



KONGSBERG



## FEATURES

- Dual channel – two independent full performance channels
- Direct sequence spread spectrum and frequency hopping technologies for maximum EPM performance
- Embedded high performance co-site capabilities
- SCA 4.1 architecture
- Advanced networking features
- Compact form factor

KONGSBERG tactical communications system (K-TaCS)

# THOR – tactical software defined radio

## Combat net radio

THOR, a dual channel tactical Software Defined Radio (SDR), provides resilient wide band and narrow band connectivity to warfighting platforms and units. The waveforms provide unique EPM performance to ensure communications in harsh environments. THOR is built to meet the requirements of tactical communications of the next decades.

THOR is optimized for tactical mobile platforms. The warfighter may apply the two independent VHF/UHF-radio channels for simultaneous voice and data communications on narrowband and wideband selectable waveforms.

### Electromagnetic Spectrum Operations

THOR facilitates increased awareness and coordinated spectrum operations. The EPM performance is provided by the advanced waveforms. THOR can be used as a sensor for advanced EMSO. This novel design combines wireless tactical voice and data traffic capabilities with advanced algorithms taking full advantage of the THOR sensor capabilities. Increasing spectrum awareness allows for better utilization and survivability of own communication in the contested spectrum.

### Waveforms

THOR can accommodate a wide range of NATO standard and KONGSBERG proprietary waveforms making each radio a valuable tool for its user.

THOR enables the combination of waveforms to counter the EW threats when needed and transports data at high data rates when possible.

KONGSBERG EPM narrow band waveform utilizes a patented Narrow Band Direct Sequence Spread Spectrum technology. This provides exceptional range, coverage and the ability to operate in severe multipath conditions, making THOR a highly effective tool for on-the-move combat connectivity.

### Design features

THOR provides embedded AES256 encryption ensuring high-level security in the network. The flexibility of the SDR architecture supports customer tailored crypto systems.

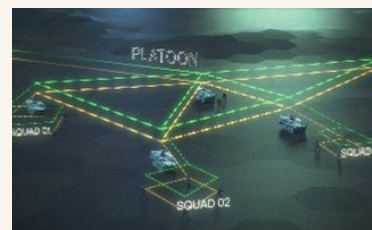
THOR is designed to support an Evolutionary Capability Development (ECD). THOR provides a capable, resilient, and highly adaptable platform, with open interfaces to support customer requested or 3rd party software modules.

### Defence Communications

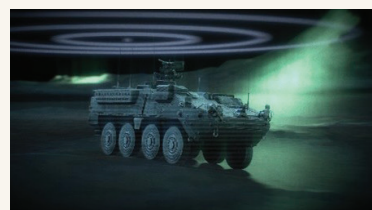
Defence Communications delivers world class robust and network centric communications solutions and precision engagements with maximum effect and protection. All products in the K-TaCS family are high quality ruggedized-by-design equipment for use in advanced military tactical communication systems.

## TECHNICAL DATA

RF characteristics	CH1: Frequency range: 30 – 1525 MHz CH2: Frequency range: 30 – 1525 MHz Output Power: 2x20 W
Waveforms	KONGSBERG proprietary EPM narrowband and wide band waveforms, including WBWF optimized for GBAD applications NATO STANAG 5630 NBWF NATO STANAG 4204 Single channel FM NATO STANAG 4372 SATURN NATO STANAG 5651 NHDR (optional) NATO STANAG 4681 IW SATCOM (optional) DMR or P25 (optional)
Data capacities	Waveform dependent Supports WFs with 600 bps to 2.5 Mbit/s or more
Interfaces	2x2 TNC RF, Configurable antenna selection 4x LAN Ethernet 10/100/1000BASE-T/TX w/PoE USB Key loading EKMS/DS-101 compatible GNSS w/pps (internal and external) Programmable System expansion & control Interfaces
Services	Network Service: IPv4/IPv6 External Networks: OSPF, RIP Embedded encryption: AES256 Voice encoding: MELPe 600/1200/2400 bit/s STaC-IS/TSVCIS compatible NINE/Tactical NINE supported Repeater, Relay and Multi-hop
Management	Web TLS/OpenConfig/Yang/JSON
Power supply	18 – 34 VDC (11 – 34 VDC under restricted conditions) MIL-STD 1275 Power consumption: 200 W single channel / 300 W dual channel
Environmental	Operating temp.: -40°C to +55°C Environmental: MIL-STD 810 army ground EMC: MIL-STD 461 army ground
Dimensions	H/W/D: 125 mm / 210 mm / 360 mm Weight: 16 kg



Advanced network functionality



Superior coverage



THOR Radio Control Terminal



Excellent performance in time critical fire support applications