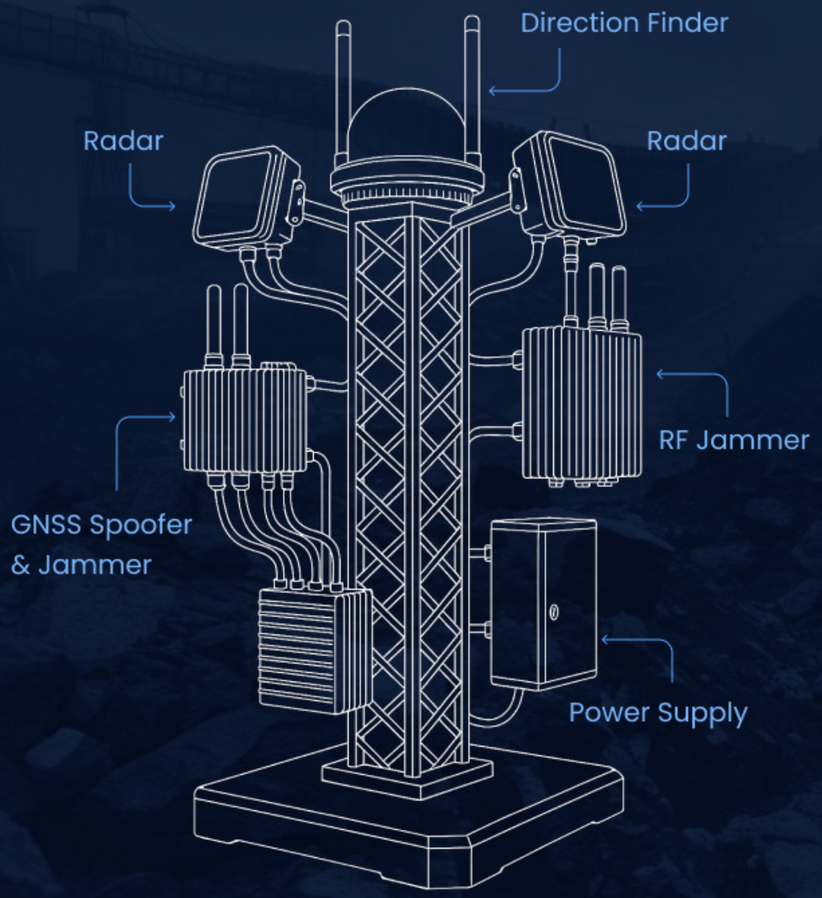
Disclaimer: This illustration is a representational concept. Final design, features, and specifications may vary based on engineering, regulatory, and operational requirements.

Indrajaal Infra is designed to neutralize rogue drones by crashing them with precision, ensuring no collateral damage while securing critical assets like nuclear power plants, oil rigs, and ports.

FEATURES



Aggressive soft-kill Weapons
Jammer and spoofer mitigates 95% of available drone types

Pre-defined fly zones
Customize your defense with pre-defined fly zones to enhance security and control.

Vehicle-deployable
Designed for mobility—easily transportable and deployable from vehicles for rapid response

48hr installation
Get up and running swiftly with a straightforward installation process—ready in just 48 hours.

Autonomous engagement
Threats are detected and neutralised autonomously. No manual intervention needed.

No collateral damage
Neutralize threats efficiently while ensuring the safety of surrounding environments.

Civilian airspace compliant
Operate safely and legally within civilian airspace without compromising security.

Works in all weather, day & night
Reliable performance in any conditions—day or night, rain or shine.

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USE CASES

INDRAJAAL

Real-time, intelligent drone defense built for high-risk, high-value infrastructure.

Oil rigs & Refineries

Blocks drones from triggering fires, leaking sensitive data, or threatening critical pipeline infrastructure.

Ports

Prevents smuggling, sabotage, and drone-induced operational disruptions at busy maritime hubs.

Nuclear power plants

Safeguards nuclear sites from espionage, sabotage attempts, and drone-induced operational risks.

Mines

Stops unauthorized drone surveillance, prevents on-site accidents, and secures hazardous material storage areas.

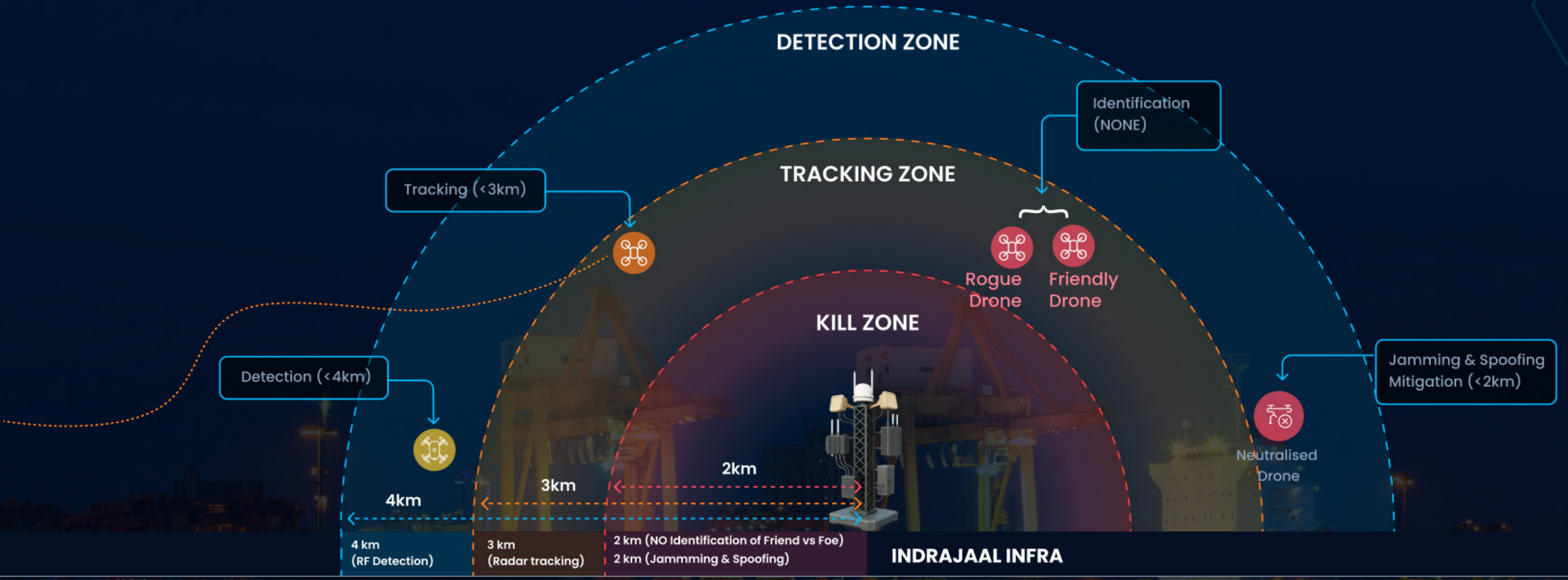
Industries

Protects intellectual property, secures high-value assets, and ensures uninterrupted production and supply chains.

Power transmission grids

Prevents drone interference, protects vital equipment, and ensures continuous energy distribution.

CAPABILITIES



Capabilities

- [x] Off-the-shelf drones
- [x] DIY Drones
- [x] FPV Drones
- [x] Swarm Drones
- [ ] Dark Drones*

*Dark drone mitigation capabilities are supported in Indrajaal Military

DTIM Ranges

Detection (RF)	Tracking (Radar)	Identification	Mitigation (Jamming & Spoofing)
<4kms	<3kms	NONE	<2kms

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DEVICES

GNSS Spoofer & Jammer

Disrupts a drone's GPS signals, forcing it to lose navigation or divert to a safe location.

RF Jammer

Disrupts drone communication links, cutting off control and video feeds instantly.

Radar

Detects and tracks drones in real-time, providing early warning and precise location data.

Direction Finder

Pinpoints the source of a drone's control signals, enabling identification and countermeasure targeting.

Processing unit

Autonomous detection, tracking, and neutralization of aerial threats using real-time data fusion and adaptive decision-making.

Command & Control Unit

Central command system that monitors, manages, and coordinates all counter-drone actions.

SPECS

INDRAJAAL

RF DIRECTION FINDER

Range and Coverage	
Low Frequency Bands Supported (Only Presence and no direction required)	433MHz, 868MHz, 915MHz
High Frequency Bands Supported	2.4GHz, 5.1GHz, 5.2GHz, 5.8GHz
Low Frequency Bands Supported (Only Presence and no direction required)	433MHz, 868MHz, 915MHz
High Frequency Bands Supported	2.4GHz, 5.1GHz, 5.2GHz, 5.8GHz
Maximum Operational Range	8km
Azimuth Operational Coverage	360°
Elevation Operational Coverage	±60°
Average detection time	< 15s
Average Refresh Rate	20s

Antenna and Signal Reception	
Antenna Type Supported	Omni-directional
Antenna Configuration of the Unit	Phased Array Antenna
Minimum frequency resolution	< 1KHz
Number of Antennas that can be connected to the unit	Variant 1 - 8 Antennas Variant 2 - 16 Antennas
Antenna gain range for low bands	19 to 21 dB gain
Antenna gain range for high bands	2.4GHz - 15.5 to 16.5 dB gain 5.8GHz - 12.5 to 13.5 dB gain
High Dynamic Range of the unit	19 to 70dB dB gain
Instantaneous Bandwidth for Scanning	60MHz
Scanning Frequency Resolution	100Hz
Instantaneous Scan Rates	1s

Performance Metrics and Scalability	
Maximum concurrent detection of drones	60
Maximum concurrent detection on frequency bands	7
What is the false alarm rate for the detection	Near zero
Direction Finding Accuracy for High Bands with 16 Phased Array Antenna Configuration	±7.5°
What is the frequency Detection Accuracy	±4°
What is the accuracy of triangulation with a configuration of 2 units	1000m
What is the accuracy of triangulation with a configuration of more than 2 units	300m

Environmental and Operational Factors	
Operating Temperature Range	-30°c to +60°c
Storage Temperature Range	-40°C to 65°C
Humidity Resistance	0% to 95% RH
EMI/EMC Compliance Standards	MIL-STD-461G
Waterproof Rating	IP66
Built-in Test Equipment	Yes
Power Supply Required	110-240v
Maximum Power Consumption	100W
Maximum Weight	12kg
Maximum Dimensions	318mm (diameter) x 294mm (height)

SPECS

RF DIRECTION FINDER

Range and Coverage	
Maximum Range	RCS = 0.01m2 (-20 dBsm) Range = 2.8 km RCS = 0.1m2 (-10 dBsm) Range = 4.8 km RCS = 0.5m2 (-3 dBsm) Range = 7.2 km RCS = 1 m2 (0 dBsm) Range = 10.1 km
Maximum Altitude	RCS = 0.01m2 (-20 dBsm) Altitude = 1.8 km RCS = 0.1m2 (-10 dBsm) Altitude = 3.2 km RCS = 0.5m2 (-3 dBsm) Altitude = 4.8 km RCS = 1 m2 (0 dBsm) Altitude = 6.8 km
Maximum Azimuth Coverage	± 65°
Maximum Elevation Coverage	50° / -40°
Maximum Operating Altitude	0-10,000 ft AGL
Minimum Target Speed for Detection	0.02 m/s
Maximum Target Speed for Detection	940 m/s
Antenna and Signal Tx/Rx	
Radar Type	Pulsed Doppler Electronically Scanned Array
Radar Modes	Search Search While Track
Operating Frequency Range	15.7-16.6 GHz
Number of Antennas	Single phased-array antenna

Performance Metrics and Scalability	
Range Accuracy	1.5 m
Maximum Number of Tracks can be tracked simultaneously	1000
Azimuth Accuracy	< 0.5°
Elevation Accuracy	< 0.5°
Minimum angular resolution	2.3 deg Elevation and 4.3 deg azimuth
Speed Accuracy	± 5 m/s
Maximum Track Refresh Rate	1 sec
False alarm rate	4e-8
Environmental and Operational Factors	
Operating Temperature Range	-40°C to +65°C Typical ambient conditions
Storage Temperature Range	-40°C to +85°C for up to 2 years
Max Humidity	RH 100%, non-condensing
EMI/EMC	MIL-STD-461, CE compliance
Shock Resistance	MIL-STD-810H
Ingress Protection	IP67
Built-in Test Equipment	.
Power Supply	48V DC
Idle Power Consumption	77W
Max Power Consumption	200W
Maximum Weight	18 kg
Dimensions	42.5 cm x 33 cm x 18 cm
Deployment Options	Vehicle Mounted Stationary

SPECS

INDRAJAAL

GNSS SPOOFER AND JAMMER

Range and Coverage	
Maximum Jamming Range	2km
Maximum Spoofing Range	2km
Azimuth Coverage	360 degrees
Elevation coverage	360 degrees
Spoofing Mode	Navigation spoofing
Jamming Mode	Sweep
White Listing of Frequency Supported	Yes
Antenna and Signal Reception	
GPS Bands Spoofing Coverage	L1
Galileo Bands Spoofing Coverage	E1
BeiDou Bands Spoofing Coverage	B1
GLONASS Bands Spoofing Coverage	L1
GPS Bands Jamming Coverage	L2
Galileo Bands Jamming Coverage	E5b
BeiDou Bands Jamming Coverage	B2
GLONASS Bands Jamming Coverage	L2
Transmission Output Variable	30dBm to 51dBm
Performance Metrics and Scalability	
Spoofing Duration	Can Spoof continuously on AC Power. 2 hours with battery power
Mitigation Success Rate (Even any other device used GNSS System like smartphones, etc)	> 98%
Environmental and Operational Factors	
Sensor Operating Temperature Range	-40°C to +50°C
Sensor Storage Temperature Range	-50°C to +85°C
Sensor Humidity Range	0% to 95% RH, non-condensing

Environmental and Operational Factors	
Sensor EMI/EMC	MIL-STD-461E
Sensor Ingress Protection	IP67
Sensor Built-in Test Equipment	.
Sensor Maximum Weight	Main Unit: 7kg Tripod + Antenna: 4kg
Sensor Dimensions	320 x 340 x 96mm (without antennas)
Sensor Idle Power Consumption	30W
Sensor Max Power Consumption	60W
Power Supply Type Supported	Mains or Battery
Power Supply (Mains)	100-240VAC, 100W
Battery Type	Rechargeable Li-ion Battery Pack
Battery Capacity	15.6 Ah @ 3A
Battery Energy	230Wh
Battery Charging Time	2 hours
Battery Life	4 hours
Battery Lifecycle	300 cycles to 80% capacity @ 100% DOD
Battery Dimensions	186.2mm X 69.5mm X 65mm
Battery Weight	1250gms
Battery Housing	ABS
Battery Energy Density	177 Wh/kg; 269 Wh/l
Battery Charge Cycle Temperature Range	0°C to 45°C
Battery Discharge Cycle Temperature Range	-34°C to 60°C
Battery Storage Temperature Range	-20°C to 50°C
Battery Humidity Range	0 to 90%
Battery Transportation Class	.
Battery Certifications	MIL-STD-810E
Battery Safety	Under/over voltage Under/over current Short circuit Temperature Reverse polarity

SPECS

INDRAJAAL

RF JAMMER

Range and Coverage	
Jamming Method	Noise Sweep
Jamming Range	2km
Operational Frequency Range	433-434MHz 860-925MHz 1160-1280MHz 1400-1499MHz 1560-1620MHz 2400-2500MHz 5170-5250MHz 5700-5900MHz
Azimuth Coverage	360 degrees
Elevation Coverage	360 degrees
Single Target Effective Range	J/S 3:1
Antenna and Signal Reception	
Out Of Band Rejection	20 - 40 dB
Frequency Hopping Rate	400 hps
Frequency Agility	Frequency hopping at 200 KHz

Performance Metrics and Scalability	
Number of bands that can be jammed concurrently	9
Number of drones that can be jammed concurrently	60
Continuous Jamming Time	3 Hours
Cooling Type	In-Built Cooling Fans
Cooling Time	20 mins
Average Mitigation Time	10s
Environmental and Operational Factors	
Temperature Range	-25°C to +60°C
Storage Temperature Range	-40°C to 65°C
Humidity Resistance	95%
Waterproof Rating	IP66
Power Supply Required	110-240v
Power Consumption	150W
Weight	30kg
Weight with battery	37kg
Dimensions	120 mm (width) x 405 mm (height) x 240 mm (depth)
Mast height for best performance	20m
Deployment Options	Vehicle Mounted Stationary

SkyOS™ Platform

Indrajaal Infra is powered by our proprietary AI-enabled platform

FEATURES & BENEFITS

Comprehensive C5ISRT

Indrajaal is a unified Command, Control, Communication, Combat, Intelligence, Surveillance, Reconnaissance, and Targeting (C5ISRT) platform designed to provide integrated and real-time decision-making across multiple domains. threats.

Plug-and-Operate Architecture

Pre-integrated hardware and software stack ensures rapid deployment without lengthy installation or calibration procedures.

Seamless Integration with any C2 Infrastructure

We can easily integrate with existing Command and Control (C2) infrastructure without any operational disruption, ensuring business continuity during the integration process.

Rooftop-Deployable, Space-Efficient Design

Engineered for constrained urban and industrial sites — with a compact footprint that mounts on flat surfaces without structural overhaul.

Multi-Layered Countermeasure Stack

Combines RF jamming, GNSS spoofing, direction finding, radar, and EO/IR sensors for redundant and resilient drone defense.

Mission-Critical Power Resilience

Integrated UPS and energy management systems ensure uninterrupted protection during grid failures or attacks on power infrastructure.

Scalable for Multi-Tower Network Defense

Easily integrates into a larger Indrajaal network mesh, with synchronized situational awareness and coordinated countermeasures across assets.

Open-Protocol Support

Indrajaal supports open protocols, ensuring compatibility with existing third-party equipment. This allows for smooth integration of previously procured assets into the system without the need for complete replacements.

Low Maintenance, High MTBF Hardware

Industrial-grade components with self-diagnosing capabilities reduce human servicing requirements and improve lifecycle cost-efficiency.

Autonomous, 24x7 Threat Mitigation

Operates continuously without human intervention to detect, track, and neutralize hostile drones in real-time using a fully AI-powered system.

Secure, Remote Command Interface

Enables encrypted, over-the-air monitoring, diagnostics, and manual override, ensuring security teams retain full situational control.

Past-prepared and future-ready

With its ability to expand through plug-and-play capabilities, Indrajaal is both past-prepared with deep system integration and future-ready to scale with your evolving security needs.

GET IN TOUCH

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