TACTICAL SDR

KONGSBERG

DUAL CHANNEL SOFTWARE DEFINED RADIO

THOR Tactical SDR

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 Electro Protective Measures (EPM) to ensure communications in harsh environments. THOR is built to meet the requirements of tactical communications over 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 (EMSO)

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

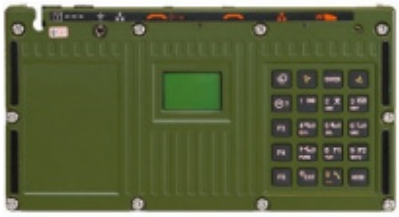
Waveforms

THOR can accompany a wide range of NATO standard and KONGSBERG proprietary waveforms, making each radio a valuable tool for its user. THOR combines waveforms to counter the Electronic Warfare (EW) threats when needed and transport data at high rates when possible.

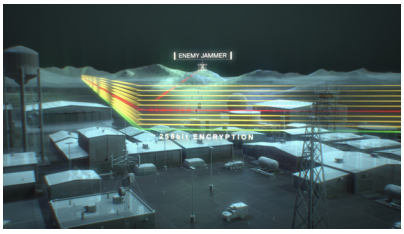
KONGSBERG narrow band waveform utilise a patented Narrow Band Direct Sequence Spread Spectrum technology, in combination with Frequency Hopping. This provides exceptional range, coverage and the ability to operate in severe multipath conditions, making THOR a highly effective tool for on-the-move combat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

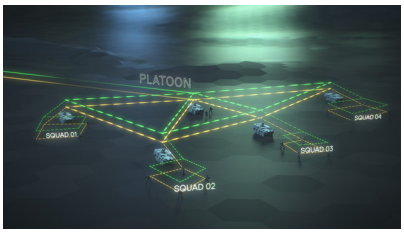
FEATURES

- Dual channel – two independent full performance channels
- Simultaneous operation of both channels – VHF&VHF, VHF&UHF or UHF&UHF
- Simple waveform change
- SCA 4.1 architecture
- Direct sequence and frequency hopping spread spectrum technologies
- Full co-site capabilities
- Advanced networking features
- EMSO sensor capability
- Fully IP based
- Embedded encryption
- Compact form factor



Radio Control Unit - RCT





Advanced network functionality

THOR designed for use in time critical applications such as air defence systems.

Design features

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.

TECHNICAL DATA

RF Charactreistics	Frequency range: 30 – 1525 MHz RF Bandwidth: 5 kHz to 10 MHz Output Power: 2x20 W
Waveforms	KONGSBERG proprietary EPM and non-EPM WF NATO STANAG 5630 NBWF NATO STANAG 4732 SATURN NATO STANAG 4204 Single channel FM NATO STANAG 5651 NHDR or STANAG 5649 NHCDR NATO STANAG 4681 IW SATCOM (optional) DMR (optional)
Data Capacities	Waveform dependent From 600 bps to 2.5 Mbit/s or more
Interfaces	LAN Ethernet 10/100/1000BASE-T/TX USB Key loading EKMS/DS-101 compatible GNSS w/pps (internal and external) System expansion Interface
Services	Network Service: IPv4/IPv6 External Networks: OSPF, RIP Embedded encryption: AES256 Voice encoding: MELPe 600/1200/2400 kbit/s STaC-IS/TSVCIS compatible NINE/Tactical NINE supported
Management	Web TLS/OpenConfig/Yang/JSON
Power Supply	21 – 34 VDC MIL-STD 1275 150 W single, 200 W dual power consumption
Environmental	Operating temp.: -40°C to +55°C Environmental : MIL-STD 810 army ground EMC: MIL-STD 461 army ground
Dimentions	H/W/D: 125 mm / 210 mm / 360 mm Weight: 8,9 kg

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