Shpak

RSI Europe
MILITARY IOT

MISSION READY FPV DRONE SYSTEM

Battle-proven | Operator-ready

FULL EQUIPMENT SOLUTION

INCREASED EW RESISTANCE

RUGGED AND RELIABLE

The Shpak FPV drone system is engineered for armed forces to execute precision strikes on enemy targets from remote distances. It can deploy various explosive munitions, combining the pinpoint accuracy of anti-tank guided missiles (ATGMs) with the extended range of indirect fire systems like artillery. With its advanced frequency-hopping technology, Shpak delivers enhanced resilience against electronic warfare, ensuring reliable performance in contested environments. This system is designed to enhance operational versatility, precision and survivability in modern military operations.

OPTIONS FOR RELIABLE PERFORMANCE:

FREQUENCY-HOPPING
for enhanced jamming resistance

FIBER-OPTIC CONTROL
eliminates the need for line-of-sight

AUTONOMOUS GUIDANCE
enabes independent operation during the final strike phase

DATASHEET

Shpak Drone (SRF) | Multi-band Frequency Hopping Spread Spectrum for Increased Jamming Resistance

DRONE Shpak (SRF)

Characteristics

Drone weight (without battery)	1030 g
Dimensions with propellers	526x583x65 mm
Frame material	Carbon fibre

Performance

Flight range with operational payload	20 km *
Operational payload	2 kg
Cruise speed with operational payload	80 km/h *
Maximum airspeed	145 km/h
Max operational windspeed	Class 8 **
Max current consumption	170 A
Maximum payload	Up to 5 kg *
Max take off weight	7.5 kg
Max service ceiling (ASL)	3000 m
Temperature range	-20C - +45C
Deploy time	±1min

* dependable on the whether conditions, such as ambient temperature and wind speed
** based on the Beaufort wind scale

Radio communication

Communication protocol	ELRS LoRa
Control signal transmission technique	Multi-band Frequency Hopping Spread Spectrum (FHSS)
Control signal frequency range	625 - 2150 MHz
Control signal power	Up to 1.5 W
Video signal transmission technique	Analog, selectable frequency
Video signal frequency range	4.9 to 5.9 GHz
Video signal power	Up to 3 W

ANTENNA ASSEMMBLY (ANA)

For ground based range extension and operation from concealed position

Characteristics

Dimensions (folded, without stand)	920x350x230 mm
Weight (without stand)	3,9 kg
Housing material	Nylon
Color	Black/Olive Green (RAL6003)
Fixation	Fixable to flat/round objects between 13 to 55 mm in diameter
Connection to Ground Control Station	50 meter in single UTP cable (power, control & video)

Control Antenna

Beam angle	70°
Antenna type	Log Periodic
Polarisation	Linear (horizontal)
Gain	9.5 dBi
Frequencies	570 MHz ~ 6 GHz

Video Antennas

No. of video antennas	2
Beam angle	25-30°
Antenna type	Helical
Polarisation	RHCP
Gain	14-16 dBi
Frequencies	4.9 to 5.9 GHz

DATASAHEET

Shpak Fiber Optic (SFO) | Optic Fiber Control for flawless video signal transmission

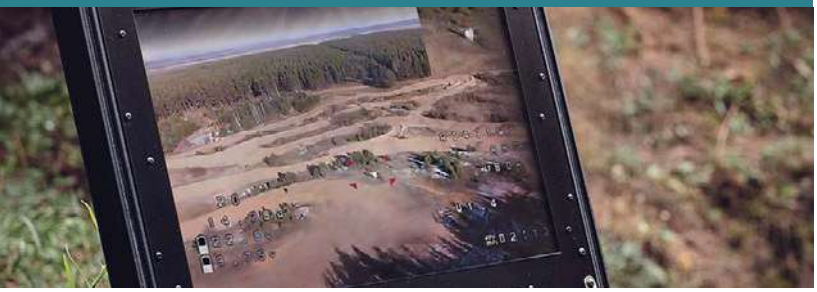
DRONE Shpak (SFO)

Characteristics	
Drone weight (without battery and spool)	892 g
Dimensions with propellers	526x583x65 mm
Frame material	Carbon fibre
Performance	
Maximum groundspeed	110 km/h
Max current consumption	170 A
Max take off weight	7.5 kg
Airspeed with spool and operational payload	80 km/h
Temperature range	-20C - +45C
Deploy time	±1min
Radio communication	
Communication protocol	TTL / ELRS / TBS / SBUS
Control signal transmission technique	Fiber-optic cable
Video signal transmission technique	PAL / NTSC

Spool Characteristics (Ultra light)	Spool Weight	Payload capacity
10 km	1.20 kg	3.00 kg
15 km	1.60 kg	2.00 kg

SHPAK TERMINAL GUIDANCE (STG)

Terminal guidance for AI-assisted strike phase execution



Characteristics	
EW resilience	Autonomous strike phase execution
Cruise mode	Flying through EW-denied corridors or long-range transit
Altitude hold mode	Controlled loitering for target acquisition
Engagement precision	≤1 m CEP, 90%
GNSS independence	AI-based computer vision assisted guidance
Manual override	Pilot retains control over final corrections if needed
Payload compatibility	Compatible with all existing Shpak SRF payloads
Lock-on range	100–500 m
Supported targets	Static, moving, camouflaged
Terminal approach speed	120 km/h
Max target speed	60–80 km/h

BATTERY PACK

Characteristics	
Capacity	12000 mAh
Safe storage voltage	22.2V
Min / Max voltage	19.8V / 25.2V
Max discharge current	360A
Max charge current	16A
Weight	1550 g
Battery type	LiPO
Connector	XT90
Dimensions (without cables)	179x58x74 mm
Cable Length	~11 cm

DATASAHEET
Ground control station

DISPLAY STATION (DSP)
For displaying multiple video streams

Characteristics

Size (closed)	520 x 435 x 230 mm
Weight (battery included)	14,7 kg *
IP rating (closed)	IP67
Screen size	18.5 inch / 47 cm
No. of streams	Up to 2 via Split Screen function

Connectivity & Ports

Connection to Antenna	UTP cable via JR Signal Converter (power, control & video)
Digital video input & output	1 x HDMI IN and 1 x HDMI OUT
Analog video input/output	3.5 mm stereo jack and 1 x RCA
Power output	12V for FPV goggles via XT60 and VBAT OUT via XT60 for AR-1
USB-A & USB-C power out	Allows charging devices with 35W fast charging

Battery

No. of battery ports	2
Standard battery	6S5P Li-Ion batteries 25000 mAh
Battery connection port	XT90 (XT60 adapter available upon request)
Uninterruptable operation	Yes, via interchangeable batteries and AC power input
Operation time with battery	Up to 9 hours
Remote Controller	RadioMaster TX12 Mark II
FPV Goggles	Skyzone SKY04X Pro

* weight without control set

THERMAL CAMERA OPTIONS

U02

Resolution	384x288 px
Field of View (FOV)	39°
Pixel size	17 µm
Focal length	6.8 mm
Image frame rate	50 Hz

U03

Resolution	640x512 px
Field of View (FOV)	46°
Pixel size	12 µm
Focal length	6.8 mm
Image frame rate	50 Hz

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