IS-1 System Integrator (VoIP Gateway)

System Integrator IS-1 is an essential element of the field ICT IP platform intended to support the command and actions of troops and deployment of efficient LAN networks mounted in vehicles, and unwind in the field framework of BMS (*Battlefield Management System*).

IS-1 is a WAN Access Box class IP gateway. The device provides integration between systems of audio connections: VoIP telephony, analog phones, tracts among exchanges, radios, and also enables the automatic exchange of IP data through wired links (*Ethernet, VDSL*) and wireless through VHF and HF radios. IS-1 enables communication between the various wire and radio communication systems. The functional parameters, the small size and low weight allow for stationary and mobile use.

The System Integrator IS-1 acts as an ICT integrator in command & control vehicles, combat vehicles (*in armoured personal carriers, tanks, etc.*) and other platforms.

IS-1 provides integration of HF and VHF radios, as well as of field and fixed telecommunication networks, and also with the vehicle sensors set. Integrator gives the functionality of on-board intercom. The equipment may contain add-on elements, for example: module WLAN, VoIP terminals and network workstations, including tactical terminals.
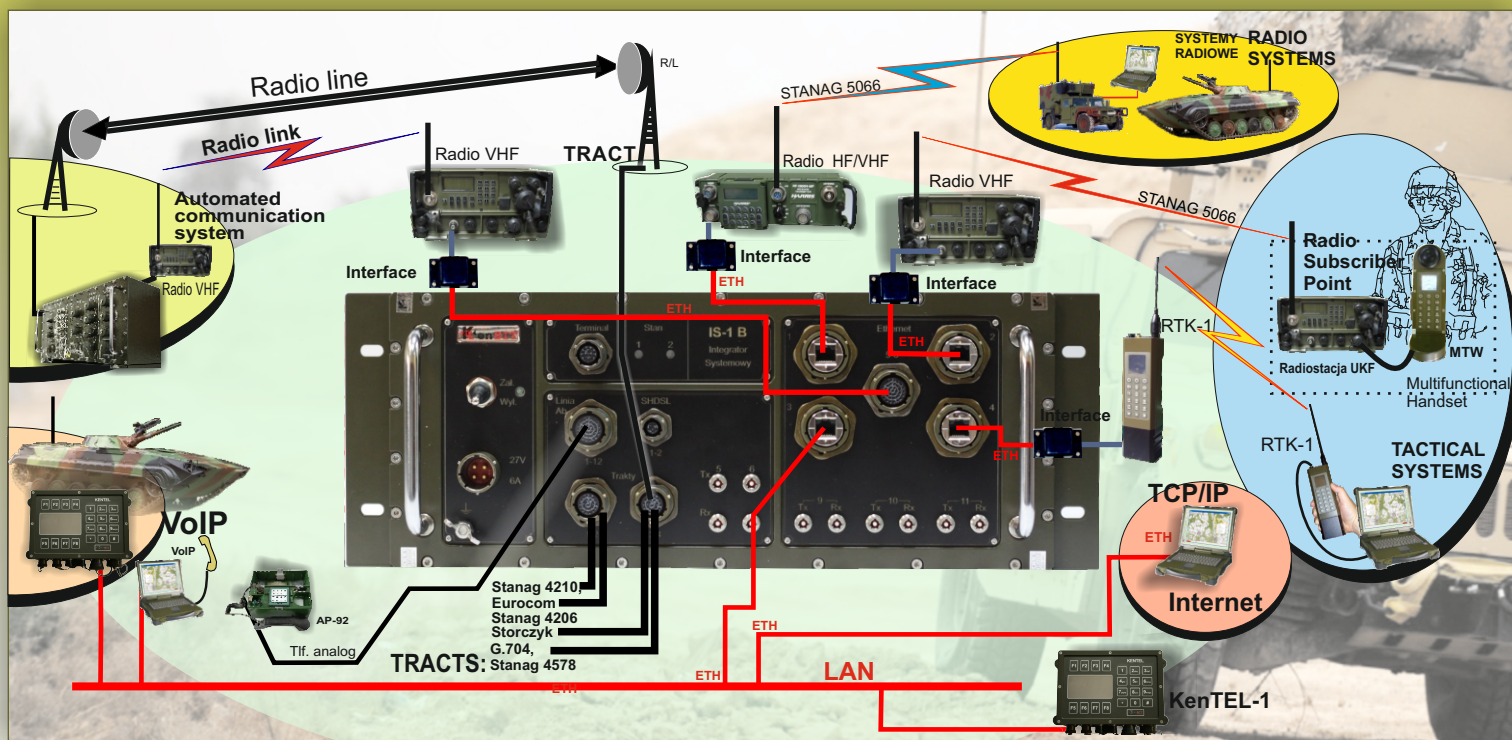
The Integrator IS-1 is intended for use in the field. According to the N0-06-A101 and N0-06-A103 classification the equipment is included into N.14-UZ-II-A group.

Permissible levels of side electromagnetic emissions and resistance to electromagnetic exposure fulfill the requirements contained in N0-06-A200 defense standard.

FEATURES

- Subscriber lines.
- Digital tracts.
- Ethernet interfaces.
- VoIP telephony.
- Router/switch function.
- Support for the radio.
- Automatic exchange of IP data.
- DHCP, NTP and TFTP servers.
- Conferencing in duplex.
- Power: DC 27 V.

1ST Industrial Security Certificate
License MSWiA #: B-008/2006
ICP #: W-148/1/2011

NCAGE 1167H

ZJZ
ISO 9001:2008
AQAP 2110:2009
AQAP 2210:2006

PCA
POLSKIE CENTRUM AKREDYTACJI
CERTYFIKACJA SYSTEMÓW ZARZĄDZANIA
AC 057
QMS

Router/switch functions

- The routing support in layer 2 and 3. IPv4 and IPv6 protocols are supported in layer 3.
- Support of protocols: RIPv1 i v2, OSPFv2, BGPv4, EIGRP.
- Servers: DHCP, NTP, TFTP.
- Management: local desktop, SNMPv3, WWW.
- VLAN support according to IEEE 802.1Q.
- Grouping of Ethernet interfaces and configuring them to work with router or switch.
- Support for GRE and IPIP tunnels.
- Creation of VPN.
- Access to the router through Ethernet interfaces and modem connections.

Support for radio

- Support for VHF radios: PR4G, F@STNET.
- Support for HF radios: RKS 8000, RF 5800, AN/PRC-150, RKP 8100.
- Support for radiotelephones: RTK-1, Motorola XTL.
- IP data transmission according to STANAG 5066.

- HF/VHF simplex radio access.
- All radios are connected to the Integrator by Ethernet cables and dedicated module interface for the particular radio. The module provides the translation of data, voice, and control over the IP.
- Voice (compilation of calls, chat, conferencing) are implemented using SIP, H.323 or SCCP protocols.

VoIP

- Support of codecs: G.711 aLaw and µLaw, G.723.1, G.726, G.729 A & B.
- Signals support: SIP, H.323 (gatekeeper), SCCP.
- The ability of translation between the different codecs.
- The ability to link exchange boards through Ethernet with the use of SIP or H.323 signaling.
- Connection of VoIP subscribers in duplex conferences.

Device line interfaces

- 4 digital tracts supporting:
  - ✓ electrical standards: G.704, STANAG 4210, EUROCOM AMI,

- ✓ sygnaling: Storczyk NR.7, ISDN DSS1 (Q.931), STANAG 4206; STANAG 4578,
- ✓ codecs: CVSD, G.711 aLaw.

- Support of 12 analog CB lines (with DTMF signaling) and MB. Analog lines provide:
  - ✓ DTMF dialing,
  - ✓ incoming calls ID,
  - ✓ calling signal current from 50÷90 V,
  - ✓ power supply line for the CB phones,
  - ✓ detection of calling signal for MB phones.

Ethernet interfaces

- 1 x Ethernet 100BASE-FX lub 1000BASE-SX.
- 1 x optical port 1000BASE-SX (850 nm, according to STANAG 4640 with 2 MFM optical connections, cooperating with 50/125 µm multimode cables with 850 nm wavelength.
- 9 x Ethernet 10/100/1000BASE-T (IEEE 802.3ab), including 4 x PoE according to IEEE 802.3af.
- 2 x VDSL interfaces.