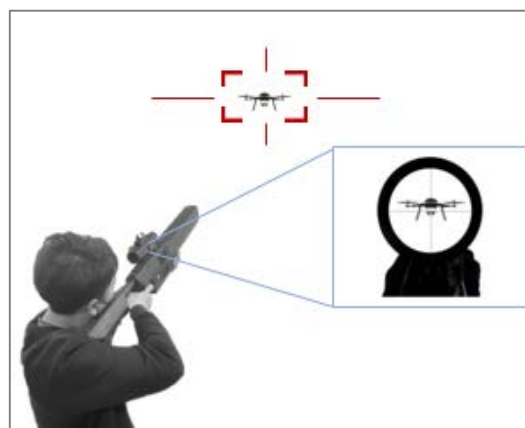


Anti-Drone Solution




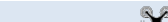




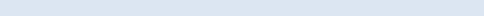



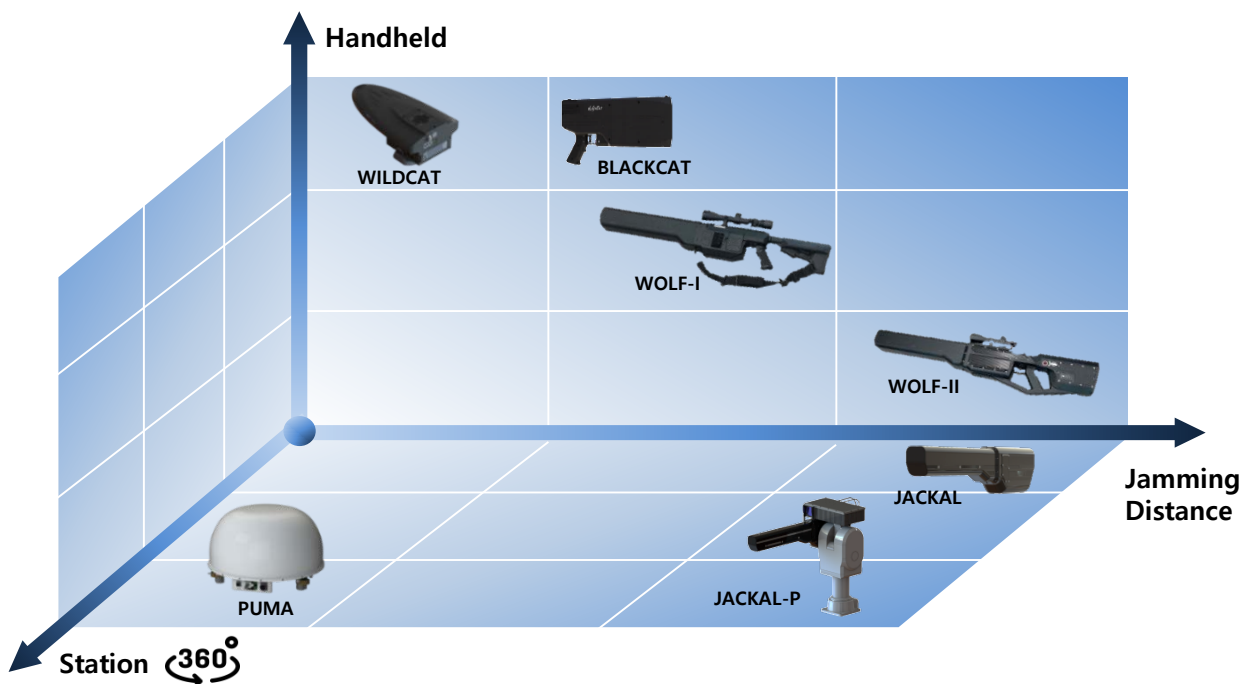


- Duta Technology Co., Ltd. is a company that is constantly developing technologies related to anti-drone. In particular, it is developing drone jamming technology that disables the flight of drones flying in prohibited areas without permission, and sells related products.
- The explosive demand for commercial drones is causing many safety-related problems. There are frequent cases of flying drones around airports or flying near power plants, causing security-related problems, or using drones as a tool for terrorism or war.
- Various measures are required to solve these problems, and the technology to respond to these problems is called anti-drone technology.
- Anti-drone technology consists of detection technology, identification technology, and neutralization technology.
- Duta Technology Co., Ltd. has released a number of products by intensively developing a technology for jamming drones corresponding to soft kill technology among neutralization technologies.

Anti-Drone Products

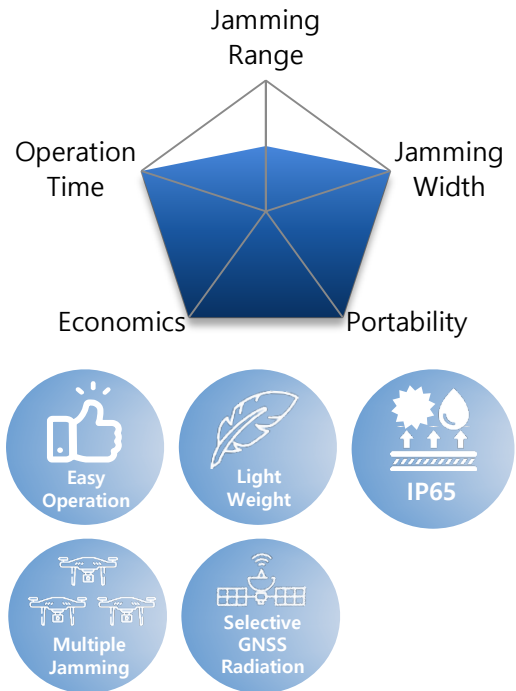
Drone Jammer Specification

	S/C, GNSS	UHF	Operation		Jamming Distance	
WILDCAT I	●		One Hand (Handheld)	0km		1km
WILDCAT II	●	●	One Hand (Handheld)	0km		1km
BLACKCAT	●	●	One Hand (Handheld)	0km		1km
WOLF I	●		Two Hand (Handheld)	0km		1km
WOLF II	●		Remote (Station)	0km		1km
PUMA	●		Remote (Station)	0km		1km
JACKAL	●		Remote (Station)	0km		1km
JACKAL-P	●		Remote (Station)	0km		1km



WILDCAT-I

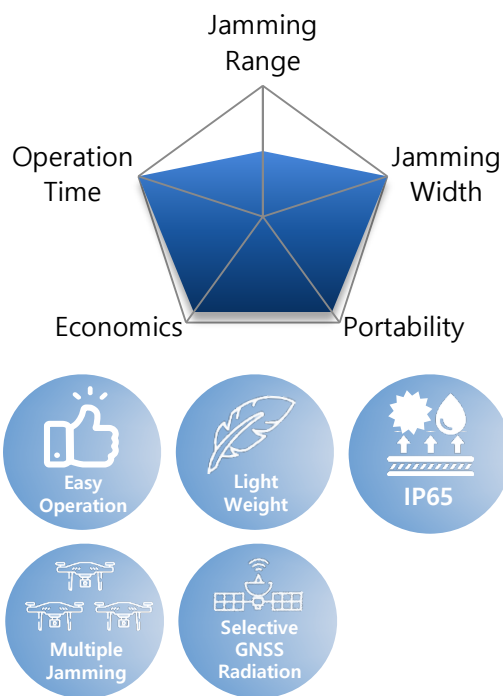
Handheld Drone Jammer



Weight	Max. 1.5kg
Operation Time	1.5 hours @ continuous operation
Jamming Frequency	GNSS : L-Band (L1 & G1)
	Command & Control : S-Band / C-Band
Antenna Beam Angle	Azimuth 25°, Elevation 30°
EIRP (Effective Isotropic Radiated Power)	L-Band(GNSS) : 2W (Typical)
	S/C-Band : 6W (Typical)
Environment	<ul style="list-style-type: none"> Operating Temperature: -32 ~ 55°C Dustproof/Waterproof: IP65
Jamming Range	<ul style="list-style-type: none"> C2 Link : more than 300m @ Distance between jammer and drone pilot is 1km GNSS : more than 500m
Components	<ul style="list-style-type: none"> WILDCAT I, Battery Charger, Battery 2EA Hard case Holster(option)

WILDCAT-II

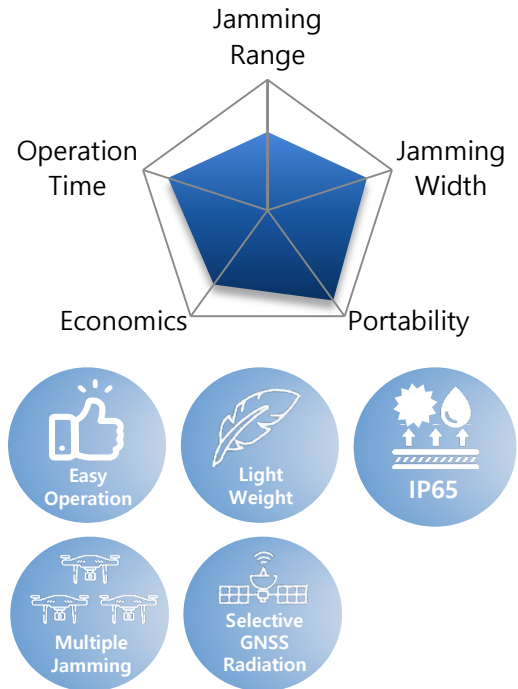
Handheld Drone Jammer



Weight	Max. 1.6kg
Operation Time	1.5 hours @ continuous operation
Jamming Frequency	GNSS : L-Band (L1 & G1)
	Command & Control : S-Band / C-Band / UHF-Band
Antenna Beam Angle	Azimuth 25°, Elevation 30°
EIRP (Effective Isotropic Radiated Power)	UHF-Band : 1W (Typical)
	L-Band(GNSS) : 2W (Typical)
	S/C-Band : 6W (Typical)
Environment	<ul style="list-style-type: none"> Operating Temperature: -32 ~ 55°C Dustproof/Waterproof: IP65
Jamming Range	<ul style="list-style-type: none"> C2 Link : more than 300m @ Distance between jammer and drone pilot is 1km GNSS : more than 500m
Components	<ul style="list-style-type: none"> WILDCAT II, Battery Charger, Battery 2EA Hard case Holster(option)

BLACKCAT

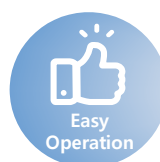
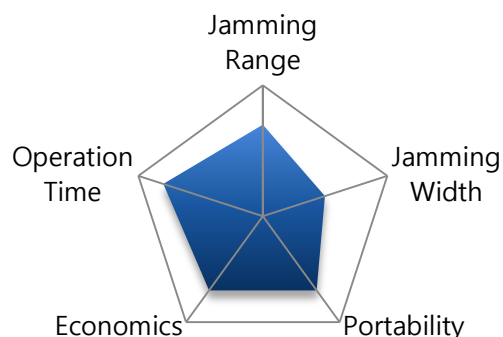
Handheld Drone Jammer



Weight	Max. 2.5kg
Operation Time	1.5 hours @ continuous operation
Jamming Frequency	GNSS : L-Band (L1 & G1)
	Command & Control : S-Band / C-Band / UHF-Band
Antenna Beam Angle	Azimuth 25°, Elevation 25°
EIRP (Effective Isotropic Radiated Power)	UHF-Band : 1W (Typical)
	L-Band(GNSS) : 2W (Typical)
	S-Band : 6W / C-band : 12W (Typical)
Environment	<ul style="list-style-type: none"> Operating Temperature: -32 ~ 55°C Dustproof/Waterproof: IP65
Jamming Range	<ul style="list-style-type: none"> C2 Link : more than 400m @ Distance between jammer and drone pilot is 1km GNSS : more than 500m
Components	<ul style="list-style-type: none"> BLACKCAT, Battery Charger, Battery 2EA Hard case Holster(option)

WOLF-I

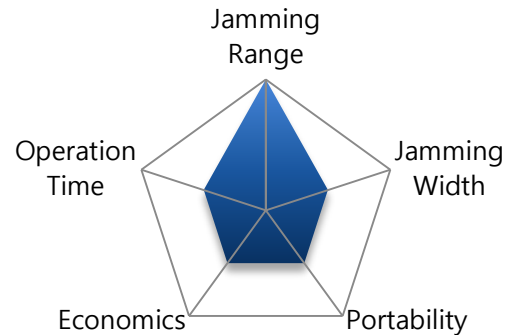
Handheld Drone Jammer



Weight	Max. 4kg
Operation Time	1.5 hours @ continuous operation
Jamming Frequency	GNSS : L-Band (L1 & G1)
	Command & Control : S-Band / C-Band
Antenna Beam Angle	Azimuth 20°, Elevation 15°
EIRP (Effective Isotropic Radiated Power)	L-Band(GNSS) : 10W (Typical)
	S/C-Band : 20W (Typical)
Environment	<ul style="list-style-type: none"> Operating Temperature: -32 ~ 55°C Dustproof/Waterproof: IP65
Jamming Range	<ul style="list-style-type: none"> C2 Link : more than 600m @ Distance between jammer and drone pilot is 1km GNSS : more than 1km
Components	<ul style="list-style-type: none"> WOLF I, Battery Charger, Battery 2EA Hard case Scope(3~9x magnification, lens 40mm)

WOLF-II

Handheld Drone Jammer



Weight	Max. 6kg
Operation Time	1 hour @ continuous operation
Jamming Frequency	GNSS : L-Band (L1 & G1)
	Command & Control : S-Band / C-Band
Antenna Beam Angle	Azimuth 20°, Elevation 15°
EIRP (Effective Isotropic Radiated Power)	L-Band(GNSS) : 10W (Typical)
	S/C-Band : 120W (Typical)
Environment	<ul style="list-style-type: none"> Operating Temperature: -32 ~ 55°C Dustproof/Waterproof: IP65
Jamming Range	<ul style="list-style-type: none"> C2 Link : more than 900m @ Distance between jammer and drone pilot is 1km GNSS : more than 1km
Components	<ul style="list-style-type: none"> WOLF II, Battery Charger, Battery 2EA Hard case Scope(3~9x magnification, lens 40mm) Tripod

JACKAL

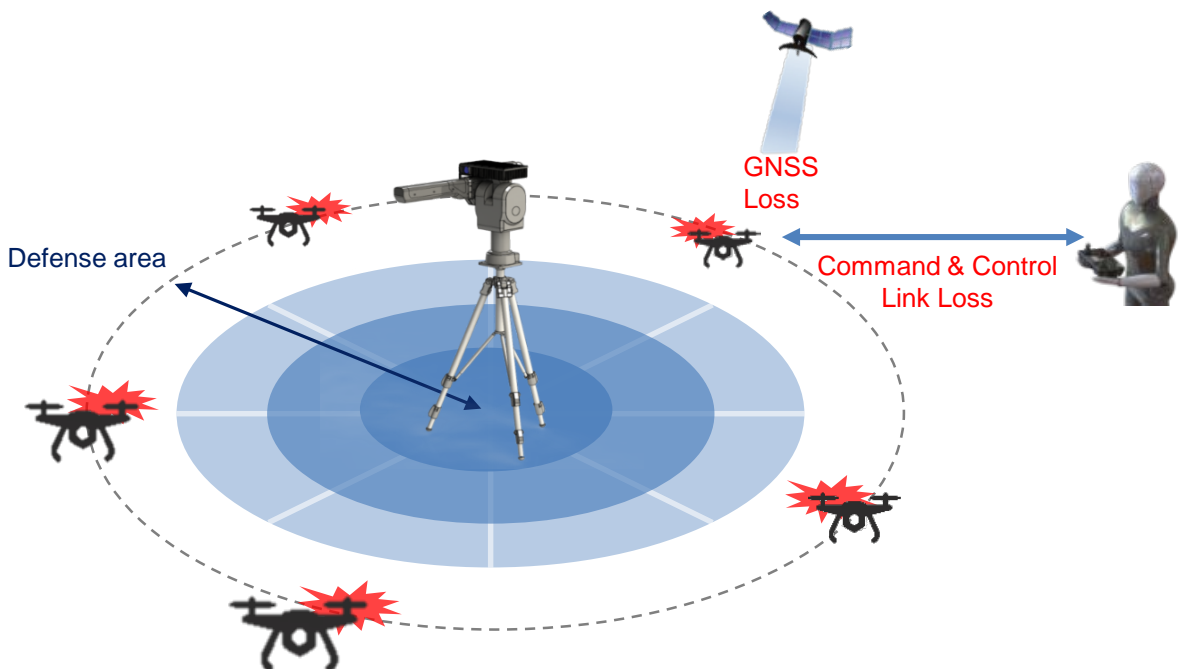
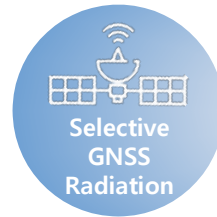
Station Drone Jammer



Weight	Max. 4.5kg
Operation Time	All time operation @ 28VDC, Max 3.8A(using external power)
Jamming Frequency	GNSS : L-Band (L1 & G1)
	Command & Control : S-Band / C-Band
Antenna Beam Angle	Azimuth 20°, Elevation 15°
EIRP (Effective Isotropic Radiated Power)	L-Band(GNSS) : 10W (Typical)
	S/C-Band : 120W (Typical)
Environment	<ul style="list-style-type: none"> Operating Temperature: -32 ~ 55°C Dustproof/Waterproof: IP65
Jamming Range	<ul style="list-style-type: none"> C2 Link : more than 900m @ Distance between jammer and drone pilot is 1km GNSS : more than 1km
Components	<ul style="list-style-type: none"> JACKAL Power and Data Cable

JACKAL-P

Station Drone Jammer



Technical Specifications

Weight		Max. 35kg
Operation Time		All time operation @ 28VDC, Max 7A(using external power)
Interface		J1 : 24 ~ 28 VDC(Amp Power) J2 : 10/100M Ethernet (Video & Control/Status)
Jammer	Jamming Frequency	<ul style="list-style-type: none"> GNSS : L-Band (L1 & G1) Command & Control : S-Band / C-Band
	Antenna Beam Angle	<ul style="list-style-type: none"> Azimuth 20°, Elevation 15°
	EIRP (Effective Isotropic Radiated Power)	<ul style="list-style-type: none"> L-Band(GNSS) : 10W (Typical) S/C-Band : 120W (Typical)
	Jamming Range	<ul style="list-style-type: none"> C2 Link : more than 900m @ Distance between jammer and drone pilot is 1km GNSS : more than 1km
Camera & Pan/Tilt	Resolution	<ul style="list-style-type: none"> FHD (1920x1080)
	Zoom	<ul style="list-style-type: none"> Optical 30x, Digital 12x
	IR	<ul style="list-style-type: none"> Include ICR Function
	Video Compression	<ul style="list-style-type: none"> H.264
	Range	<ul style="list-style-type: none"> Pan-Axis : 360° continuous rotation Tilt-Axis : 0° ~ 85°
Environment		<ul style="list-style-type: none"> Operating Temperature: -20 ~ 55°C Dustproof/Waterproof: IP65
Components		<ul style="list-style-type: none"> JACKAL-P Power and Data Cable Tripod(option)

PUMA

Station Drone Jammer



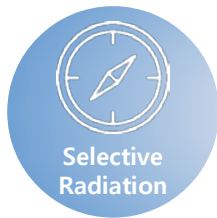
Control GUI



Vehicle



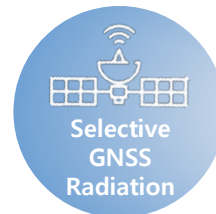
Omni-directional
Operation



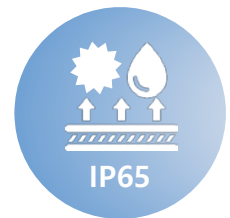
Selective
Radiation



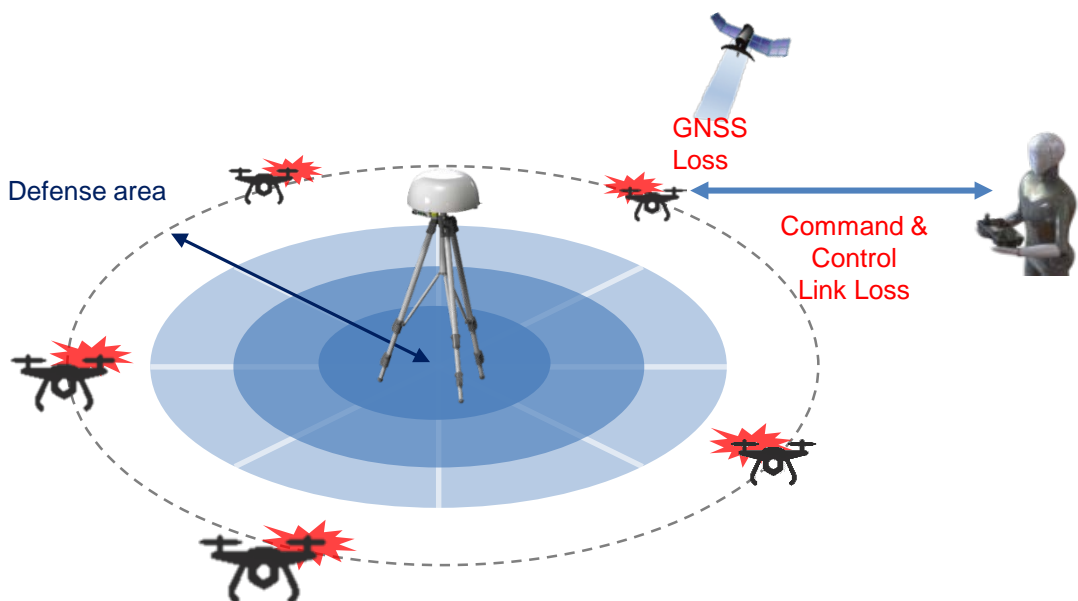
Remote
Control



Selective
GNSS
Radiation



IP65

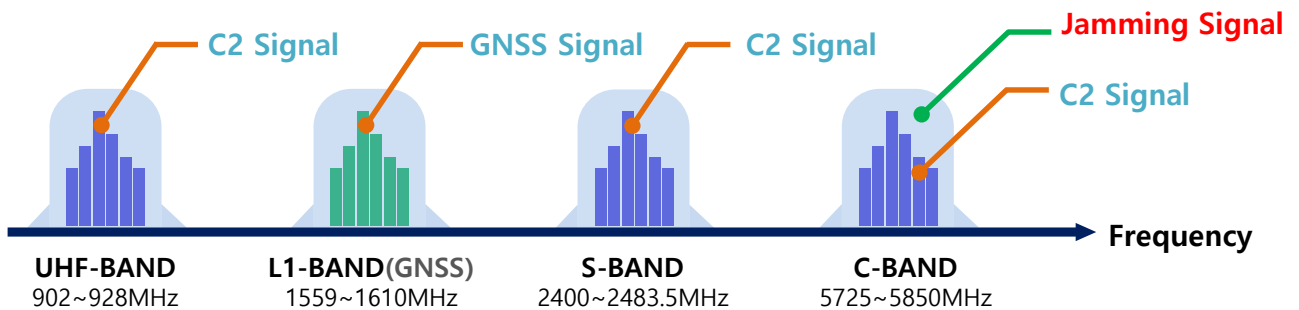


Technical Specifications

Weight	Max. 7kg
Operation Time	All time operation @ 12VDC, Max 16A (using external power)
Jamming Frequency	GNSS : L-Band (L1 & G1)
	Command & Control : S-Band / C-Band
Antenna Beam Angle	Azimuth 360°, Elevation 55°
EIRP (Effective Isotropic Radiated Power)	L-Band(GNSS) : 3W (Typical)
	S/C-Band : 7W (Typical)
Environment	<ul style="list-style-type: none"> Operating Temperature: -32 ~ 55°C Dustproof/Waterproof: IP65
Jamming Range	<ul style="list-style-type: none"> C2 Link : more than 300m @ Distance between jammer and drone pilot is 1km GNSS : more than 500m
Components	<ul style="list-style-type: none"> PUMA Remote Controller Hard case Power and Data Cable Tripod(option)

Concept of Jamming

- The drone receives a satellite navigation signal (GNSS) to determine its current location and flies under the command of the pilot (Command & Control, C2).
- Drone Jamming interferes with reception by disturbing the drone C2 channel, and also interferes with reception by disturbing the GNSS signal.
- In particular, commercial drones use C2 links in the specified frequency band. The jamming signal interferes only with this band and the GNSS band.
- Even in the case of a drone using a command channel at a different frequency, the satellite navigation signal (GNSS) may disturb.



Military

- Base Protection
- Boundary Duty
- Patrol Work
- Anti-Terrorism
- Vehicle Protection
- Building Protection

Public

- Patrol Work
- Protection of Privacy
- Anti-Terrorism
- VIP Protection
- Vehicle Protection
- Maintaining Event Safety
- Airport and Facility Protection

Product History



-2017-
WILDCAT



-2019-
PUMA



-2020-
WILDCAT
Renewal



-2021-
WOLF-II



-2020-
WOLF-I



-2020-
FALCON



-2021-
JACKAL



-2022-
JACKAL-P



-2023-
BLACKCAT





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