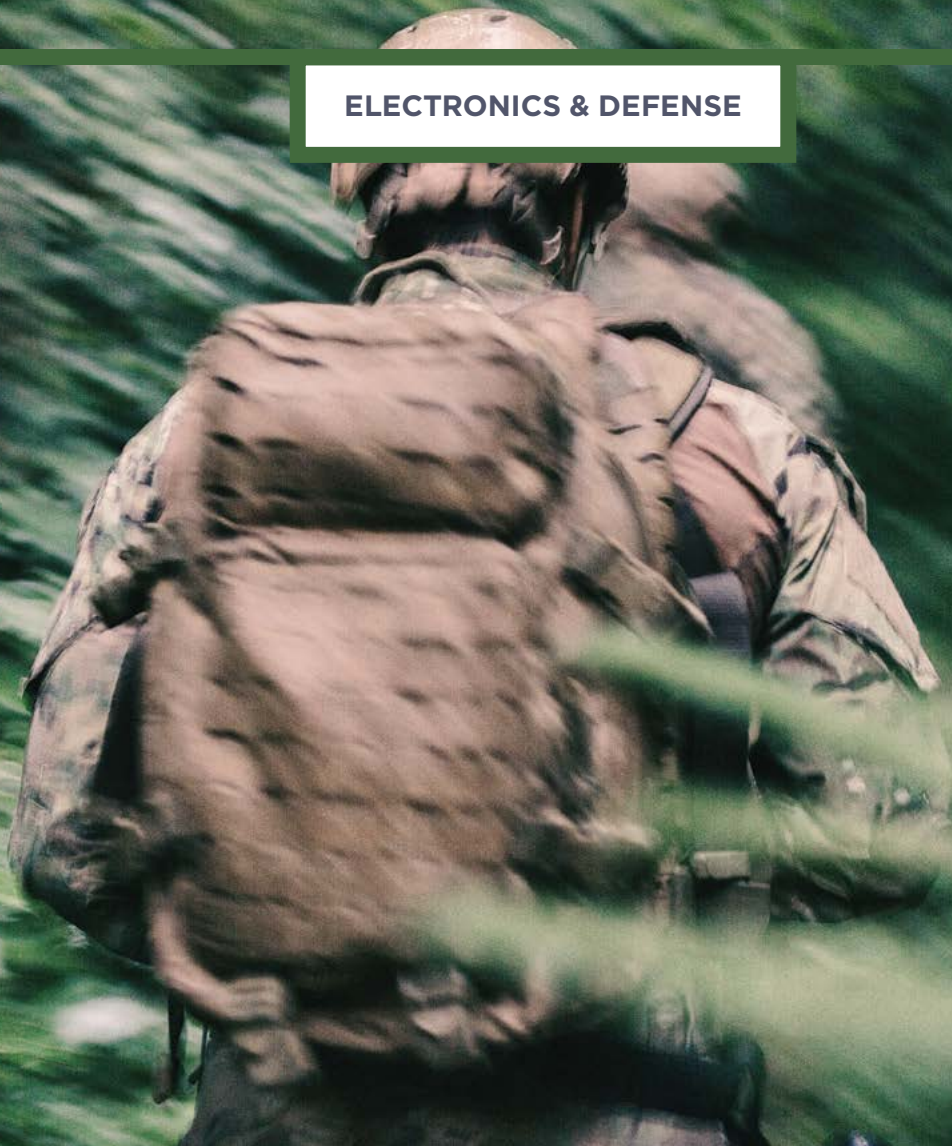# ROS 3

Remote Operating System for JIM Compact

SAFRAN

ROS 3

HIGHLY PORTABLE. RAPIDLY DEPLOYED. SELF-CONTAINED.

ROS3 provides a complete off-the-shelf wired and wireless solution for the remote operation of JIM Compact. Leveraging the advanced capabilities of the JIM Compact, ROS3 provides more functionality and improved ergonomics in a smaller size, lighter weight and lower power consumption. Highly reliable even in the most challenging conditions, ROS3 provides infantry, forward observers, reconnaissance teams and special forces with a reliable solution for 24/7 remote observation.

THE ROS3 "BASELINE CONFIGURATION"

Ethernet based architecture for data transmission. Power is delivered by a single source battery.

JIM Compact, pan/tilt head with tripod and End-User Device are interconnected through a dedicated power and data hub.

The hub supplies power to all connected equipment from a BB2590 battery or external power sources (vehicle or mains power).

3 OPTIONAL KITS TO PROVIDE EXTENDED CAPABILITIES

Extended Wired Kit
wired remote control
at a range up to 25 m

Wireless Medium Range Kit
wireless remote control
at an extended range up to 300 m

Wireless Long Range Kit
wireless remote control
at an extended range up to 1 km

COMMANDS & CONTROLS

ROS3 provides full remote control of the JIM Compact (duplicating the HMI of JIM Compact) and full remote control of a precision pan/tilt head with a color multi-point touch screen for touch control.
ROS3 provides digital video and image recording directly from the JIM Compact for a shared database.

SCANNING MODES

· automatic scan of an area defined by several waypoints by the operator or along a predefined pattern
· automatic rally of a waypoint
· 3D movement scan pattern

Pan/tilt can be programmed in a flexible pattern combining pan and tilt.

DIGITAL MAP DISPLAY

Using industry standard map formats it allows to display:
· operator's own position
· JIM Compact's field of view
· JIM Compact's line of sight
· acquired targets position
The operator can manage points of interest and synchronize them with the JIM Compact Point Manager.

LOW WEIGHT

+

- Less than 10 kg* in
  "Baseline Configuration"

- Less than 12 kg* in
  "Extended Wired Configuration"

- Less than 16 kg* in
  "Wireless Long Range Configuration"

*without battery and JIM Compact

VERSATILE VIEW MODES

+

- Sensors Remote Control
- Areas Scan
- Map Display

APPLICATIONS

+

- Dismounted Reconnaissance
- Rapid Deployment Perimeter
  Surveillance
- Remote Forward Observation
- Border Surveillance
- Coastal Surveillance
- Police and Customs

SYSTEM CAPABILITIES

+

- High precision motorised
  pan/tilt unit for accurate
  positioning
- Compact control tablet
  featuring a large color
  multi-point touch screen
- Digital recording of
  videos and pictures

USER-FRIENDLINESS

+

- Intuitive, efficient user interface
- Ergonomic design
- Usable with or without gloves
- Easy to set up and use
- Lightweight, one man carry

SYSTEM FEATURES

+

- Ethernet connectivity to PC
  and/or digital communications
  infrastructure
- Low system power
  consumption
- Rugged and durable
- Ethernet architecture for
  high-speed data and video
  transmission

OPTIMIZED POWER CONCEPT

+

- Refined battery management
- Uses standard available
  BB2590 batteries
- External main power supply
  110 – 220 V
- External power supply from
  vehicle 18 – 36 VDC

WIRED CONNECTION CAPABILITIES

+

- 5 m in
  "Baseline Configuration"

- 25 m in
  "Extended Wired Configuration"

- 5 m in
  "Wireless Medium Range Configuration"

- 5 m in
  "Wireless Long Range Configuration"

WIRELESS CONNECTION CAPABILITIES

+

- 25 m in
  "Baseline Configuration"

- 25 m in
  "Extended Wired Configuration"

- 300 m in
  "Wireless Medium Range Configuration"

- 1 km in
  "Wireless Long Range Configuration"

BASELINE CONFIGURATION

ETHERNET PAN/TILT

POWER & DATA HUB

END-USER DEVICE

TRILITE TRIPOD

INTERCONNECTION CABLES

EXTENDED WIRED KIT

POWER & DATA HUB

INTERCONNECTION CABLES

WIRELESS MEDIUM RANGE KIT

WIFI ANTENNA

WIFI ANTENNA TRIPOD

WIRELESS LONG RANGE KIT

WIFI ANTENNA (×2)

WIFI ANTENNA TRIPOD (×2)

POWER & DATA HUB

TECHNICAL DATA

PAN&TILT MOTORISED PLATFORM

Range	Elevation: +45° an –30°
	Azimut: ±175°
Minimum speed	0.8 mrad/s
Maximum speed	40 mrad/s
Position resolution	0.2 mrad along each axis
	(azimuth and elevation)
Position accurate	±1 mrad along each axis
	(azimuth and elevation)
Level accurate	±0.5 mrad
Dimension	154 x 214 x 133 mm
Weight	2.4 kg

TRIPOD

Materials	Black anodized aluminum
Max payload	5 kg
Dimension (stowed)	Ø126 mm x 659 mm
Dimension (deployed)	Min: Ø 1.335 m x 0.175 m
	Max: Ø 1.127 m x 1.079 m
Weight	1.7 kg

END-USER DEVICE

Display Size	10.1"
Display Resolution	1920 x 1200
Display Characteristics	Capacitive 10-point touch
	Contrast Ratio 800:1
	Wide Viewing Angle ±89°
	Night vision mode
Connectivity	2x USB3.0 ports
	Micro SD Card
	Wifi
Dimension	280 x 195 x 22 mm
Weight	1.3 kg

SYSTEM POWER SOURCES

Standard	Rechargeable BB2590
	(not included with KTROS3)
Vehicle Power	18 – 36 VDC
Main Power	110 – 240 VAC (50 – 60Hz)

REMOTE CONNECTION CAPABILITIES

Baseline Configuration	Wired: 5 m
	Wireless: 25 m
Extended Configuration	Wired: 25 m
	Wireless: 25 m
Medium Range Configuration	Wired: 5 m
	Wireless: up to 300 m
Long Range Configuration	Wired: 5 m
	Wireless: up to 1 km

APPLICATIONS

Dismounted Reconnaissance
Rapid deployment Perimeter Surveillance
Remote Forward Observation
Border Surveillance
Coastal Surveillance

MULTIMEDIA

Pictures	>2000 photos
	(stored in JIM Compact)
Video	2 h continuous recording
	(stored in JIM Compact)
Mapping	compatible with ESRI tile
	(.tpk or .mmpk)

ENVIRONMENTAL CONDITIONS, TESTED TO MIL-STD-810

Operational temperature	–33° C to +55° C
Storage temperature	–40°C to +71°C
Immersion	MIL-STD-810G, Meth.512.6, Proc. I
Transit drop	MIL-STD-810G, Meth.516.6, Proc. IV
General vibration	MIL-STD-810G, Meth.514.7, Proc. I
Loose Cargo Transport	MIL-STD-810G, Meth.514.7, Proc. II
Rain	MIL-STD-810G, Meth.506.6, Proc. I
Solar radiation	MIL-STD-810G, Meth.506.6, Proc. I

PHYSICAL (BASELINE CONFIGURATION)

Weight	<10 kg
Autonomy	>6 h

POWERED
BY TRUST

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