

## FONET Digital Communication System



The **FONET Digital Communication System** is designed to ensure reliable voice communication and data transmission inside a vehicle and between vehicles in battle formation. The system ensures telephonic communication, integrates electronic equipment in a vehicle, and controls the wire and radio networks. Crewmembers in vehicles fitted with **FONET** can transmit data and operate conversations in digital mode via tactical radio and wire connections. Vehicles equipped with **FONET** are ready to operate in automated command networks. The modularity of the system ensures the selection of an appropriate configuration for each vehicle.

Due to its flexibility, **FONET** makes it possible to connect vehicles in cascade flow following a command level hierarchy at the same level or in a mixed manner. The **FONET's** Ethernet connection gives access to all dispersed network services. It is a perfect solution to combine radio and wire with state-of-the-art communication systems.

The advanced **FONET** functions make it possible to incorporate vehicles into a wide data transfer and VoIP voice communication network. A vehicle equipped with **FONET** becomes an efficient element of current and future web-centric command systems.

### FONET system properties Profile

#### ■ star architecture of the system

**FONET** is built around a central unit. All crewmember modules, computers and radio-communication devices are connected to it in a star architecture. Each device is connected independently to the central unit.

A twisted pair cable provides power, voice, data and signalling to the modules. Ten modules can be supported by each central unit. This number may be further expanded connecting central stations in cascade flow.

Depending on the execution option selected, each module can provide a voice connection for one or two crewmembers. They may also be fitted with a digital data transmission connection using RS232/RS422/RS432 designed for direct connection of electronic equipment in the vehicle into the communication network constituted by **FONET**.

# FONET Digital Communication System

## ■ modularity and flexibility of configuration

- the contained and lightweight structure of **FONET** unit components makes it ideal for mounting on any type of wheeled and tracked vehicle. The terminal component set is made up of small size devices impervious to most climactic extremes. User modules are configured specifically to the needs of individual crewmembers. Connections are identical, they can be interchanged and their functionality can be altered by changing configuration software.
- upon installation on a vehicle, program configuration options for **FONET** devices enable further expansion and installation modification. Potential changes in the structure of connections between crewmembers, access rights to the radio, changes of quantities and types of headsets are implemented through software configuration modification, which minimizes the costs related to potential corrections made at the final stage of the project.

## ■ provision for interoperability of various sound types in different generations

### ■ simplicity of use for vehicle crews

user interface design is made for maximum ease of use for operators of all skill levels and is intuitive to a maximum extent to make it operational even for an inexperienced operator.

A specifically designed menu of the **FONET** device settings provides an option to control operational parameters on the basis of voice commands.

## ■ suitable towards upgrades and adjustments based on expanding battlefield needs

## External communication

- **FONET** connectivity is not limited to a single vehicle. It provides a stable platform for more complex systems (BMS, C4I) where voice communication and digital information exchange between vehicle crews is crucial. A regular twisted pair wire ensures undisturbed, bidirectional voice communication and duplex data transmission for up to 1200 metres. Maximum radio communication range is determined by radio type used. **FONET** also ensures the possibility of working at a remote station upon connection to any crew module with the field light wire [PKL]. Moreover, computers fitted with the **FONET** interface socket ensure command continuity and access to means of communication in the vehicle even on mobile posts.

### ■ communication use outside a vehicle

Radio communication

FONET wired communication

Telephone communication

Ethernet connection

voice transmission

voice transmission

to public telephone exchange

data exchange

data transmission

data transmission

to field telephone

VoIP voice

Communication

## Basic functions and intended use

- digital data exchange and voice communication within and between the vehicle crews makes **FONET** perfect for the establishment of Battlefield Management Systems (BMS)
- support of package data transmission protocol
- monitoring of alarm signals with instant crew notification via synthesised voice commands triggered by the event
- integration of devices with different interfaces
- support of multiple radios in analogue and digital modes