



# Platform for Integrated Communication

Multi-variant, multi-level, mobile telecommunications solution offering:



Nationwide dispatch communications

Integration of various incompatible communication systems (Radio and GSM)

Exchange and information management system compliant with the Network-centric standards

Secure, mobile access to information from databases and registers

Live transmission of images from mobile and stationary crew cameras and UAVs





Broadband Internet access

Optimizing process of switching to other/new communication systems

PIK is a mixed hardware and software solution designed to provide seamless, safe, user- and supervisor-friendly voice and data communication. The PIK Platform consists of both hardware and specialized software.

## PIK HARDWARE COMPONENTS

## Gate PIK-GAT

The PIK-GAT module is the core hardware component of the PIK system. The main function of PIK-GAT is the integration of different forms of radio communication systems and ensure secure data transmission in the system.

As a standard, each PIK-GAT is equipped with 3 communication slots dedicated to work in LTE / UMTS (any operator) or / and others e.g. LTE450 or CDMA. For the operation of the PIK-GAT gate, it is necessary to provide packet data communication (GSM).



Standard version of PIK-GAT, dedicated for vehicles and on-site installations



Special, camouflaged portable version of PIK-GAT, dedicated for foot patrols and undercover operations

#### **PIK-GAT main features:**

#### Extends the range of UHF / VHF systems without building infrastructure - thanks to GSM

Integrates UHF / VHF radio systems and various communication standards (DMR, TETRA, Nexedge, analog) into one integrated communication system

Integration of various DMR / TETRA / Nexedge / analogue communication systems

into a data exchange and information management system

**Broadband data transfer** – wide range of functionalities, including video, data from service repositories, digital documents (plans, images, forms) and other files transfer, safe access to various databases etc. enabling visualization of officers and service activities, by offering built-in: Ethernet ports with PoE and 2 USB ports

The possibility of **any configuration** on the device **interfaces and communications operators** (LTE, CDMA, UMTS, working in their own APN **aggregation channels serving in special dedicated networks:** LTE 450, GSMR, LTER)

The support system with tools for remote monitoring of the System operation, software update & upgrade with new functionalities

#### **Maintenance free**

Fast and easy assembling and installation



AMSTA - Advanced Monitoring of Stand-off Areas

WINES – Wireless Network Shield /passive system detecting attempts to hacking attacks through GSM network

ATLES – Automated Traffic Law Enforcement System

## **System Servers**

The software for PIK system servers has been entirely designed by MindMade Ltd. and are organized in a transparent form for monitoring the infrastructure work, comprising two functional modules: Single IP server, Group server. Optional are also offered: video server, allowing live transmission of camera images in streaming mode to many recipients simultaneously (point-to-multipoint streaming) and access to databases and user servers.

The **Single IP Server** serves as an interface between users and server infrastructure and is responsible for cryptography, setting encryption keys and secure data tunnelling and mediates in their combination between users and the server infrastructure.

The **Group Server** works as a platform for applications responsible for the organization of user groups.

#### Server system main features:



## **End-point devices**

The basic tenet of PIK system is the usage of existent users equipment for **voice and other data transmission processing equipment** (radios, cameras, printers, scanners, terminals, computers etc.). The manufacturer can deliver any equipment in accordance with the customers' requirements.

## **Dispatch system**

**The dispatch system** is implemented in the form of a customizable application, which is the interface between server software, gates, dispatchers and other users. Due to such structure, the number of dispatchers can be dynamically changed. The system allows dispatcher hierarchy.

**The mobile version** of the dispatcher enables the dispatcher to work in the field, allowing the PIK system to be capable of supervision and management of local as well as global range operations.



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### Dispatch system key features

Possibility of creating arbitrary voice and/or data **communications groups** during system operation. Implemented changes are immediately propagated system-wide, using server infrastructure

Listening and signalling of a real-time communication, each broadcast in the group is additionally signalled in the graphical interface of the application. Ensure one-to-one, all-to-one communication

**Voice communication** with each user, with one or many groups simultaneously

**Alarms** – sending function to the dispatcher in the alarm mode. Communication takes place then in a special expropriation mode, and the dispatcher is additionally informed via the graphic interface of the triggered alarm

**Ergonomics of the dispatcher's work** – signalling states such as: broadcasting, monitoring

A map with a real view of the location of gates and devices (officers' radios) updated every 5 seconds, integrated with the view of voice communication and data exchange gives an **overview** of the situation in the field

**Ability of filtering objects** displayed on the map according to the user type

Direct broadcast to users from the map view

The option of selecting multiple users for both collective display of additional information and performing **group operations on units** 

**Additional unit info window:** unit operational name, personnel names, non-standard vehicle equipment list (if available), etc.

Ability to conduct **voice communication between dispatchers and with the master operator** 

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