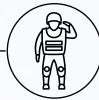


SOFTWARE DEFINED RADIO

Handheld **COMP@N**

Radio Communications of the Future



**TACTICAL VHF AND UHF COMMUNICATION
FOR LAND FORCES**



**TACTICAL COMMUNICATION VHF
FOR AIR FORCE**



COMMUNICATION WITH CIVILIAN SERVICES

Wide range of functionalities:

- Basic e.g. voice transmissions broadcast
- Complex e.g. MANET radio / all available functions

Within the family of COMP@N radios it is possible to choose between different waveforms (WF) and range of supported frequencies.

The narrowband system based on COMP@N radios

Current requirements of the modern battlefield, with all limitations of available radio resources, determine the need to use various types of radios working with many types of waveforms (WF). Fulfilling of these expectations is a challenge that can only be achieved by a radio communication system, for which the main goal is to provide a comprehensive implementation of user's services while taking into account the limitations of the planning spectrum.

COMP@N family radios provide a comprehensive security in the range of TRANSEC, NETSEC and COMSEC mechanisms based on AES-256 algorithms and additional usage of SCIP technology (STANAG 5068).

Main services

data services	IP data
	Serial Data
	sensor data
	data for BMS systems → Situation Awareness / GPS
voice services	analog voice
	digital voice (which supports the flat and vertical structure)
management services	remote (e.g. SNMP v3)
	local (e.g. HMI, Fillgun)

Capability to integrate with existing infrastructure elements:

- other radios
- other terminal devices (e.g. user terminal)
- vehicle infrastructure
- wired infrastructure (e.g. LAN)

Effective extension of narrowband system

The flexibility of the system allows for its cooperation with other currently use and future radios and communication systems. In such manner the core of the system is being complemented with additional services and possible operational scenarios. These are i.e. the functionalities offered by:

- VHF tactical radios e.g. 3501, F@STNET
- PRR personal radios e.g. 35010, PERAD
- wideband radios
- satellite communications (SATCOM)
- on-board communication and integration system on the vehicle e.g. FONET
- crypto devices
- multisystem gateways e.g. PIK
- communications with the UAV e.g. FlyEye
- wired network infrastructure

General specification of the handheld COMP@N platform

FM/AM fixed frequency	modulations	FM, AM
	transmission modes	F3E, A3E
	channel	FM: 25 kHz
		AM: 8.33 kHz, 25 kHz
	Squelch	
	Nº of channels	1000
General	Scan	
	FCS (free channels search)	
	a large color display	
	auto backlight intensity regulation	
	menu	
	double PTT button	
	backlit keyboard	
	Emergency Clear button	
	build-in GPS receiver	
	dimensions (without antenna)	220 x 86 x 44 mm
	weight (with battery)	~ 1000 g
	with amplifier and adapter creates 50 W vehicular set	
RF	frequency range	30÷520 MHz
	output power	up to 5 W
	3 definable output power levels	
	suppression of harmonics:	> 50 dBc
	frequency stability:	± 1 ppm
	sensitivity:	- 116 dBm (SINAD 20 dB)
Interfaces	adjacent channel selectivity	≥ 50 dB
	Audio / PTT	
	RS232	
	Ethernet 10/100	
	USB	
	Side Connector (to work with COMP@N accessories)	
Environmental parameters	operational temperature:	-32°C ÷ +55°C
	immersion	1 m for 2 hours
	MIL-STD-810G	
	EMC MIL-STD-461F	

COMP@N H07 Waveforms

DV	operating modes	FH (Frequency Hopping): 100 hop/s
		FF (Fixed Frequency)
	digital voice transmission	
	channel	25 kHz
security (AES-256 based)	TRANSEC	
	COMSEC	
	Pre-defined profiles with set of mission parameters (radio data, encryption keys)	
RSD	channel	25 kHz
	capability to enter data via Ethernet or serial port	
	capability to transmit GPS reports	
modulation	$\pi/4$ DQPSK	
data rate	up to 40 kb/s	

COMP@N H08 Waveforms

W2FH	EPM (Electronic Protective Measures) class waveform	LPD (Low Probability of Detection)
		LPI (Low Probability of Interception)
		AJ (Anti-Jamming)
operating modes	FH (Frequency Hopping): 300 hop/s	
	FF (Fixed Frequency)	
services	digital voice (e.g. MELPe 2400, CODEC2)	
	SA (Situation Awareness) messages and GPS reports	
	data (e.g. serial data, sensor data)	
	simultaneous transmission of voice, data and SA/GPS messages	
	SA (Situation Awareness) data and GPS data can be attached to each transmission of voice and data	
	synchronization without GNSS (e.g. GPS)	
	Radio Silence mode	
modulation	CPM	
channel	25 kHz with possible extension	
security (AES-256 based)	TRANSEC	
	COMSEC	
data rates	up to 26 kb/s	
	definable frequency range and sub-bands	
	pre-defined W2FH profiles with set of mission parameters (radio data, encryption keys)	

COMP@N H09 Waveforms

BMS IP WF	MANET class waveform	mobile self-configuring and self-organizing network
		extended range of services (retransmission within waveform – multihop relay)
operating modes	FH (Frequency Hopping)	
	FF (Fixed Frequency)	
	simultaneous voice and data services	
voice services	digital voice (np. MELPe 2400, CODEC2)	
	group calls	
	privileged users	
	priority calls (break-in)	
	double PTT	
	multi-hop voice	
data services	IP data	
	Serial data	
	SA (Situation Awareness) messages	
	GPS reports	
	short text messages	
	sensor data	
	files, video, pictures, mail transmission supporting	
	data retransmission	
	synchronization without GNSS (e.g. GPS)	
modulation	CPM	
channel	50 kHz	
security (AES-256 based)	TRANSEC	
	COMSEC	
	NETSEC	
data rates	up to 40 kb/s	
	definable frequency range and sub-bands	
	pre-defined BMS IP WF profiles with set of mission parameters (radio data, encryption keys)	
sms		
number of networks	20	



Case



FillGun programmer



Headsets

Antennas for various frequency bands

	Antenna 4702/1	Antenna 4702/2	Antenna 4702/3
frequency range	30 ÷ 90 MHz	90 ÷ 250 MHz	220 ÷ 520 MHz
length	1395 ±25 mm	832 ±25 mm	491 ± 25 mm
mass	280 ±50 g	187 ±50 g	180 ±50 g



Antennas for various frequency bands



Li-Ion battery with a charge indicator



Four station charging device

www.wbgroup.pl

RADMOR
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The information in this folder is not intended to constitute an offer within the meaning of the Civil Code.

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