

Czech army operationalises MBK soldier ensemble

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The Chrudim-based 43rd Airborne Battalion has become the first Army of the Czech Republic (ACR) unit to be equipped with an indigenously-developed soldier ensemble called the Modulární Bojový Komplet (Modular Combat Complex; MBK), *IHS Jane's* has learnt.



Some of the key components of the ACR's Modular Combat Complex soldier ensemble. (Michal Zdobinsky)

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Having undergone field trials in mid-2015, the MBK ensemble - developed by Pramacom HT - achieved initial operational capability (IOC) with the 43rd in May 2016.

The MBK is designed to improve the situational awareness of small infantry units, and comprises equipment sets for the three squad leaders within a platoon, as well as its attached sensor, surveillance, reconnaissance, and target acquisition (SSR TA) specialist who supports the platoon commander with relevant tactical information and functions as a coordinating element to direct artillery and aviation assets.

A dedicated SSR TA team is attached at the company level to enhance the situational awareness of the commander. This team is equipped with the Wasp AE micro unmanned aerial vehicle (UAV), which is controlled via digital datalink (DDL) protocols and is also capable of streaming captured imagery and data to platoon-level SSR TA specialists, artillery reconnaissance teams, and forward air controllers.

If necessary, troops can also take command of the battalion's RQ-11B Raven UAV using the same ground station, which is also NATO STANAG 7085 datalink-compliant for the transmission of videos, images, and other intelligence, surveillance, and reconnaissance data from on-board sensors on the ACR's new ScanEagle tactical UAVs, or the targeting and reconnaissance pods of NATO fixed-wing and rotary aircraft platforms.



Regardless of the variant, the ensemble is connected via the Wave Relay communication network carried on Generation 4 or 5 man-portable unit (MPU) terminals, as well as the DICOM RF-40 or IMBITR radios fitted with Wave Relay modules. Squad leaders and SSR TA specialists are also equipped with personal Android-based MyVector terminals, which fuse information communication and sensor devices and enables them to update and share tactical data.

Each MBK network station is not only a transmitter but also the base station hosting a Mobile Ad-Hoc Network (MANET) type network with its own TCP/IP topologies with COMSEC AES Suite B cryptography. With the theoretical and practical transfer rate of the Wave Relay network stated to be in the hundreds of Mb/s, the MBK could potentially support simultaneous live-video streams from multiple sources.

The ensemble is designed to be fully compatible with the existing communications architecture employed by other ACR units via the BVIS (bojový vozidlový informacní systém, or Combat Vehicle Information System) terminal and AN/PRC-117G portable radio carried by the SSR TA team.

For the observation and position plotting of potential targets, squad leaders employ the PLRF 25C BT laser rangefinder, while SSR TA specialists and teams are equipped with target acquisition systems such as the Moskito TI and TLS 40i rangefinder. The ensemble can also be further augmented with uncooled thermal imaging sights attached to small-arms and other supporting weapons.

COMMENT
<i>IHS Jane's</i> understands that the ACR is planning to equip six more combat battalions with the MBK ensemble by 2021. The service also plans to deploy the system in actual overseas operations from January 2017.