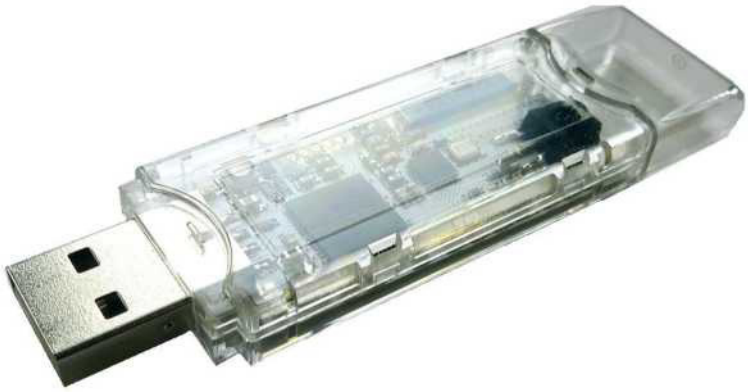
F&F Filipowski Sp. J.
95-200 Pabianice, ul. Konstantynowska 79/81 phone +48 42 215 23 83 www.fif.com.pl

DATA SHEET



rH-IR16 LR

Infrared transmitter / receiver
of the F&Home RADIO system.
LR version - longer range.

The IR16 module is a receiver and transmitter of infrared signals to control hardware electronics and household appliances. The module performs three functions:

- storing IR command in one of 16 internal memories;
- sending IR command from a memory with a specific number;
- identification of received IR command and sending a memory number to a server.

With the IR16 module the system can receive commands from IR remotes and send commands to devices controlled with these remotes. IR16 module sends IR commands approximately every 200 ms. This is the transmission time of one packet of IR command. Communication with the server is done via radio. The module is placed in a typical enclosure with USB port. Power is supplied via USB port so it must be plugged into any USB port (in TV, receiver, DVD player…)

The IR module is represented by an object that consists of 16 inputs, 16 outputs and 16 buttons visible in the *Remote Access* that correspond to the memory cells in the module. Additionally the module has a byte output "Error Code", which returns the preset number in case a command was not delivered. If a rising edge of a binary signal is applied on the input or in *Remote Access* a button is pressed, the object sends a command to the module and waits for a response with the same command. Holding logical '1' on the input for longer or registering at this time a rising edge of the signal sends the next command after receiving confirmation. After receiving by the module the previously stored command from the remote control changes the binary value on the corresponding output of the object to logical '1'.

INPUTS		
Figure	Name	Type
	send IR command channel 1 - 16	binary

OUTPUTS

Figure	Name	Type
	received IR command channel 1 - 16	binary
	error number	byte

If the object does not receive confirmation after the command was send, it set on the “Error Code” output the number of a memory from a sent and undelivered command. Upon unblocking the transmission the signal goes back to 0.

Installer settings in the configuration program

Feature name	Description	Range	Unit / Description
Connection monitoring	Sets action in case of loss of connection to the server (information about the modules out of reach).	Standard module	Information on the standard output SX 752
		Alarm module	Information on the alarm output SX 752
		Unmonitored module	No connection correctness control
The delay in signaling a lack of coverage	Sets the delay after which the module is reported that it is beyond the coverage range of the server	1 - 5	

Module configuration is done using the icon displayed in the *Remote Access*.

1. Registration of IR commands is done by double-clicking on the button. The color changes to blue and the module starts to scan the IR code from a remote control.

- After a correct reading of the IR signal from a remote control, the button changes its color for one second to green. After one second the color changes back to white.
- If the command is not received within 30 seconds, the button will not be registered and its color goes back to white.
- Clicking on any button interrupts the scanning and the color of the button goes

2. Receiving the previously stored command from a remote control initiates the logical state '1' on the output and the specific button lights up in green for a one second.

3. The IR commands can also be send by a single click on the button with a channel number or by applying the rising edge of a binary signal on the specified input. Button lights up in green for one second and the logical state '1' emerges on the output.

Technical specifications table	
Rated supply voltage	5 V DC
Radio link (operating frequency)	868 MHz
Signal strength	9 mW
Transmission type	two-way
Coding	yes
Range in open space	350 m
Period of logging in the system	30 seconds
Storing temperature	-20^{O}C to +50^{O}C
Working temperature	0^{O}C, +45^{O}C
Humidity	<=85% (without condensation and aggressive gases)
Dimensions	70 x 25 x 10 mm
Ingress protection	IP20
Operating position	any
Enclosure type	flash drive

Registration in the system
1. Select the registration method in the configurator.
2. Plug the device into USB port.

WARNING

The connection method is specified in this manual. Any activities related to installation, connection and regulation should be carried out by persons with electrical qualifications who are familiar with this manual and features of the module. Manner of transport, storing and using the module affects its proper operation. Installation of the module is not recommended in the following cases: missing components, damage to the module or its deformation. In case of malfunction the module should be returned to the manufacturer.