

SISTEN_{||||}ATICS

Traffic aggregation and distribution



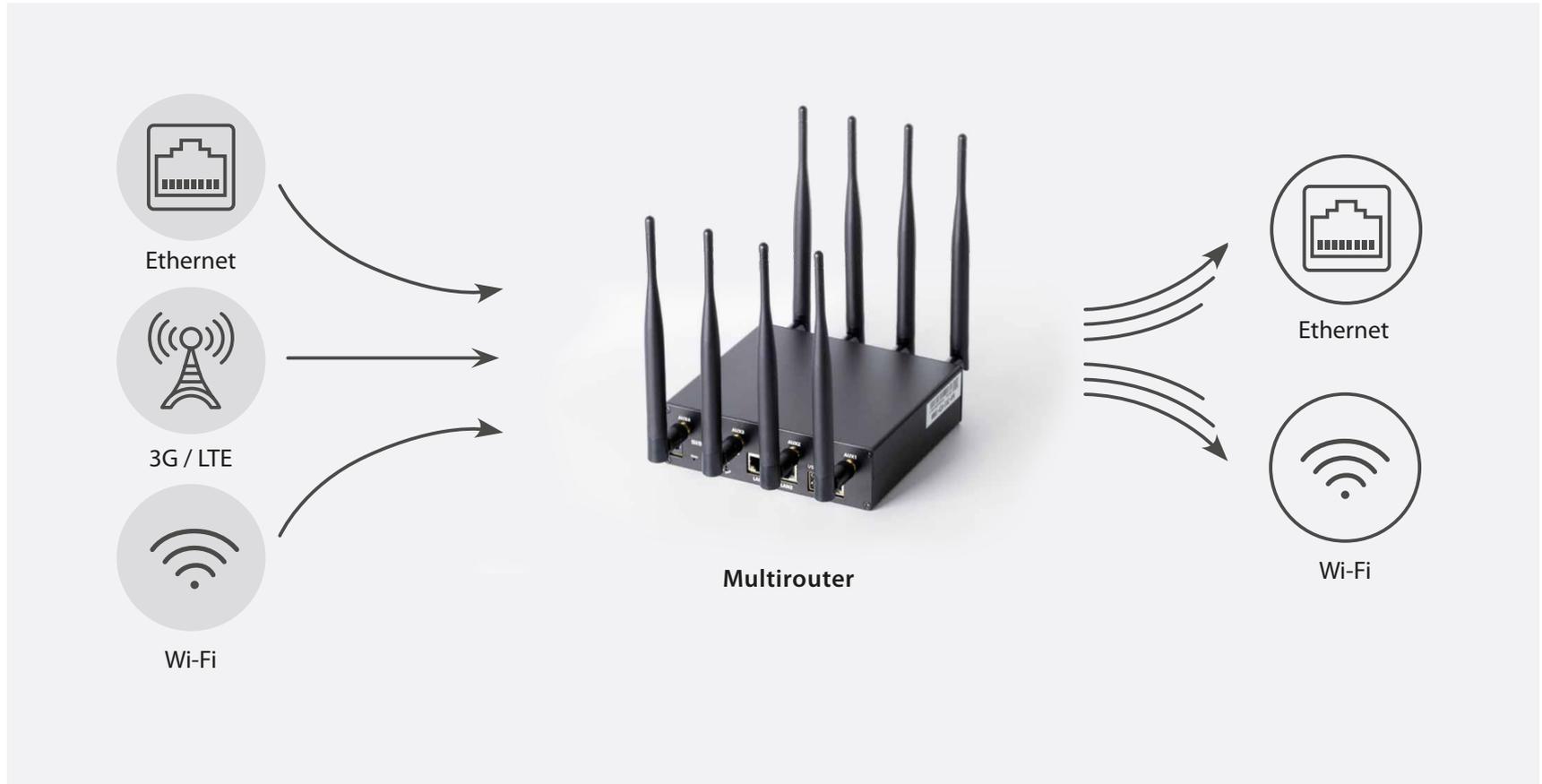
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We are used to always having access to the internet. But sometimes even state-of-the-art mobile networks fall behind consumer needs and lack of stable 3G/4G coverage shows that the market calls for the solution of the problem of constant internet access. As a result in 2014 Systematics came up with an idea of creating a device that registers in multiple networks simultaneously forming an aggregated virtual data-transmission channel whose transfer rates and reliability far surpass even the most efficient physical communications channels available today.

Technology



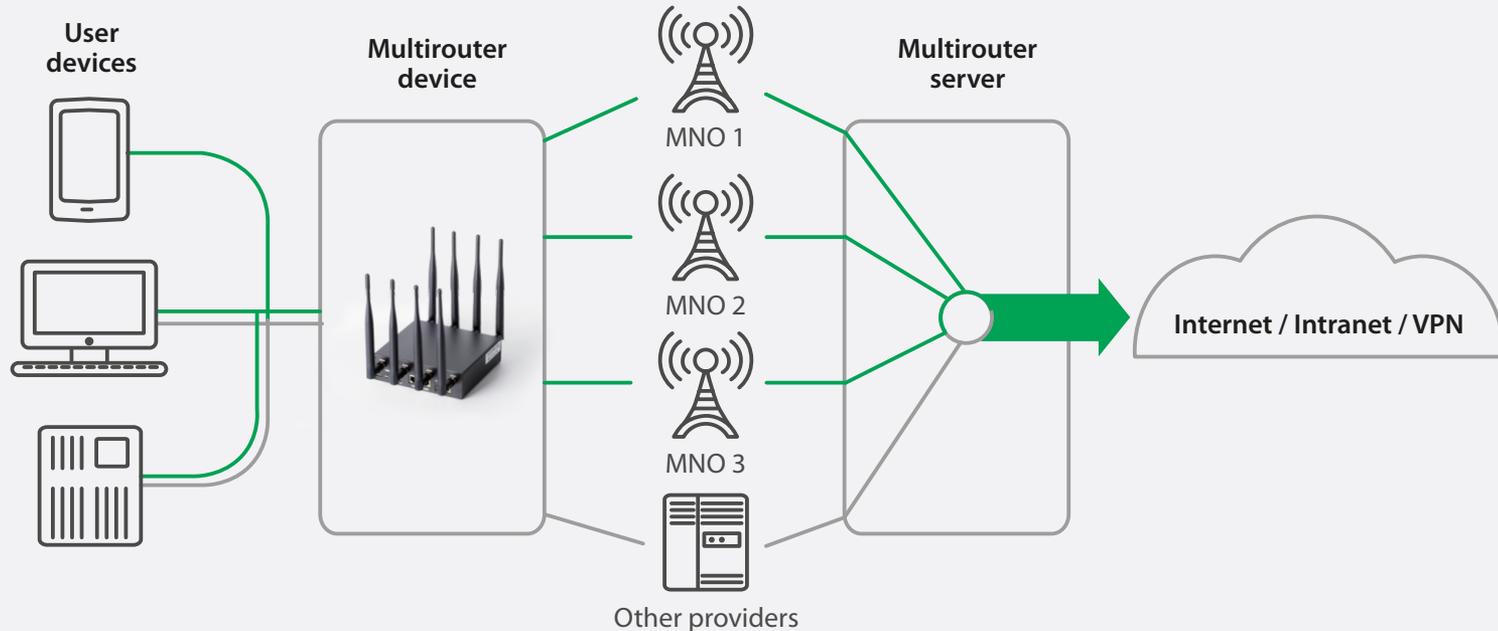
Traffic aggregation and distribution



Technology



Common scheme of device operation



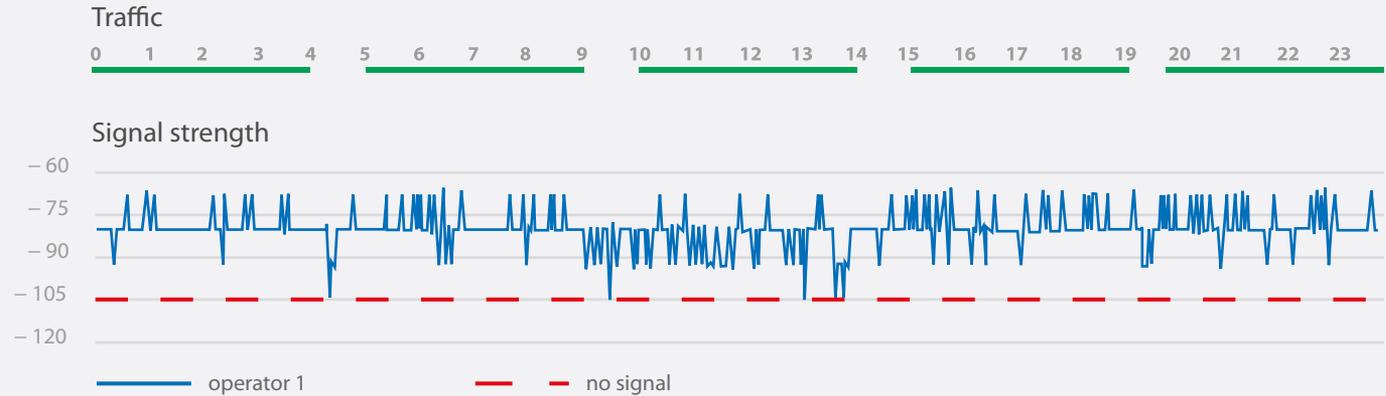
The system combines several independent transmission channels (which can belong to different MNOs) into a single logical channel thus aggregating bandwidths of separate operators into a single high-throughput data transmission channel.

Advantages of the Solution



Fault tolerance

Single operator



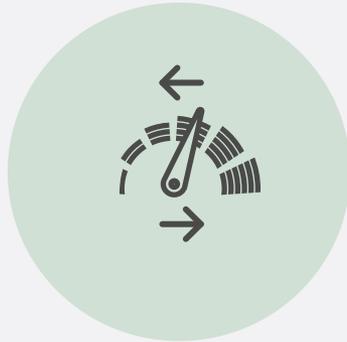
Two operators,
combined
by means
of a multirouter



Advantages of the Solution



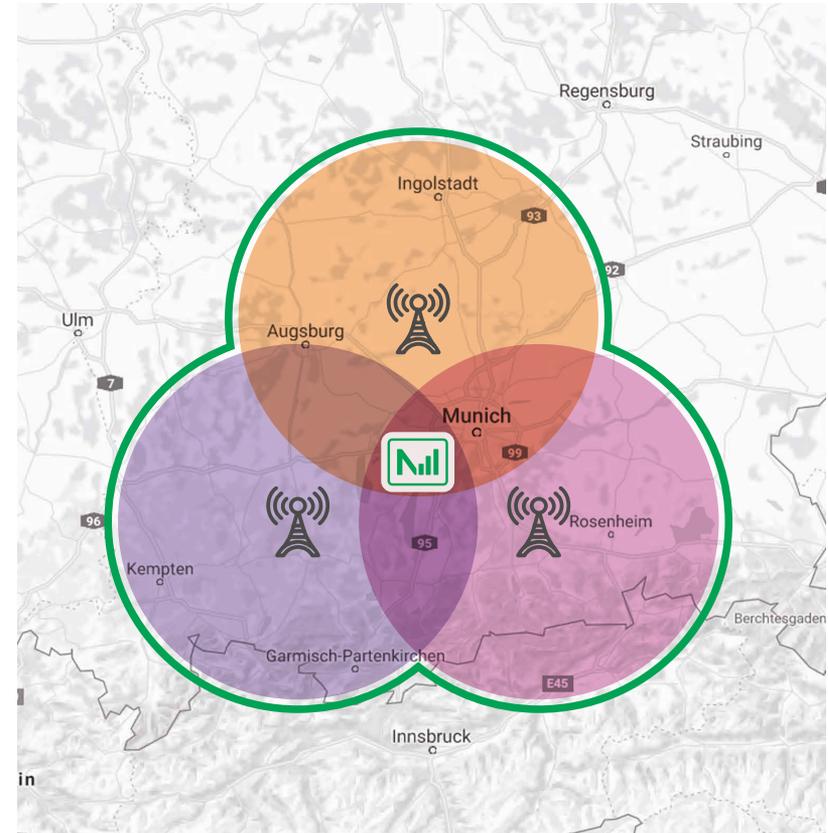
Flexibility of the solution
for the clients tasks



Load distribution between available
data channels based on:

- price;
- speed;
- quality;
- priority.

Combining coverage areas
of different operators



Specification



8xAntenna SMA

Power 12V
9xLED
Ethernet
USB 2.0

4xModem 3G/4G/LTE + GPS
4xMicroSIM

Power 12V 5.5x3.5

9xLED
3xEthernet 10/100Mb
1xUSB 2.0

MicroSD Card
CPU Allwinner H2+
(quad core Cortex A7 1.2 GHz)
Wi-Fi XR819, IEEE 802.11 b/g/n

Specification



Multirouter Ver. 4.2

CPU	Allwinner H2(+)/H5 quad core Cortex A7
Mother Board	Sistematic MM-MB 4.2
RAM	512 MB
ROM	MicroSD
SLOTS	mPCIe x 4
Ethernet	3x10/100 или 2x10/100 + 1x10/100/1000
Power	DC 12V 36W
USB	USB 2.0 x 1
Antennas	SMA x 8
SIM SLOTS	MicroSIM x 4
Radio Modules	GSM/3G/LTE/GPS/GLONASS x 1-4
Size	150x140x40mm

Multirouter Ver. 4.2 Standard

MMS-422-SAC-00

AC Power
2 LTE modems class 4
 No WiFi onboard
 standard CPU module
 3 FE port onboard

MMS-423-SAC-00

AC Power
3 LTE modems class 4
 No WiFi onboard
 standard CPU module
 3 FE port onboard

MMS-424-SAC-00

AC Power
4 LTE modems class 4
 No WiFi onboard
 standard CPU module
 3 FE port onboard

Multirouter Ver. 4.2 Extra Speed

MMX-422-SAC-00

advanced CPU
 AC Power
2 LTE modems class 12
 No WiFi onboard
 1 GE + 2 FE
 port onboard

MMX-423-SAC-00

advanced CPU
 AC Power
3 LTE modems class 12
 No WiFi onboard
 1 GE + 2 FE
 port onboard

MMX-424-SAC-00

advanced CPU
 AC Power
4 LTE modems class 12
 No WiFi onboard
 1 GE + 2 FE
 port onboard

LINUX DEBIAN, DHCP, NAT, VPN, VLAN, LANDING PAGE, WATCHDOG, LOGGING, DASHBOARD, ROUTING, INTERFACE MANAGEMENT, TRAFFIC COMPRESSION, LOCAL CONTENT, SPEED AGGREGATION, DEVICE ORCHESTRATION, USER ACCESS LEVELS IN CONTROL PANEL, L2/L3 ROUTING

Use cases



Transport



Private transport

- Constant high-quality access to the internet when traveling from one city to another
- Cinema inside your car
- IP telephony
- Fully functional mobile office
- Wi-Fi in your car



Car rental

- Geolocation and navigation
- Constant high-quality access to the internet when traveling from one city to another
- Cinema inside your car
- Videoconferencing
- IP telephony
- Fully functional mobile office
- Wi-Fi in your car



Trucking

- Monitoring the cargo in real-time
- Remote route, speed and location monitoring

Use cases



M2M



Cash registers

Regular data feeds about sales and cash in the register



ATM

Real-time data feeds about the ongoing operations



Self-service terminals

Real-time data feeds about the ongoing operations

Uploading regular shift reports to the servers of a business owner/managing company/fiscal data operators

Use cases



TV broadcasting



- Live HD video translation
- Increases autonomous work time of the camera crew
- Reduces the time needed for the news to go on air
- Doesn't require cumbersome equipment

CCTV



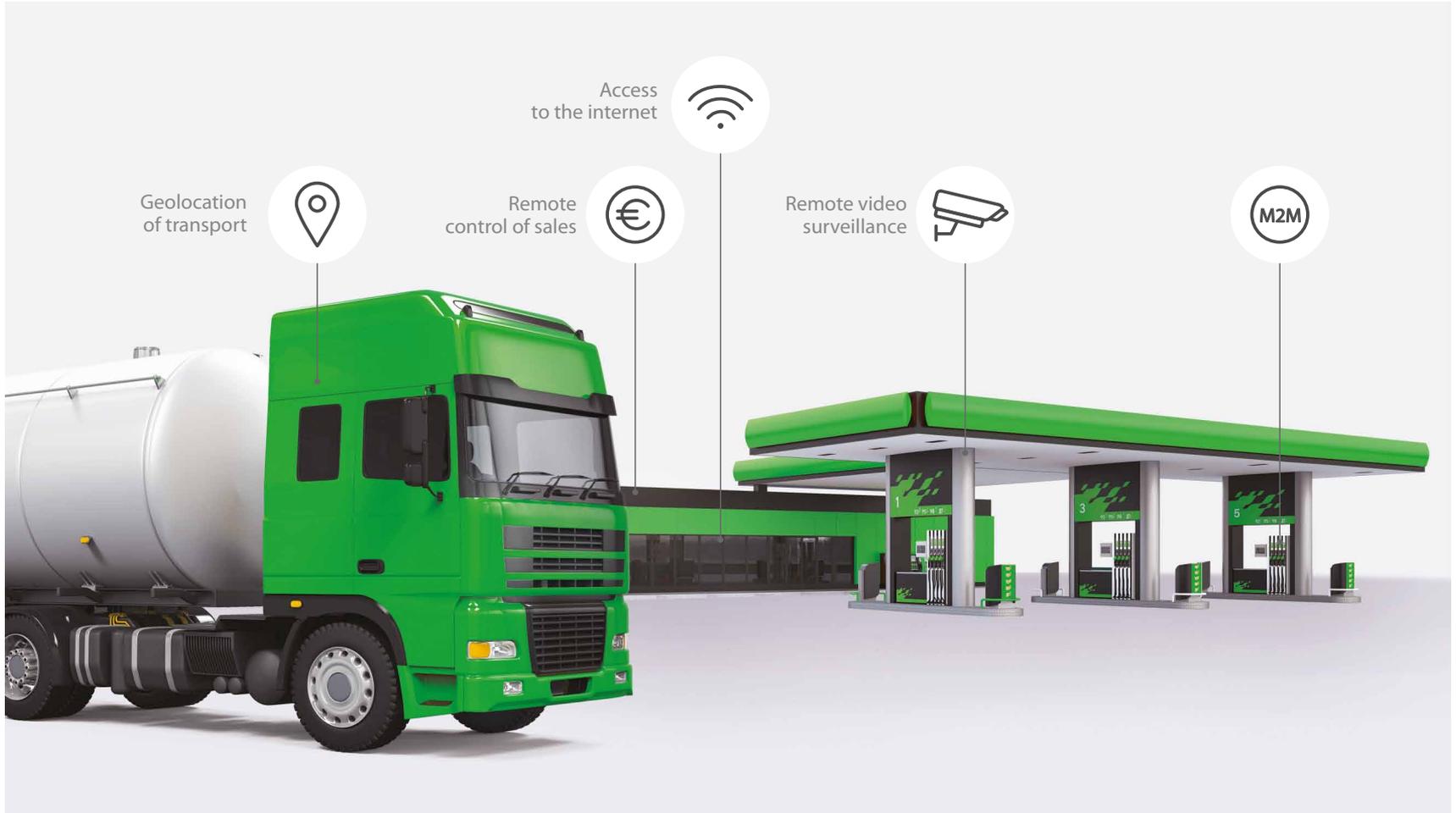
- Expanding control over your business by means of video camera access
- Constant HD video uploads to the data-center

Remote offices



- Companies with wide branch networks
- Connecting branch offices to the Internet in a short time
- Constant monitoring and control over operations of branch offices
- Getting online data from branch offices

Use cases



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