

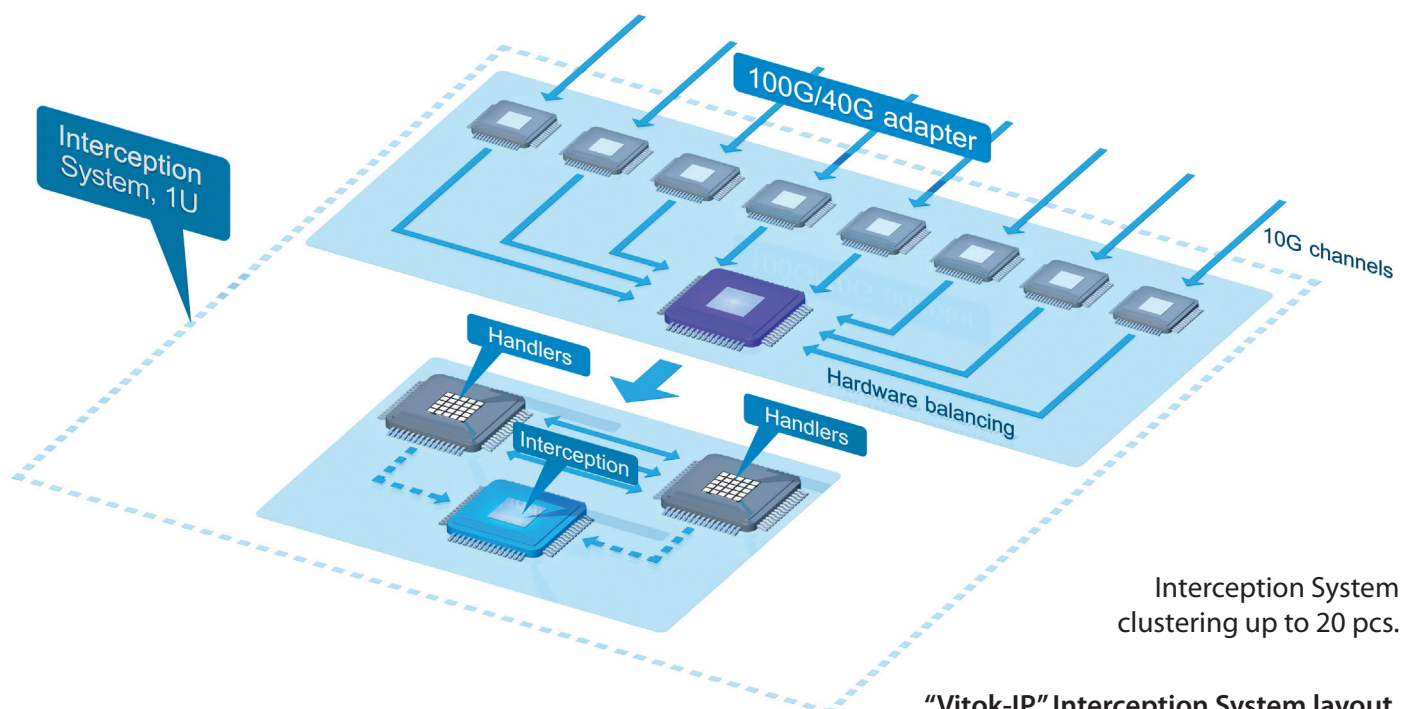
VITOK-IP (LI-2)

“Vitok-IP” is a clustered interception system for communications channels with a bandwidth of up to 1000 Gbit/sec. “Vitok-IP” is designed to monitor the Internet and is fully compliant with technical requirements of the Ministry of Communications.

“Vitok-IP” hardware and software package is developed in compliance with the articles of the Ministry of Communications’ General Technical Requirements for Lawfully Authorized Electronic Surveillance approved by Order №47 of 03.27.1999, Technical Requirements for Lawfully Authorized Electronic Surveillance Systems of 03.27.2003 and The Requirements for Telecommunications Networks under Electronic Surveillance, approved by Order of the Ministry of Communications of the Russian Federation №73 of 05.27.2010.

KEY FEATURES:

- Operating on Ethernet networks 10/100/1GbE and 10GbE/40GbE/100GbE (connection to splitter/SPAN-port) and E1/STM channels (connection to splitter);
- Full range of supported protocols: IGRP, MPLS, GPRS, CDMA, WiMAX, LTE;
- Original technology of hardware mixing and data synchronization for multiple 10GbE channels;
- Receiving and decoding data without pre-filtering;
- Total decoding of application protocols for e-mail and web-mail analyzing, keyword search;
- Flexible system health monitoring;
- Selection criteria: account name, phone number/identifier, IP address or subnet mask, VLAN ID/MPLS tag, TCP/UDP port, protocol number, MAC/physical address, e-mail address, web-mail address, VoIP phone number, IM ID, web-resource URL, keyword.



Interception System
clustering up to 20 pcs.

“Vitok-IP” Interception System layout.

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The Interception System provides specific information selection in the following modes:

- **Total control** – passes all monitored traffic: e-mails, HTML pages, transmitted data, ICQ messages etc. to the Mediation Center;
- **Statistical control** – only notifies the Mediation Center of events of establishing connection between two network users or client/server connections (IP addresses and ports, mailbox names, URL of visited Internet resources, UIN ICQ, etc.).

SPECIFICATIONS OF BASIC “VITOK-IP” MODELS:

Type	Input Stream	Size (U)	Power consumption (W)
Standalone Interception System	10/100/1000 Mbit/sec	1	325
Standalone Interception System	1 – 10 Gbit/sec	1	330
Standalone Interception System	10 – 80 Gbit/sec	1	500
Interception System Cluster	80 – 160 Gbit/sec	2	1000
Interception System Cluster	160 – 320 Gbit/sec	4	1800
Interception System Cluster	Up to 1000 Gbit/sec	1 * (N+1)	500 * (N+1)

- ➔ For communications nodes with a distributed network structure (cloud), there is an option of joint operation of several Interception System Cluster elements located in different buildings and even parts of the city, provided there is a high-speed internal communications channel between them.
- ➔ The cluster scalable design of the Interception System allows to increase “Vitok-IP” performance at installation locations progressively as communications nodes grow. In order to increase the System’s inflow capacity by 40-80G, an additional 1U module can be included in the structure of an existing cluster.
- ➔ To facilitate total keyword search in a network stream with different encodings, an additional 1U module for every 10G of the stream is installed.
- ➔ To achieve simultaneous connection to several LI-2 Mediation Centers, for every ten Mediation Centers 1U module is added to the Interception System.

CONNECTION OPTIONS:

- **An optical splitter (splitter)** is the basic option for high-speed optical communications channels. It splits a part of optical emission (15-30%) from the main data channel and sends the branched stream to the Mediation Center.
- **Traffic mirroring (SPAN port)** replicates traffic from one or several provider switching ports to one or two dedicated ports and sends these packets to the Mediation Center.
- **UTP splitter** is a highly reliable specialized device for duplication of 10/100/1000 Mbit/sec stream from copper UTP cable, if SPAN-port function is unavailable on the switch.
- **Traffic concentrators** – if there is an array of branch points of traffic, flexible traffic aggregation/filtering of these channels (up to 48x10G/1U) to monitoring ports on CJSC “NORSI-TRANS” (certified) hardware is possible.