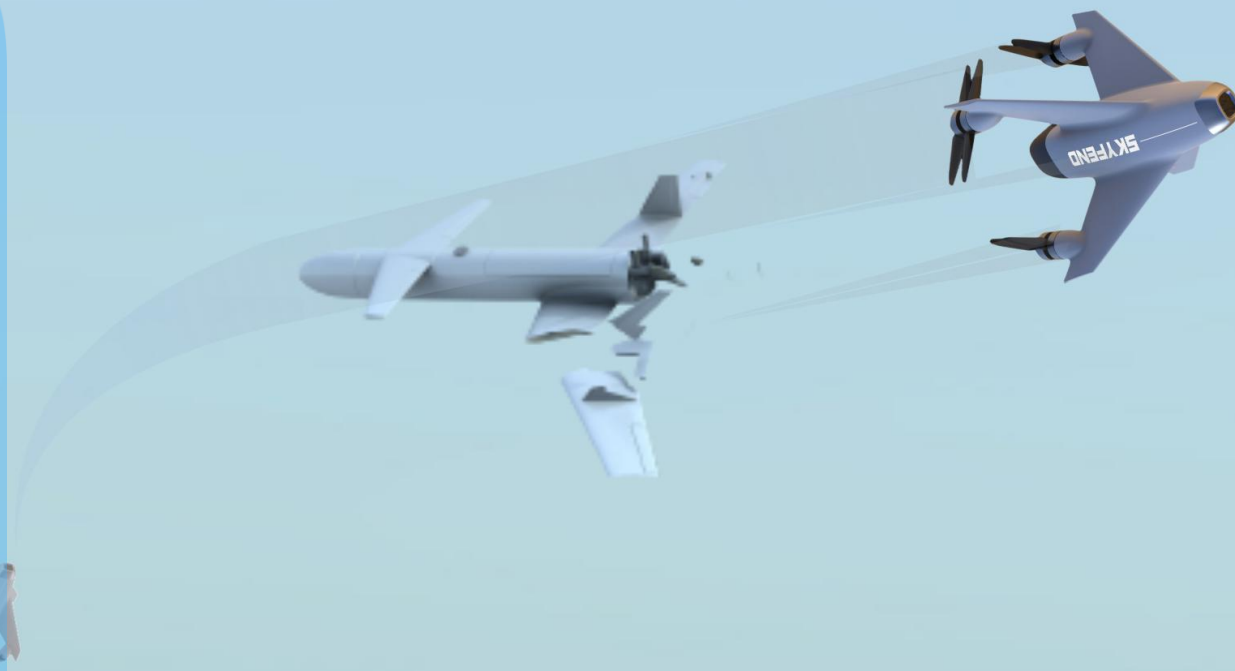
Parameters	Indicators
Attack Distance	> 1km (@Visibility > 10km, RCS > 0.01m ²)
Detection Distance	> 2km (@Visibility > 10km, RCS > 0.01m ²)
Maximum Attack Time	600s
Tracking Accuracy	< 20μrad(RMS)
Azimuth	-175° ~ +175°
Pitch	-25° ~ +70°
Maximum Angular Velocity	>60°/S
Angular Acceleration	>60°/S ²
Weight	<400kg
Laser Power	> 4kW
Size	Main Unit: 850*850*1730 mm Chiller: 650*650*1150 mm
Power Supply	AC 380V
Data Interface	Ethernet Port (Gigabit Ethernet)
Working Temperature	-20°C ~ +55°C
Cooling Method	Active Cooling(Water Cooling)
IP rating	IP65



◆ Specifications—Interceptor (Kamikaze Killer)

SKYFEND

Thunder can receive the guidance of the ground detection sensor in real time to obtain the real-time position, altitude and flight speed of the target drone, and quickly fly to the target drone in combination with the prediction information of the trajectory prediction algorithm. Through the built-in camera of Thunder, it can autonomously identify and lock on the target drone, and automatically match the optimal interception route and strategy through the built-in strategy algorithm to accurately intercept and destroy the target.



Parameters	Indicators
Countermeasures Range	Distance: 5000m; Height: 3000m
Flight speed	Horizontal speed: 80m/s; Climb speed: 20m/s
Battery life	≥10min
Terminal guidance mode	Wide-angle camera, infrared thermal imaging, and millimeter-wave radar
Interception success rate	Stationary target: ≥80%; Cruising target: ≥65%; Single interception of maneuvering targets: ≥40%; Multiple interceptors of maneuvering targets: ≥90%





SKYSHIELD COMMAND & CONTROL SYSTEM



Continually Upgrading
& Future Resistant



Customization
& Flexible Configuration



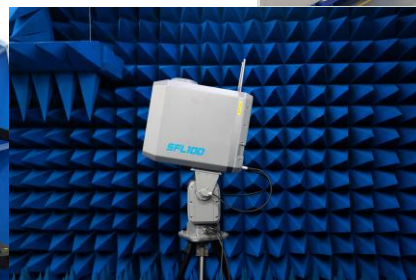
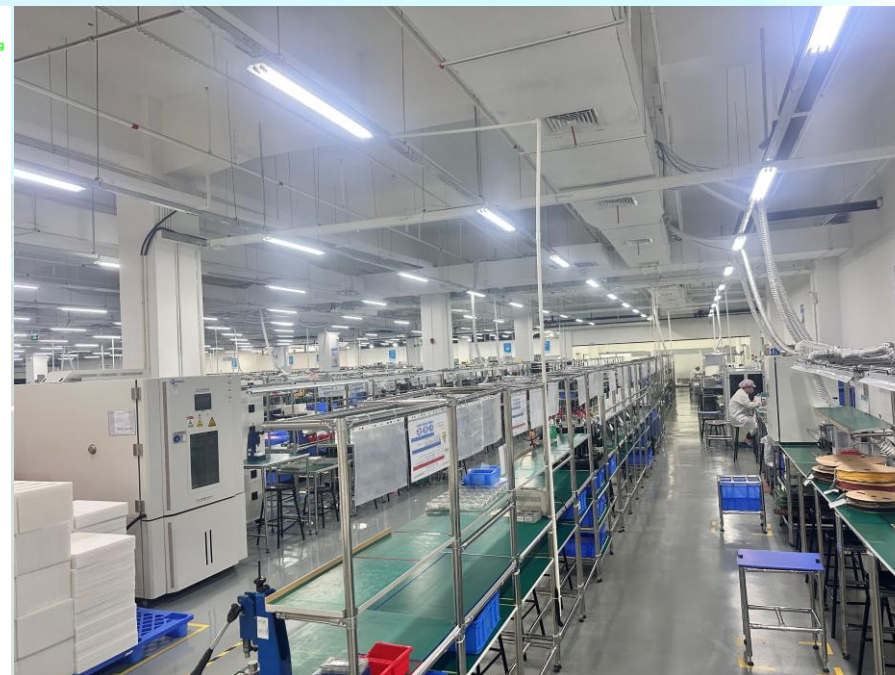
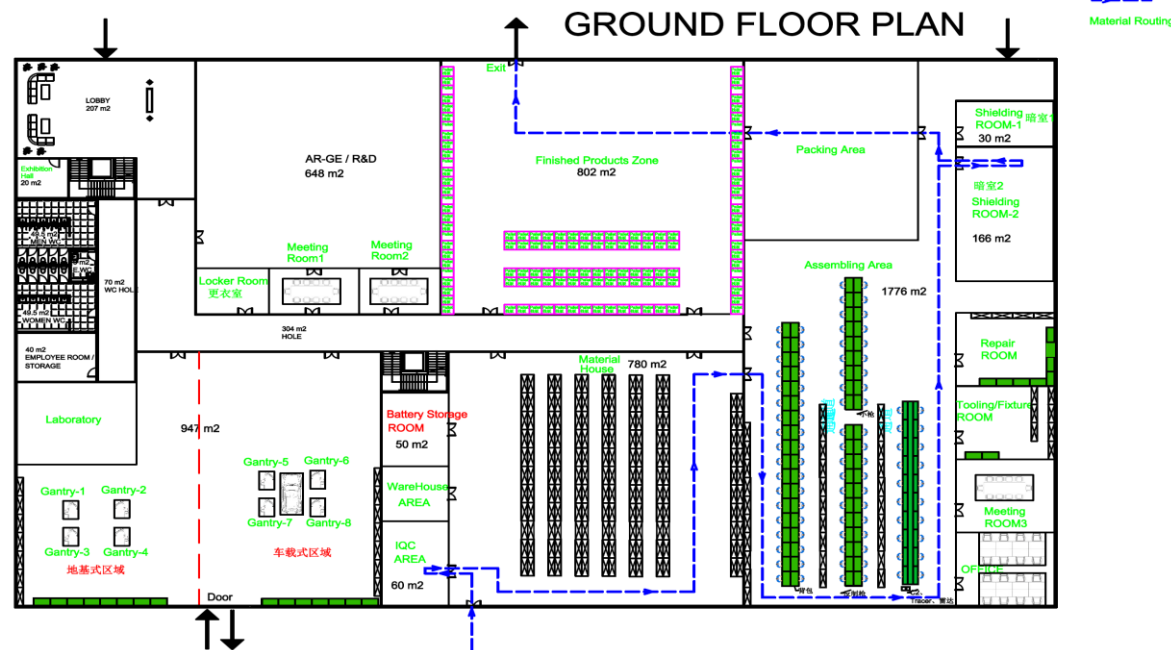
Real-time Monitoring
& Live Video Feeds



Fully Compatible
& Easy Integration

Production and Assembly Line

SKYFEND



SKYFEND

**THANK
YOU**

