



RS232/IP Bridge

Data sheet

Device identification number

1. General Information

The RS232/IP bridge (hereinafter referred to as device) is designed for connecting four devices with RS232 interface and getting access to them through the local network or Internet.

The device supports secured VPN connection.

2. Manufacturer

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3. Package Contents

RS232/IP Bridge	1 pc
MicroSD memory card with operating system	1 pc
Power cable 220V 50Hz	1 pc
Interface COM cable	4 pcs
Terminal block for external power source, 12V	1 pc
Data sheet	1 pc
Package	1 pc

4. Technical Specifications

Parameter	Value
Ethernet communication channels	100BASE-TX
Device connectors	DB9M
COM ports	4
VPN support ¹	+
Ethernet connector, pc	1
External indicators, pc	4
Main power source voltage, V	220
Backup power source voltage, V	12±2
Device energy consumption, mA, max	200
Dimensions, mm	47×150×150
Weight, g	200
Operating temperature range, °C	-20...+85

¹ Available when using the file "vpn.json" (see section 6).

5. Designation of Elements

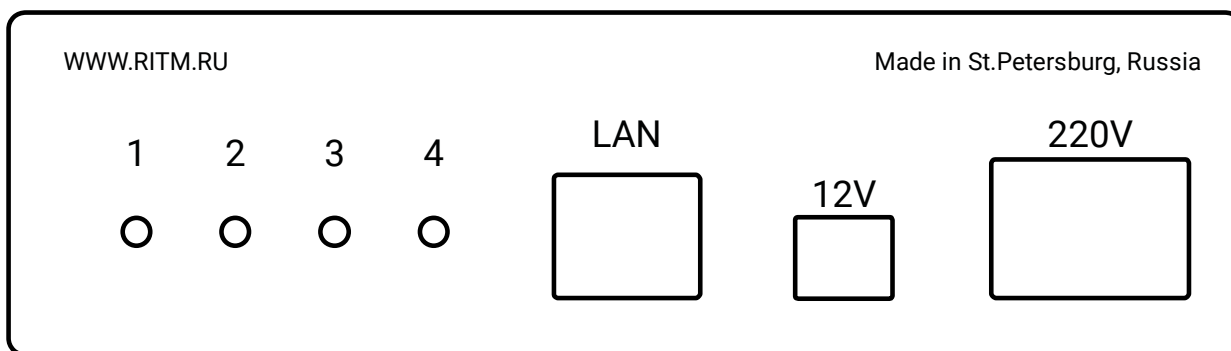


Figure 1. Device front side

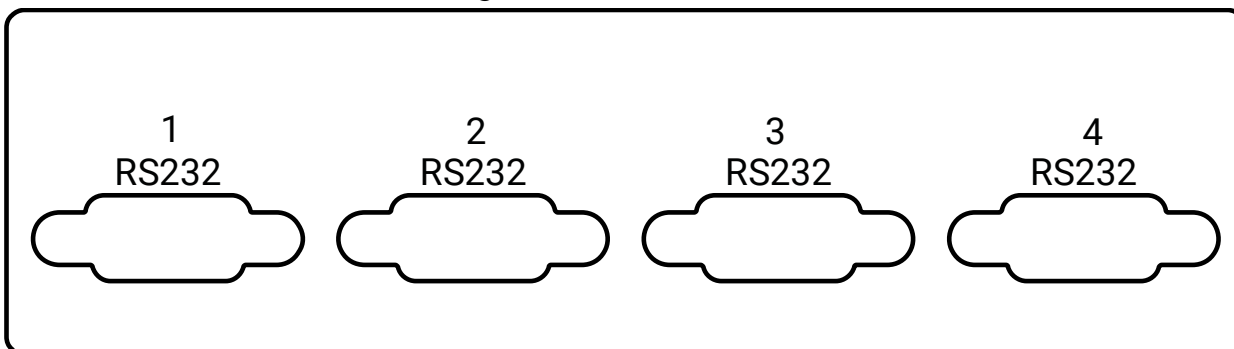


Figure 2. Device back side

Element	Designation
1...4 (on the front side)	Data transmission process indicators.
LAN	Connector for connection via Ethernet 100BASE-TX channel.
+12V-	Backup power source connector (12 V).
220V	Main power source connector (220 V).
Connectors RS232 (on the rear side)	Connectors for external devices.

6. Visual Indication

Indicator	State	Designation
1...4 on the front side (data transmission process indicators)	Always on	The port is used.
	Blinking	Packet transmission.
	Off	The port is not used.

7. Getting Ready for Operation



All connections must be done only with power off!

1. Connect the required devices to the device using supplied interface cables.
2. Fasten cables in connectors using fastening screws.
3. If operation in VPN network is required or COM ports operation should be changed insert MicroSD memory card into MicroSD-1 connector at the device card (fig. 3).

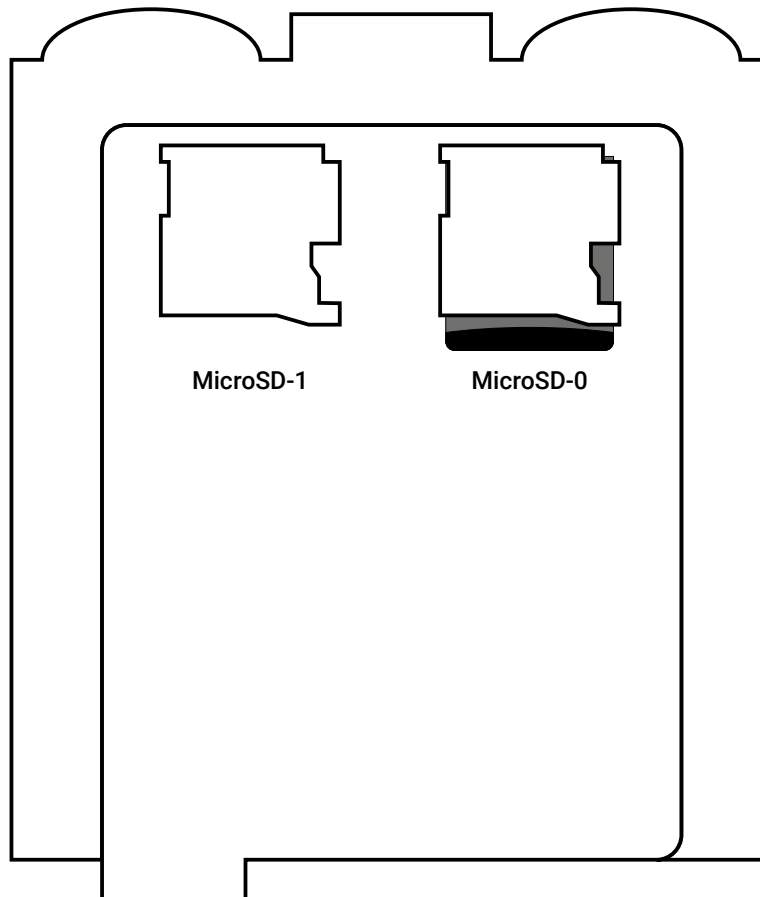


Figure 3. Device card

Element	Designation
MicroSD-0	OS MicroSD holder. Attention! Do not remove the card from the holder and do not write anything on it!
MicroSD-1	MicroSD holder for configure files.

4. Connect the device to the local network.
5. Power on the device (220V and/or 12V). If using simultaneous connection to both power sources the power source 12V becomes the backup source. So it is used only in case of 220V power supply absence.
6. To establish a connection you need to know the IP-address and the connection port of the device. Each connector has corresponding port and device indicator:

Connector №1	Port 10000	Indicator "1"
Connector №2	Port 10001	Indicator "2"
Connector №3	Port 10002	Indicator "3"
Connector №4	Port 10003	Indicator "4"

7. Check the normal operation of the device:

- Determine the IP-address assigned by the router/specified in the file "network.json"². Perform the device identification via MAC address. The MAC-address is indicated at the first page of this data sheet.
- In the command line (Win+R→Cmd) run the following command:

telnet IP_assigned_to_the_device 10000



For example, ***telnet 192.168.1.33 10000***

- The device switches to the remote control mode, the indicator of the selected port is on.

8. For the device operation in the VPN network, you must place the file "vpn.json"³ with the correct connection settings to an external storage device installed in a slot MicroSD-1 (see Fig. 3).

8. Device operating principles

1. After turning on the power the device receives network settings and the IP-address from the DHCP service or uses settings specified in the file "network.json"⁴.
2. The device is waiting for incoming connections via ports 10000-10003 at the IP address obtained from DHCP.
3. To access connected devices use created virtual COM ports.



**To create virtual COM-ports, e.g. VSPE, use dedicated applications⁵.
The default speed of COM ports is 19.200 bps.**

4. You can access the device via local network or VPN.

9. Network Settings Manual Configuring

To configure the network settings (IP address, gateway, mask, DNS) you must place the file "network.json"⁶ to an external storage device installed in a slot MicroSD-1 (see Fig. 3). Before doing this, open the file with any text editor (e.g., Notepad) and enter the parameters in accordance with the configuration of your network.

If necessary, refine the network settings from your system administrator.

The "network.json" file is described in section 10.

² See sections 9 and 10.

³ <https://goo.gl/nUfh7B>

⁴ See section 9.

⁵ <http://www.eterlogic.com/Products.VSPE.html>

⁶ <https://goo.gl/gFhiwJ>

10. The "network.json" Structure

```
{
  "eth0":{
    "ip" : "192.168.13.91",
    "mask" : "255.255.255.0",
    "gate" : "192.168.13.1",
    "dns" : "8.8.8.8 8.8.4.4"
  }
}
```

The "network.json" file contains general parameters required for connecting the device to the local network:

Option	Value
ip	The device IP address
mask	The subnet mask
gate	The default gateway
dns	The DNS addresses (entered using "space")

11. Ports Manual Configuring

To change the connection port and speed of the COM port you must place the file "MOST_RS232.json"⁷ to an external storage device installed in a slot MicroSD-1 (see Fig. 3). Before doing this, open the file with any text editor (e.g., Notepad) and change number to the required port (parameter "tcp_port") and speed (parameter "modem_speed").



Do not change any other settings in the file "MOST_RS232.json", but "tcp_port" and "modem_speed"!

12. Maintenance and Safety Measures

Personnel with the appropriate qualifications should carry out maintenance and settings of the device.

13. Transportation and Storage

Transportation of the device should be in the package and closed vehicles.

Storage and transport conditions must comply with storage conditions EU Directives: 2014/35/EU and 2014/30/EU. Storage premises should be free of current-conducting dust, acid and alkaline fumes, corrosive gases and gases harmful to insulation.

⁷ <https://goo.gl/V9Svu9>

14. Manufacturer's Warranties

The manufacturer guarantees that the device complies to requirements of the technical specifications, provided the client ensures compliances to conditions of transportation, storage, installation and operation.

Although **the warranty period is 12 months** from the commissioning date, it may not exceed 18 months from the production date.

The warranty storage period is 6 months from the production date.



Removing the SD-card with the operating system leads to early termination of the warranty!

The manufacturer reserves the right for modification of the device in any way that does not degrade its functional characteristics without prior notice.

15. Information on Claims

In case of a device failure or defect during the warranty period, please fill in a malfunction report specifying the dates of issue and commissioning of the device and nature of the defect and submit it to the manufacturer.