ritm

Control panel

Contact 15

Data sheet

Device identification number

1. General Information

Contact GSM-15 is designed to be operated as a control panel with the ability to transmit video from an external analog video cameras. It can be used to control both Ritm's radio channel sensors and third party wired detectors.

The device records video from 4 analog cameras into storages (such as SSD, HDD, MicroSD) and transmits it via 4G, Wi-Fi or Ethernet networks.

Arming and disarming of the protection system can be done using wired and wireless keypads and radio key fobs produced by Ritm, as well as TM keys.

Event messages are transmitted to the monitoring software.

This data sheet covers 2 versions of the device:

- Control panel Contact 15G (with GPS/GLONASS);
- Control panel Contact 15 (without GPS/GLONASS).

2. Manufacturer

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St Petersburg, Russia
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www.ritm.ru/en world@ritm.ru

3. Package Contents

Name	Quantity
Control panel Contact 15	1 piece
MicroSD card with operating system	1 piece
GSM antenna	1 piece
GSM antenna	1 piece
Radio channel antenna	2 pieces
Connection cable with 12-pin connector	1 piece
Holder	1 piece
Wi-Fi antenna	1 piece
Battery B600BE	1 piece
Terminal block for hardwired devices connection	5 pieces
Kit for fixing a hard disk	1 piece
Device holder and fastening kit	1 piece
Data sheet	1 piece
Package	1 piece
Additional equipment[1]	
MicroSD card	
HDD drive	
SSD drive	
Analog video camera 12V	
USB flash drive	
4G modem (Huawei E3370 and Huawei E3372 only)	

[1] Additional equipment of the control panel Contact 15 is not included in the delivery package and should be purchased separately.

4. Technical Specifications

Geolocation System		
GPS/GLONASS antenna		Optional
Communicator		
Communication channels		GSM (CSD, GPRS), LAN, Wi-Fi
GSM antenna		External, SMA connector
Wi-Fi antenna		External, SMA connector
Number of SIM cards installable, pcs		2
Support of 3G and 4G using an external 4G modem (Huawei E3370, Huawei E3372)		+
System capacity		
Independent areas		8
Zones		36
User codes		128
Touch Memory keys		16
Relay cards		1
Keypads		10
Wire subsystem		
Hardwired zones (“dry contact” inputs)		4
Outputs “open collector”		2
Hardwired keypads		5
Wireless subsystem		
Wireless sensors		32
Key fobs		32
Wireless keypads		5
Power supply		
External supply, V		11…15
Load on each power output of video cameras, mA, up to		350
Type of a backup battery		B600BE
Battery nominal capacity, mAh		2000
Short circuit protection in the circuit of cameras		+
Power consumption of the device, W, up to (depending on a mode)		15
General Specifications		
External connections	USB 2.0 / LAN	1 / 1
	GPS / GSM / Wi-Fi	1 / 1 / 1
	HDMI	1
	AV input	4
	Outputs for a video cameras supply (12 V)	4
	Input for a device supply +CPW–	1
External indicators	Registration in GSM network	+
	Connection to monitoring server	+
Image compression codec / frame rate, fps		H.264 / 25
Size of the video image from one PAL camera, points		720×576
Size of the video image from 4 cameras		1440×1152
RAM, Gb		1
Event history, records		65 000

Head parking, vibration protection (depends on HDD installed)		+
Media types for video and history recording	USB flash drive (with video bitrate no more than 4 Mbps)	+
	HDD (SSD) 2,5” (SATA)	+
	MicroSD more than 8 Gb (class 10)	+
Design		
Dimensions, mm		47×156×150
Weight, g		300
Operating temperature range[2], °C		0...+70

5. Designation of Elements

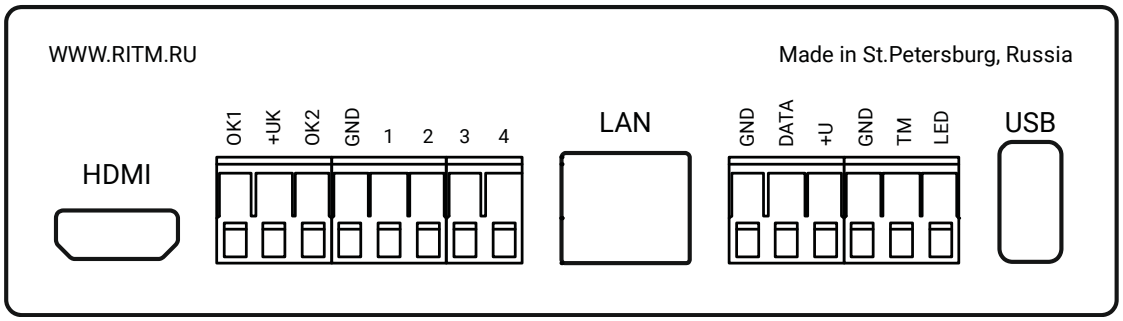

Figure 1 — The front panel

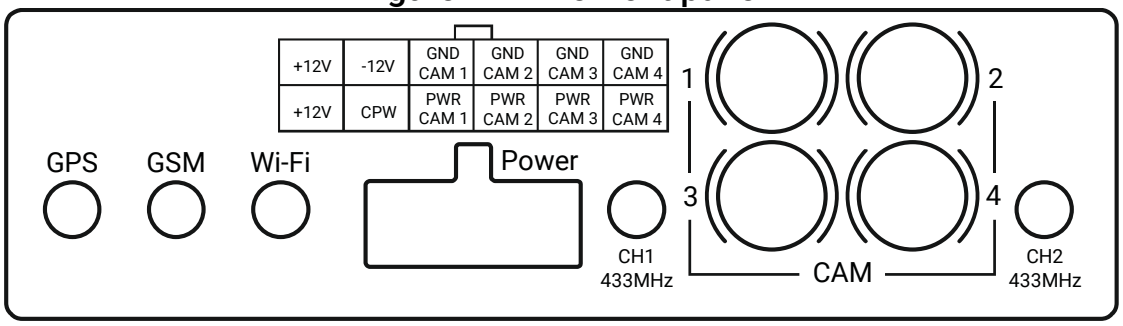

Figure 2 — The back panel

Element	Designation
HDMI	Connector for an external monitor with digital input for viewing images from video cameras in a real time mode.
OK1, +UK, OK2	Output terminals with open collectors for connection of actuation devices (sirens, relays, etc.) Maximum current for one terminal is 500 mA. • OK1 — output 1 («negative»); • OK2 — output 2 («negative»); • +UK — base voltage («positive»).
1…4, GND	Terminals for connecting hardwired zones. Up to 4 ‘dry contact’ zones may be connected to the control panel (magnetic contact sensor, tamper, panic button, etc.).
LAN	Connector for an Ethernet cable 100BASE-TX.
GND, DATA, +U	Terminals for connection of an external keypad and/or a relay card. • DATA: A signal (output) for connection of a keyboard and/or relay; • +U: A (positive) output for powering a keyboard and/or relay card; • GND: Common (ground).
TM, LED, GND	Terminals for connecting Touch Memory reader. • TM: Positive output; • LED: Signal output (positive); • GND: Common (ground).

[2] Without regard to battery characteristics.

USB	Connectors for Flash drive and external 4G modem.
GPS	SMA-M/F connector for an external GPS/GLONASS antenna.
GSM	SMA-M/F connector for an external GSM antenna.
Wi-Fi	SMA-F/F connector for an external Wi-Fi antenna.
Power	Connector for a power supply (see section 6).
CH1 433 MHz, CH2 433 MHz	Terminals for connecting radio channel antennas
CAM	AV input connectors (BNC) for analog video cameras.

6. Power Connector Pin Table

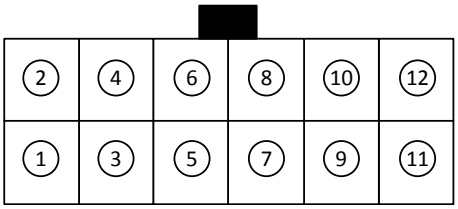

Figure 3 — Connector

Pin No.	Designation	Note
1, 2	Power positive (+U) terminal	12 V main connection. Monitoring of the 220V power is carried out by using CPW terminals.
3	CPW terminal	
4	Power negative (GND) terminal	
5, 7, 9, 11	Power positive terminal	Video camera power supply connection
6, 8, 10, 12	Power negative (GND) terminal	

7. Visual indication

The device has 5 operating visual indicators under the battery (see fig. 4).

Indicator	State	Value
GSM modem **HL1**	Blinks very frequently	The device is connected to the monitoring server
	Blinks frequently	Registration in GSM network
	Blinks slowly	The device modem has successfully registered in the GSM network
	Off	The device modem is switched off
Connection to server **HL2**	On	Server is connected
	Off	Server is not connected
SIM cards **HL12 — SIM1 HL13 —SIM2**	HL12 is on	SIM1 is in use
	HL13 is on	SIM2 is in use
	Are lit alternately	Search for SIM cards
Power **HL14**	On	Operates on the main power source
	Flash rapidly	The measurement of the voltage supply is carried out by the device
	Flash slowly	Operates from a battery
	Off	No power

8. Configuration

Configure the device prior to installation. Using the configuration software connect to the device using one of the following ways:

- **Desktop configuration.** To connect use a cable and the configuration software ritm.conf or Ritm Configure.
- **Remote configuration via digital GSM.** To connect use a GSM CSD channel and the configuration software ritm.conf or Ritm Configure.
- **Remote configuration via TCP/IP**. To connect use a GSM GPRS channel and the cloud configuration software (from GEO.RITM and Ritm-Link only).

To use the configuration software ritm.conf or Ritm Configure download it from the website of the www.ritm.ru/en and install all the required drivers.

To connect via a digital CSD-channel make sure there is access to the digital data transmission service (CSD) and there are enough funds on the account of the SIM-card inserted into the device.

Remote configuration via CSD is only possible from the engineering phone numbers.

9. Getting Ready for Operation

Do not place the device in the vicinity of EMI sources, large metal objects and structures, power cable runs. The device installation location should have a strong GSM signal. We recommend configuring the device before it is installed on the site.

1. Remove the bottom cover of the device fastened with latches.
2. Insert a MicroSD card (see figure on page 7) into the MicroSD-1 slot and SIM cards into their respective boxes. Before inserting SIM cards make sure they do not require a PIN code to be activated.
3. Install the battery from the package.
4. Close the bottom cover of the device.
5. Remove the top cover of the device fastened with latches.
6. If necessary, install an HDD or SSD in the slot under the top cover of the enclosure. When installing an SSD, use an adhesive plastic dummy panel by sticking it to the disk. Fasten the disk with screws.
7. Close the top cover of the device.
8. Attach external GSM, GPS/GLONASS, or Wi Fi antennas and a 4G modem to the device. Make sure the distances between the antennas, modem, and the device are 50 cm.
9. Place the GSM antenna in a GSM reception area, where the signal is strong and stable.
10. Connect analog video cameras to the device via its CAM connectors.
11. Connect the power cable from the package to the device via the Power connector (see Paragraph 2.3). Connect power inputs of video cameras (the device supplies cameras with 12 V). If cameras power consumption is more than 350 mA use direct connection to external power supply. Connect the power source to the terminals +12V, GND. Connect the wire from the CPW terminal to the secondary winding of the power source transformer. If the wire from the CPW terminal is not connected, the

device does not monitor the main power (220 V). If the device is connected to a Ritm's power supply, connect the wire from the CPW terminal to the CPW terminal on the power source board.

12. If necessary, connect hardwired zones to terminals.
13. If necessary, connect circuits with actuation devices (sirens, displays)to terminals.
14. If necessary, connect hardwired keyboards to the terminals DATA, GND, +U.
15. If necessary, connect the relay card to the RELAY connector.
16. Connect radio channel antennas to the terminals CH1 433 MHz and CH2 433 MHz.
17. To install the device, choose an appropriate location, which is protected against dirt, process fluids, physical impact, etc. and prevents free access of unauthorized persons. Make sure the device is located at least 0.5 m from all EMI sources.
18. Fasten the device holder. Place the device into the holder.
19. Turn on the power source.
20. Add radio channel devices to the system using configuration software.

For more information on radio channel operating modes, please refer to device data sheets.

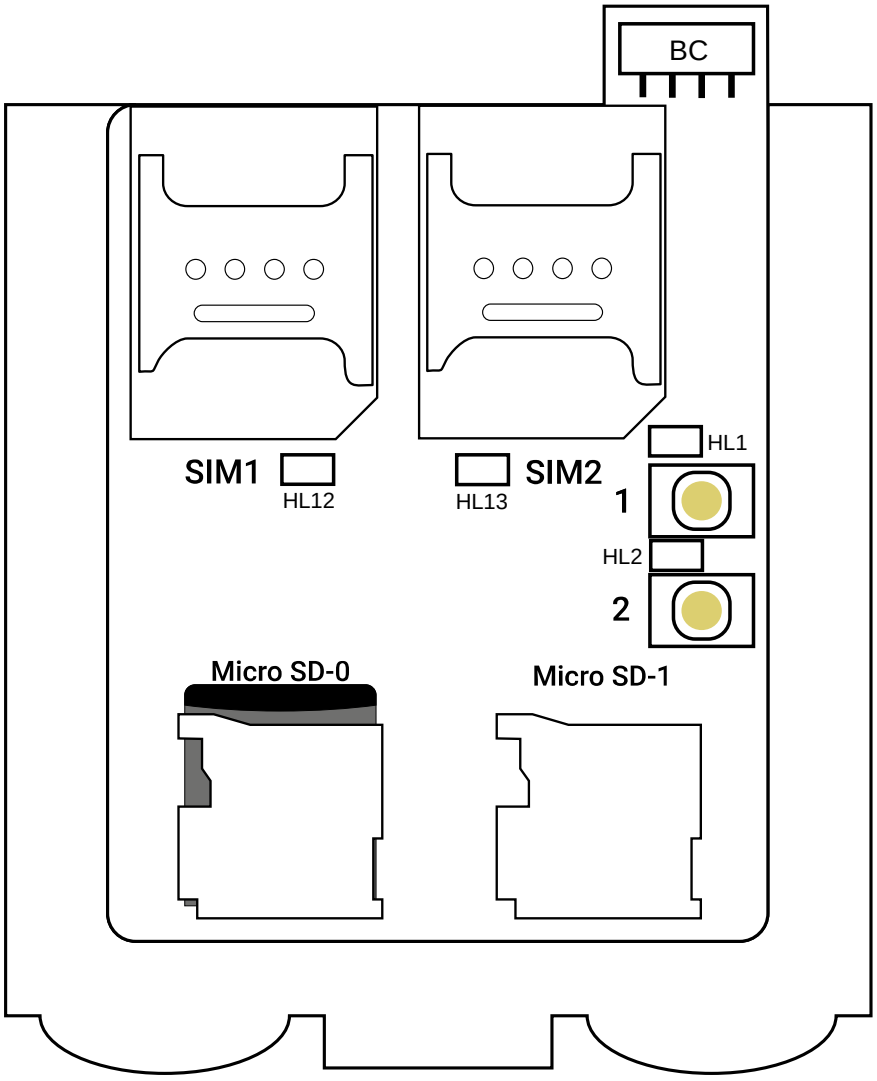

Figure 4 — Elements under the cover.
SIM1 – SIM card holder 1; SIM2 – SIM card holder 2;
MicroSD-0 – OS MicroSD holder; MicroSD-1 – MicroSD medium holder;
Button 1 — Add radio devices w/o configuration software; Button 2 — reserved;
HL1, HL2, HL12, HL13 — visual indicators; BC - battery connector.

10. Maintenance and Safety Measures

At least once per month check SIM card accounts for funds. Periodically, at least twice a year, check the reliability of contacts and, if necessary, clear their bonding areas.

11. Transportation and Storage

The device should be packaged and transported inside the closed vehicles.

Storage premises should be free of current-conducting dust, acid and alkaline fumes, corrosive gases and gases harmful to insulation.

12. 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.

The device life cycle is 6 years (provided the operating conditions are observed).

Warranty repairs of the device are done throughout the life cycle.

The warranty does not cover the battery and the additional equipment included in the package.

The manufacturer shall not be responsible for quality of data links provided by GSM operators and Internet service providers.

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

Removing the SD-card with the operating system lead to early termination of the warranty.

13. Information on Claims

In case of a device failure or defect during the warranty period, please fill out a malfunction report specifying the dates of the release and when the device was installed as well as the nature of the defect and submit it to the manufacturer.