



Configurator

(UProxIPConfigurator)

SOFTWARE FOR THE INITIAL

CONFIGURATION

User manual

About this document

This user manual describes the order of work with UProxIPConfigurator software.

<p>Attention! Before working with the control panel you should carefully read the user manual of the control panel.</p>
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Technical support

To get warranty and technical support you can apply to authorized service centers, situated on the territory of countries, enlisted in the warranty card.

Warranty and technical support are performed on the territory of the country, where the customer applied for warranty or free service.

Technical information is available on the system website

www.u-prox.com

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Application

Software UProxIPConfigurator (further - "Configurator" or configuration software) is used to perform preliminary setting of Series Access Control Panels NDC F-18IP and U-Prox IP100, namely to install parameters of the network connection.

Configurator allows downloading and reading the current settings of control panels connection, saving the template of settings in the file, opening the template files, editing templates settings either on-line (connected to the control panel) or off-line (not connected, working up with the template files).

Terms

Identifiers

In access control systems (ASC) each user has a unique identification code. RF IDs can be in the form of a plastic card, keyfob, etc.

Reader

To read RF IDcodes, readers are used connected to the ACS control panel.

There are several common types of identifiers and readers for them. When connected to a control panel it is important to match the type of interface between the reader and the control panel. To connect to a control panel F-18 IP the interface Wiegand is used

PIN code

If readers have a built-in keypad, then the code entered with key presses may be used as an identifier. Usually, this code is called PIN code, it can be independent or complement to the card or keyfob, so after the passing of the card the reader "expects" a PIN code.

Access point

The place where the direct access control is carried out (for example, a door, turnstile, a cabin passage, equipped with necessary means of control and supervision).

Loading

After programming of settings try to upload the control panel. When loading configuration data come from the computer to the control panel.

Host

Any device that provides a service format of "client-server" is in server mode. In particular host is any computer connected to the LAN or WAN.

IP address

IP address (short for Internet Protocol Address) – is a unique address in the network.

IP address is a 32-bit binary number. A convenient form for recording IP-address is recorded as four decimal numbers (from 0 to 255) separated by periods, for example, 192.168.0.1.

IP addresses, the last number in which is 0 (192.168.1.0) or 255 (192.168.1.255) are service and not used when assigning address to a network device.

IP port (TCP and UDP)

In the TCP and UDP (family TCP / IP), port – is a system resource allocated to the application for communication with other applications through the network.

For each of the protocols, TCP and UDP, the standard defines the ability of simultaneous release on the destination machine (server) to 65,536 unique ports (from 0 to 65535). A port number in the packet header is used (along with the IP-address of the host) to address a specific application (program) when networked.

In a typical client-server model (notification mode of control panel), ACS server software waits for incoming data ("listening to port"), and the control panel sends data to the well-known port opened by the application server (as a client).

NAT

(Network Address Translation – "NAT") - a mechanism in computer networks, which converts an IP-address of transit data packets (passing from the local network to the Internet).

NAT serves several important functions:

1. Saves IP-addresses, transferring several internal IP-addresses to one external public IP-address. Most networks in the world are built on this principle: for a small area of the home network of local provider or for an office is offered 1 "white" (i.e. external) IP-address, by which operate and have access to outside all the "gray" (i.e. internal) IP addresses.
2. To prevent or limit the circulation from outside to the internal computers, leaving the possibility of handling the inside out. When you initiate connection inside network the broadcast is created. Response packets from the outside meet created broadcast and therefore are allowed. If for the packets coming from the outside there is no relevant event they are ignored.

DHCP

Dynamic Host Configuration Protocol - is a network protocol that allows computers to automatically receive IP-address and other parameters needed to run in a computer network.

To automatic configuration the network device addresses the so-called DHCP server and receives the necessary parameters. The network administrator can specify a range of addresses to be distributed by the server among computers. This affords to avoid manual setting of network computers and reduces errors. DHCP is used in most TCP/IP major (and minor) networks.

Firewall

Firewall is a set of hardware or software, which monitors and filters network packets running through them according to the specified rules.

In most routers, gateways to the Internet, it is present by default and is configured to protect your LAN from attacks from the Internet, and at the same time, to pass the packets of network devices from the LAN to the WAN.

Router (gateway)

Network device based on certain rules to make decisions about passing (forwarding) of packets between the local and the global network.

It can both convert one type of data transmission protocols in protocols of the other type (e.g. ADSL router) and connect to an external modem (e.g. cable modem standard, DOCSIS), which is a simple converter of data transmission medium for Internet access.

These devices usually have built-in firewall, DHCP-server and NAT function.

Network switch, commutator or switch

A device designed for the connection (association) of multiple devices (computers) into a local computer network.

Since modern computer LANs have "star" topology, it is allowed connection of multiple switches.

LAN

Local area network (LAN, WLAN, Local Area Network) is a computer network covering generally a relatively small area or small group of buildings (home, office, company, institution). In this case, it is the Ethernet port/ports of the router, to which the user's computer is connected.

WAN

Wide Area Network (WAN). In this case, it is the Ethernet port of the router, to which the modem/cable from the provider to access the Internet is connected.

DNS

Domain Name System - a distributed system for receiving IP-address on behalf of the device (computer or device).

DDNS (Dynamic DNS)

The technology that allows to update information at DNS-server in a real time and (if desired) in an automatic mode. It is used to assign a permanent domain name to a device (computer, router, server) with a variable (dynamic) IP-address.

ACS server

A computer with a permanent connection with the network. It has a permanent fixed IP address or a fixed domain name (see DNS and DDNS). It collects and processes information received from the access control panels.

Preparation

To link the control panel and PC with software U-Prox IP interface USB is used. Find type B Mini USB connector on the board of control panel.

After connecting the control panel to the computer, operating system creates a virtual COM port (if there are the appropriate drivers, see Installing drivers), usually with a number greater than 6, which is used for the data exchange.

In some very rare cases the information from the Troubleshooting section is necessary to configure the correct functioning of the COM ports.

Connecting the control panel to the PC

NDC F -18-IP

To switch the control panel to the programming mode and connection of the control panel to the computer, follow these steps:

1. Open the top cover of the control panel without turning off the power,
2. Remove TMP jumper
3. Plug USB cable into your computer and then to the port of the miniUSB control panel.
4. Wait for the end of search of preset device drivers and creating of a virtual COM port.
5. Set up the device with the software "Configurator"

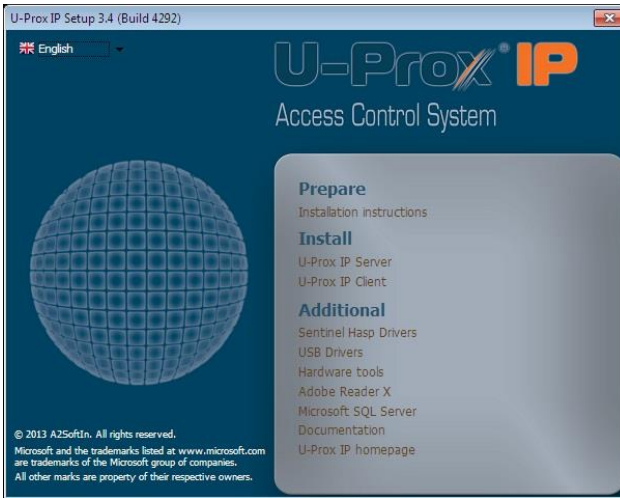
U-Prox IP100

To switch the control panel to the programming mode and connection of the control panel to the computer, follow these steps:

1. Remove the top cover of the control panel without turning off the power,
2. Plug USB cable into your computer and then to the port of the miniUSB of control panel.
3. Wait for the end of search of preset device drivers and creating of a virtual COM port.
4. Set up the device with the "Configurator" software

Installing drivers

As part of the installation disc U-Prox IP USB Drivers install packet is included, this is designed for working with USB device ports that are part of ACS “U-ProxIP” on computers running Microsoft Windows.



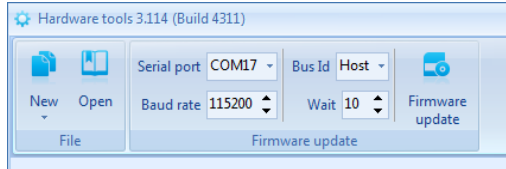
Drivers available in this set require running **version of Windows XP SP3 and above**.

Installing instruction, setting up COM ports and troubleshooting instructions are included into drivers installation pack.

The program interface

The program interface of "Configurator" (UProxIPConfigurator) is made in the standard style of Windows 7. The upper part of the window is occupied by area band (ribbon) menu, and the rest is divided into several parts - panels.

After starting the software the menu is available:



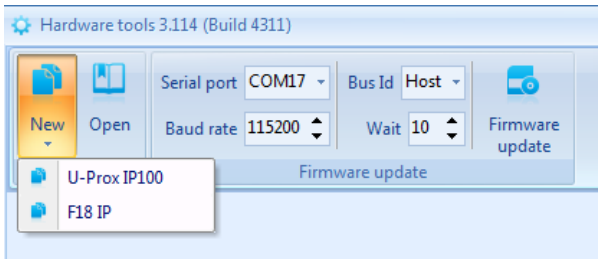
Firmware update

The group of the menu "Firmware update" is responsible for the update firmware of devices in boot-loader mode.



"Firmware update" - The standard dialog window for firmware files (.bin extension) open will display after this button press. After file select program will start the panel firmware update. During this all menu buttons are locked.

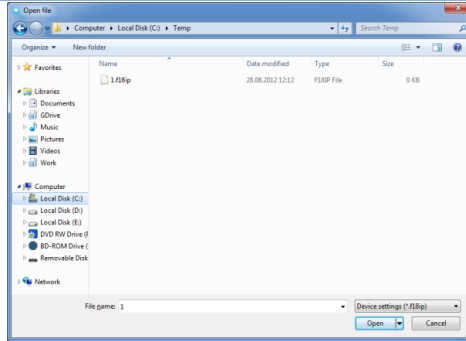
Work with the template files



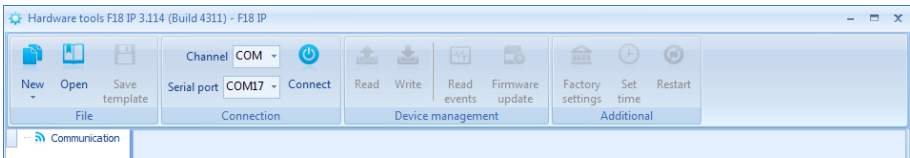
"New" Clicking this button reveals the dropdown list of device types supported by the configurator. When one of them is selected, a new setting template of this device type is created and opened in the configurator.



"Open" Clicking this button opens a standard dialogue of device template files, supported by the configurator. When one of them is selected, previously saved template of the device is opened in the configurator.



Once created or opened template settings, the menu will have additional functions, and on the left pane of the program the point "**Communication**" will be available to select:

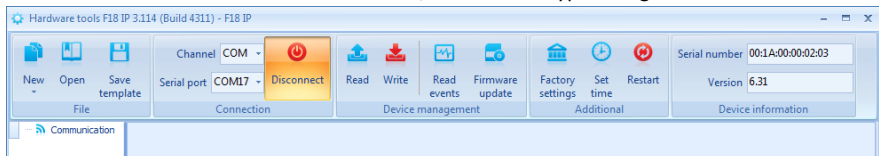


"Save" - after making changes to the template of device settings the button becomes active. After clicking on it the template settings will be saved in a file. If a template is new - a standard dialogue of saving files with the ability to enter a file name will appear.

Connect to controller

The next group of the menu ("Communication") is responsible for the connection to the control panel. It contains the following controls:

- **"Connection type"** - "Serial port" – connection over the COM port
- **"Serial Port"** - number of the virtual COM port, which was created to connect the control panel to a computer via USB.
- **"Connect"** - switch button, after pressing it configurator makes a connection. If the connection is established, the button's type changes to:



- **"Disconnect"** - after you press the button, the configurator is making disconnection - communication with the control panel is broken, the COM port is released and closes."

The changes made to the template, when compulsory disconnected, will not be loaded to the control panel.



Read

"**Read**" - after you press the button, the software reads the network settings of the connected control panel. Settings, that were read, are available for further editing.



Write

"**Write**" after you press the button, the software records the network settings to the connected control panel. After downloading of the setup program, configurator performs disconnection - the connection with the control panel is broken; COM port is released and closes.

After downloading of setup program, communication with the control panel is broken automatically.

Miscellaneous functions



Factory settings

"**Factory Settings**" - press "Factory Settings" button to return panel to the factory settings. The window for action acknowledge will display.



Set time

"**Set Time**" - Panel date and time will be synchronized with PC



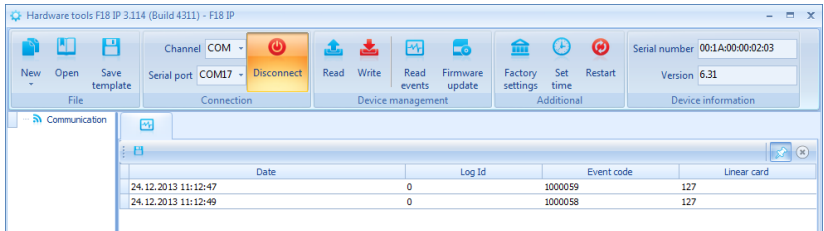
Restart

"**Restart**" - The warning window will display for action confirmation. The panel firmware will restart.



Read events

"**Read events**" - Program will read event log from the panel memory



Firmware update

"**Firmware update**" - The standard dialog window for firmware files (.bin extension) open will display after this button press. After file select program will start the panel firmware update. During this all menu buttons are locked.

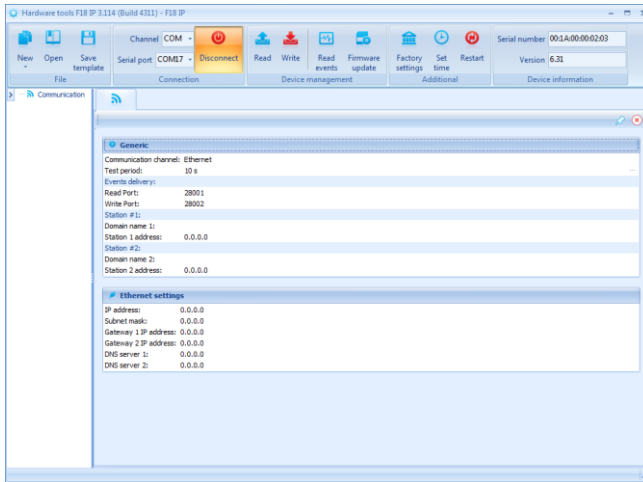
Device Information

The next group of the menu ("Device Information") provides information about control panel firmware and the serial number of the device (for example, 00:1A:00:00:02:03).

Attention! The serial number of the device is further used when you configure control panel into access control. Therefore, it is recommended to copy and save (or copy) the contents of the field.

Setting up of communication

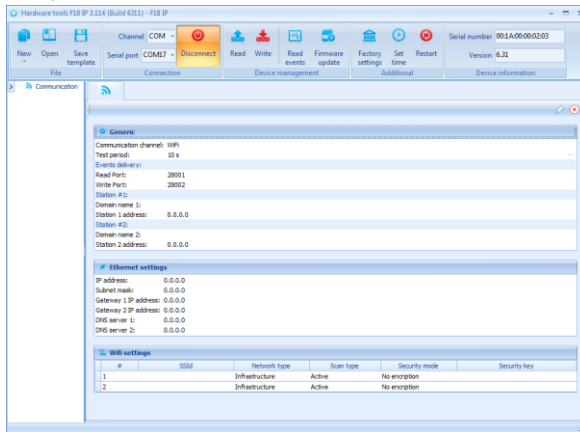
Once created or opened template of settings, in the left pane of the program will be available to select "Communication". When clicked it will open the settings form of communicator device



Communication configuration

The "communication channel" contains a dropdown list, switching the type of communicator - Ethernet (wired network) and Wi-Fi (wireless network).

After switching of the type of communicator, a lower table of settings is changed; for example, when you switch to Wi-Fi form becomes:



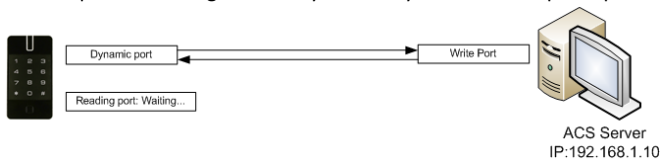
The field "Test period" shows the frequency with which the control panel sends test package to ACS server, which is used to determine the integrity of the communication channel and condition of the route of message delivery.

Modifying of this setting should be careful and coordinated with the ACS server, to avoid unnecessary consumption of network traffic (with a decrease in the test period), or prevent the event "Loss/recovery of communication".

Delivery settings

For routing of message delivery from the control panel to the ACS server both the server address and the port are used - the unique identifier of the network portion of the program running on the computer. It is called entry port .

The default port is 28002 - sending of messages occurs with a randomly selected port on the control panel (see the dynamic port) on the port of reading. Acknowledgment of delivery is done from the port of reading on already known dynamic control panel port.



For additional service features control panel always waits for data at a fixed port - the so called port for reading (reading port). The default port is 28001.

ACS Server Address

The control panel can operate in series with two addresses of the same ACS server (see "Server Address 1", "Server Address 2").

In this case you can use to address not only the IP address, but also DNS server address (see "Server Address 1", "Server Address 2" - a field to enter the IP and the "Domain Name 1", "Domain Name 2" - the field for text input).

When using DNS addresses you should pay attention to the following features:

1. DNS address always has the highest priority – i.e. if, for example, to enter the Domain Name 1: ACServer.local and Server Address 1:192.168.1.100 , you will always use only the Domain Name.
2. If not using DHCP, or if using DHCP the field of DNS server is not passed, the DNS server must be explicitly specified in the settings.

Settings Ethernet (wired network) communicator

Wired network settings are made exactly like settings of network card for the computer, with the following exceptions:

- To enable DHCP (to obtain an IP address automatically) leave the fields "IP address" and "Subnet Mask", zero - 0.0.0.0

Ethernet settings	
IP address:	192.168.1.101
Subnet mask:	255.255.255.0
Gateway 1 IP address:	192.168.1.1
Gateway 2 IP address:	192.168.1.2
DNS server 1:	192.168.1.1
DNS server 2:	192.168.1.4

- When using DHCP, take into account that the IP address of the gateway 1 and DNS servers can come in the package of auto-DHCP configuration (if these options are configured on a DHCP server), or may be absent. In that case they must be installed manually using software "Configurator"
- Control panel can operate in series via two independent gateways to the Internet.

Settings Wi-Fi (wireless network) communicator

Configure static or dynamic address device Wi-Fi produced in table "Settings Ethernet" (see above)

Control panel can operate in series with two points of wireless access. Configuration is set individually for each of them.

Wifi settings						
#	SSID	Network type	Scan type	Security mode	Security key	
1	WLAN1	Infrastructure	Active	WPA/WPA2	fvyy4362r fw3	
2	WLAN2	Infrastructure	Active	WPA/WPA2	er5g56asffjh783ZSDcr	

Field "**SSID**" - ID of Wi-Fi network

"**Network Type**" field - can take two values, "**Access Point**" and "**Ad-Hoc**" (Direct Connection), which corresponds to infrastructure mode and Ad-Hoc (point-to-point) Wi-Fi standard.

The "**Encryption**" field - Select the encryption algorithm for this network. For Infrastructure mode Open (no encryption) and WPA-PSK/WPA2-PSK Auto (WPA/WPA2) - are supported. For Ad-Hoc mode Open (no encryption) and WEP are supported.

Working with configurator

Software configurator allows you to configure Ethernet/Wi-Fi access control panel device. After setting up the control panel communicates with the server access control.

The following describes the typical wiring diagrams that integrators access control may face, and control panel settings for them.

Attention! These type schemes are not complete. Configuration shown in them are given only as an example, there is no need to rebuild your local network to have the same parameters.

The following examples are simplified, for design and construction of a complex network, contact your system administrator.

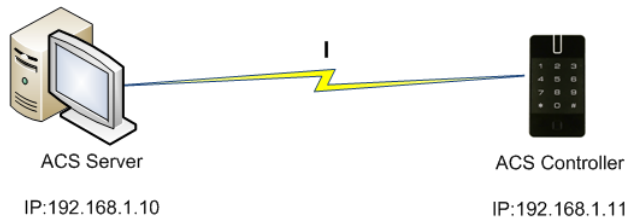
Typical schemes of network connection

Wired LAN with static IP

Description:

1. LAN with addressable 192.168.1.xxx/255.255.255.0 (network mask)
2. ACS server on the network has a static IP address, set by the administrator, for example 192.168.1.10
3. To access control panel allocated free IP - for example, 192.168.1.11

Scheme:

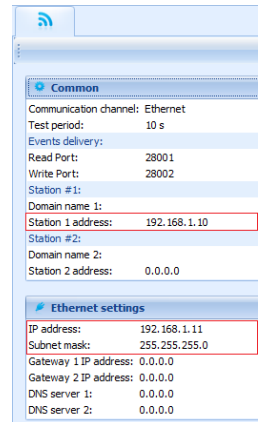


Steps for installing a connection to the server (denoted by Roman numerals in the figure):

- I. Direct transfer to the server in the LAN via communication equipment (switches, etc.)

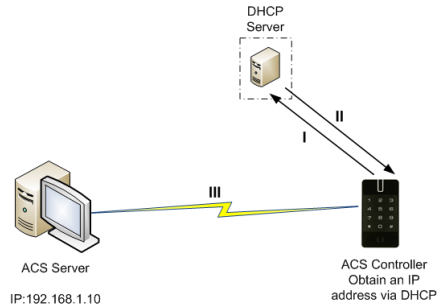
Settings made by using the software Configurator (in red)

1. Ethernet link installed
2. IP address for ACS server is indicated
3. IP address of the control panel is indicated
4. The subnet mask is indicated



Wired LAN with dynamic IP clients and static IP address of the server access control**Description:**

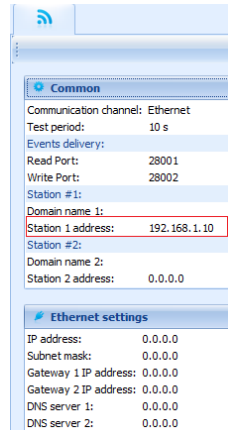
1. LAN addressable 192.168.1.xxx/255.255.255.0 (network mask)
2. ACS server on the network has static IP address, set by the administrator, for example 192.168.1.10
3. IP addresses of client devices in the network are assigned dynamically - DHCP server running
4. Access control panel receives the first free IP, handed by DHCP server - for example, 192.168.1.222

Scheme:**Steps for installing a connection to the server (denoted by Roman numerals in the figure):**

- I. Request free IP from the DHCP server
- II. Getting IP from DHCP server
- III. Direct transfer to the server in LAN via communication equipment (switches, etc.)

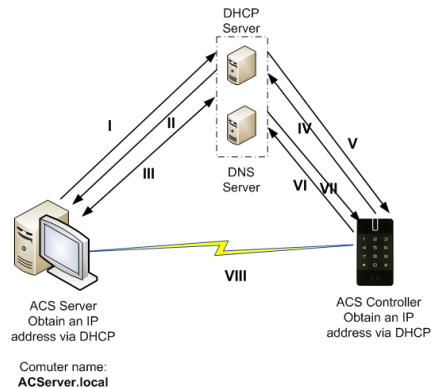
Settings made using the Configurator software (in red)

1. Ethernet link is set
2. IP address for the ACS server is indicated



Wired LAN with dynamic IP addresses on the local network with a static DNS name of ACS server.**Description:**

1. LAN with addressable 192.168.1.xxx/255.255.255.0 (network mask)
2. IP addresses of client devices in the network are assigned dynamically - DHCP server running
3. The network has server DNS - its IP, for example 192.168.1.5
4. ACS server receives the first free IP, handed out by DHCP server - for example, 192.168.1.111.
5. ACS server after getting the IP performs DNS registration of its static name - for example, ACServer.local (and possibly responds to a broadcast request of name).
6. Access control panel receives the first free IP, handed out by DHCP server - for example, 192.168.1.222

Scheme:**Steps for installing a connection to the server (denoted by Roman numerals in the figure):**

- I. ACS server: Request of free IP from DHCP server
- II. ACS server: Getting IP from DHCP server
- III. ACS server: Registration ACServer.local name in DNS
- IV. Control panel: Request of free IP from server DHCP
- V. Control panel: Getting IP from DHCP server
- VI. Control panel: Request of IP address of the name ACServer.local from DNS server
- VII. Control panel: Getting IP address for the name ACServer.local from DNS server
- VIII. Direct transfer to the server in LAN via communication equipment (switches, etc.)

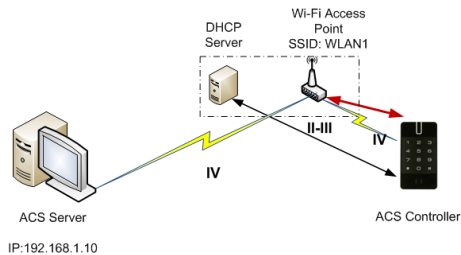
Settings made by using the Configurator software (in red)

1. The DNS name for ACS server is indicated
2. Optionally, IP address of the DNS server is indicated.
3. Usually control panel receives these data when obtaining IP address from DHCP server.

Common	
Communication channel:	Ethernet
Test period:	10 s
Events delivery:	
Read Port:	28001
Write Port:	28002
Station #1:	
Domain name 1:	ACServer.local
Station 1 address:	0.0.0.0
Station #2:	
Domain name 2:	
Station 2 address:	0.0.0.0
Ethernet settings	
IP address:	0.0.0.0
Subnet mask:	0.0.0.0
Gateway 1 IP address:	0.0.0.0
Gateway 2 IP address:	0.0.0.0
DNS server 1:	0.0.0.0
DNS server 2:	192.168.1.5

Peer LAN with static IP ACS server, the control panel is connected to Wi-Fi.**Description:**

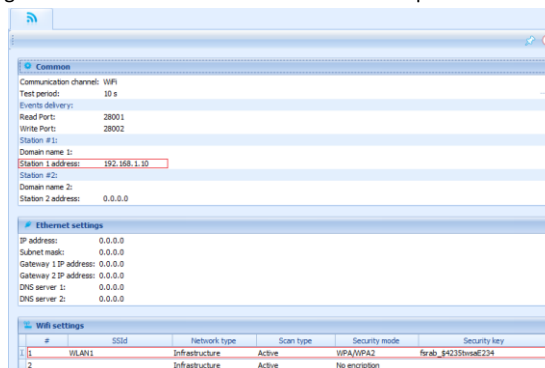
1. Local network addressable 192.168.1.xxx/255.255.255.0 (network mask)
2. ACS server on the network has a static IP address, set by the administrator, for example 192.168.1.10
3. The control panel is connected to a Wi-Fi via hotspot, which is included in the network.
4. In LAN (or a built-in in access point) is working DHCP server.
5. Access control panel receives the first free IP, handed out by DHCP server - for example, 192.168.1.222

Scheme:**Steps for installing connection to the server (denoted by Roman numerals in the figure):**

- I. Installation of connection by Wi-Fi
- II. Request of free IP from DHCP server
- III. Getting IP from DHCP server
- IV. Direct transfer to the server on LAN via communication equipment (Wi-Fi access point, switches, etc.)

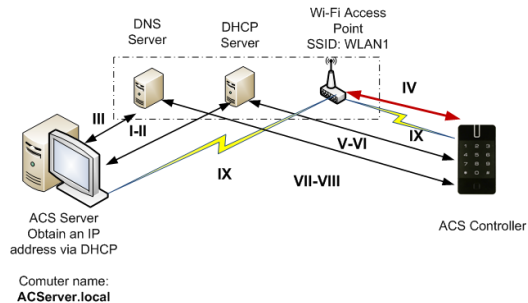
Settings made by using software Configurator (in red)

1. Wi-Fi channel is set
2. IP address for ACS is indicated
3. Setting for Wi-Fi network with SSID WLAN1 is set up



Local network with static DNS name of ACS server, the control panel is connected to Wi-Fi.**Description:**

1. LAN addressable 192.168.1.xxx/255.255.255.0 (network mask)
2. IP addresses of client devices in the network are assigned dynamically - DHCP server running
3. The network has DNS server
4. ACS server receives the first free IP, handed out by DHCP server - for example, 192.168.1.111.
5. ACS server after getting IP performs registration of its static DNS name – for example ACServer.local (and possibly responds to a broadcast request of the name).
6. The control panel is connected by Wi-Fi via hotspot, included in the LAN.
7. Access control panel receives the first free IP, handed out by DHCP server - for example, 192.168.1.222

Scheme:**Steps for installing connection to the server (denoted by Roman numerals in the figure):**

- I. ACS server: Request of free IP from DHCP server
- II. ACS server: Getting IP from DHCP server
- III. ACS server: Registration of ACServer.local name in DNS
- IV. Control panel: Installation of connect on Wi-Fi
- V. Control panel: Request of free IP from DHCP server
- VI. Control panel: Getting IP from DHCP server
- VII. Control panel: Request of IP address for ACServer.local name from DNS server
- VIII. Control panel: Getting IP address for ACServer.local name from DNS server
- IX. Direct transfer to the server in LAN via communication equipment
- X. (Wi-Fi access point, switches, etc.)

Settings made by using the Configurator software (in red)

1. Wi-Fi Channel is set
2. DNS name for ACS server is indicated

3. Setting of Wi-Fi network with SSId WLAN1 is set.

The screenshot shows a network configuration window with three main sections: Common, Ethernet settings, and Wifi settings.

Common

- Communication channel: WiFi
- Test period: 10 s
- Events delivery: ...
- Read Port: 28001
- Write Port: 28002
- Station #1:
 - Domain name 1: ACServer.local
 - Station 1 address: 0.0.0.0
- Station #2:
 - Domain name 2:
 - Station 2 address: 0.0.0.0

Ethernet settings

- IP address: 0.0.0.0
- Subnet mask: 0.0.0.0
- Gateway 1 IP address: 0.0.0.0
- Gateway 2 IP address: 0.0.0.0
- DNS server 1: 0.0.0.0
- DNS server 2: 0.0.0.0

Wifi settings

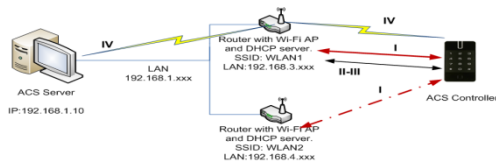
#	SSID	Network type	Scan type	Security mode	Security key
1	WLAN1	Infrastructure	Active	WPA/WPA2	fsrab_#423twsaE234
2		Infrastructure	Active	No encryption	

Complex network with static IP ACS server, the control panel is connected via Wi-Fi to multiple access points in series.

Description:

1. LAN 1 addressable 192.168.1.xxx/255.255.255.0 (network mask)
2. In the network ACS server has static IP address, set by the administrator, for example 192.168.1.10
3. Several Wi-Fi routers are connected in LAN 1
4. Control panel is connected by Wi-Fi via routers, passing between them in series when transfer fails.
5. In local Wi-Fi network (or built-in in access point) DHCP server is working.
6. Access control panel receives the first free IP, handed out by DHCP server in local Wi-Fi network - for example, for the network WLAN2 - 192.168.3.222
7. The data from the access control panel are routed to the local network № 1

Scheme:

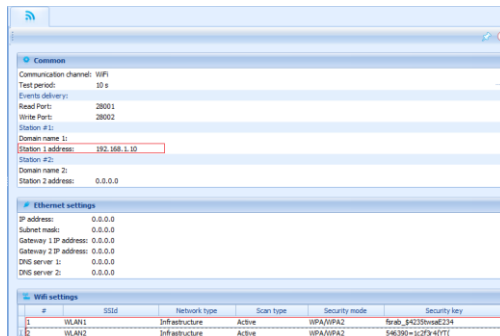


Steps for setting connection to the server (denoted by Roman numerals in the figure):

- I. Setting connection by Wi-Fi, if the transfer of messages fails - move to next Wi-Fi network
- II. Request of free IP from DHCP server
- III. Getting IP from DHCP server
- IV. Direct transfer to the server through the communication equipment (Wi-Fi access point, switches, etc.)

Settings made by using the Configurator software (in red)

1. Wi-Fi Channel is set
2. IP address for the ACS server is set
3. Settings for Wi-Fi networks WLAN1, WLAN2 are set

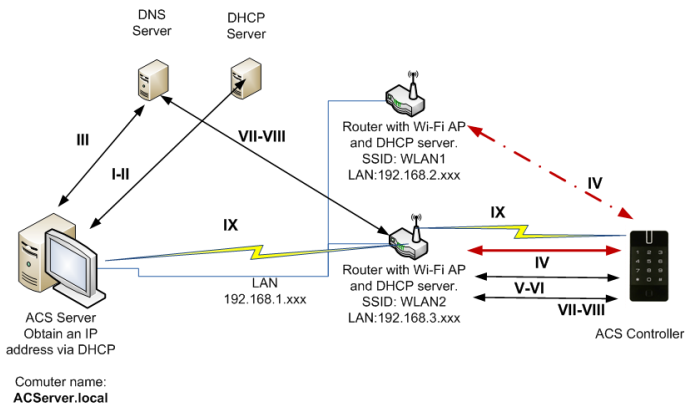


Complex network with static DNS name of ACS server, the control panel is connected via Wi-Fi to several access points in series.

Description:

1. LAN1 addressable 192.168.1.xxx/255.255.255.0 (network mask)
2. IP addresses of client devices in the network are assigned dynamically - DHCP server is running
3. The network has DNS server
4. ACS server receives the first free IP, handed out by DHCP server - for example, 192.168.1.111.
5. After getting IP ACS server performs registration of its static DNS name - for example, ACServer.local (and possibly responds to a broadcast request of the name).
6. Several of Wi-Fi routers are connected in LAN 1
7. The control panel is connected by Wi-Fi via routers, passing between them in series when transfer fails.
8. In local Wi-Fi network (or built-in in access point) DHCP server is working.
9. Access control panel receives the first free IP, handed out by DHCP server in local Wi-Fi network - for example, for the network WLAN2 - 192.168.3.222
10. The data from the access control panel is routed to LAN 1

Scheme:



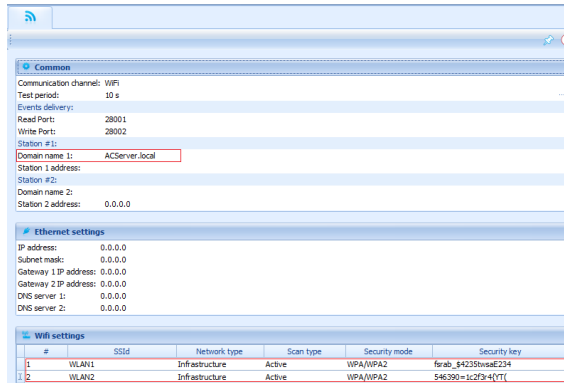
Steps for installing connection to the server (denoted by Roman numerals in the figure):

- I. ACS server: Request of free IP from the DHCP server
- II. ACS server: Getting IP from DHCP server
- III. ACS server: Registration of ACServer.local name in DNS
- IV. Setting of connection via Wi-Fi, if passing of messages fails - move to the next Wi-Fi network
- V. Request of free IP from DHCP server

- VI. Getting IP from DHCP server
- VII. Control panel: Request of IP address for ACServer.local name from DNS server
- VIII. Control panel: Getting IP address for ACServer.local name from DNS server
- IX. Direct transfer to the server via the communication equipment (Wi-Fi access point, switches, etc.)

Settings made by using the Configurator software (in red)

1. Wi-Fi Channel is set
2. DNS name for the server access control is set
3. Settings for Wi-Fi of networks WLAN1, WLAN2 are set

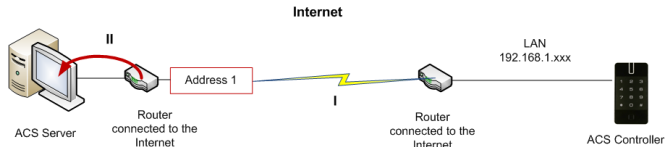


Working via the Internet: Connecting of the control panel via Ethernet. Working on one address of ACS server via single gateway

Description:

1. LAN addressable 192.168.1.xxx/255.255.255.0 (network mask)
2. Gateway to the Internet (via router) has address 192.168.1.1
3. Free IP to access control panel is identified - for example, 192.168.1.11
4. ACS server in the Internet has static IP address

Scheme:



Steps for setting of connection to the server (denoted by Roman numerals in the figure):

- I. Direct transmission via router from the Internet to static address server.
- II. Redirection (Port Forwarding) of data from control panel to the server access control.

Settings made by using the Configurator software (in red)

1. Ethernet link is set
2. IP address for ACS server is indicated
3. IP address of the control panel is indicated
4. Subnet mask is indicated
5. Gateway to the Internet is indicated

To work with the DNS server name indicated it is enough

1. To indicate the "Domain Name" for server address
2. To indicate DNS server/servers in Ethernet configurations

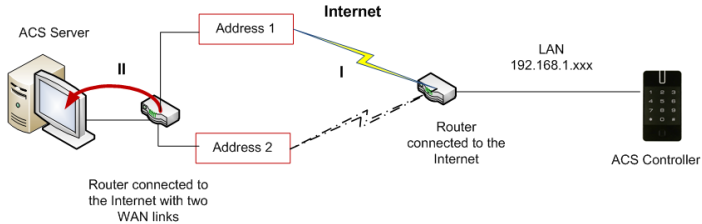
Common	
Communication channel:	Ethernet
Test period:	10 s
Events delivery:	
Read Port:	28001
Write Port:	28002
Station #1:	
Domain name 1:	
Station 1 address:	88.207.159.15
Station #2:	
Domain name 2:	
Station 2 address:	0.0.0.0
Ethernet settings	
IP address:	192.168.1.11
Subnet mask:	255.255.255.0
Gateway 1 IP address:	192.168.1.1
Gateway 2 IP address:	0.0.0.0
DNS server 1:	0.0.0.0
DNS server 2:	0.0.0.0

Work via the Internet: Connecting of control panel via Ethernet. Work on two addresses of ACS server via a single gateway

Description:

1. LAN addressable 192.168.1.xxx/255.255.255.0 (network mask)
2. Gateway to the Internet (via router) has address 192.168.1.1
3. Free IP to access control panel is identified - for example, 192.168.1.11
4. ACS server in the Internet has two static IP addresses

Scheme:



Steps for setting of connection to the server (denoted by Roman numerals in the figure):

- I. Direct transmission via router from the Internet to static server addresses, if the messages transfer fails – go to the next server address.
- II. Redirection (Port Forwarding) of data from control panel to ACS server.

Settings made by using the Configurator software (in red)

1. Ethernet link is set
2. IP address 1 for ACS server is indicated
3. IP address 2 for ACS server is indicated
4. IP address of control panel is indicated
5. Subnet mask is indicated
6. Gateway to the Internet is indicated

To work with DNS server name it is enough:

1. To identify "Domain Name 1", "Domain Name 2"
2. To identify DNS server/servers in Ethernet configurations

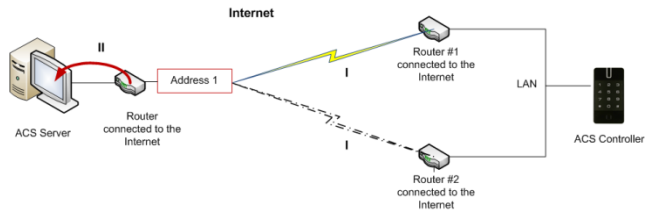
Common	
Communication channel:	Ethernet
Test period:	10 s
Events delivery:	
Read Port:	28001
Write Port:	28002
Station #1:	
Domain name 1:	
Station 1 address:	88.207.159.15
Station #2:	
Domain name 2:	
Station 2 address:	23.115.10.44
Ethernet settings	
IP address:	192.168.1.11
Subnet mask:	255.255.255.0
Gateway 1 IP address:	192.168.1.1
Gateway 2 IP address:	0.0.0.0
DNS server 1:	0.0.0.0
DNS server 2:	0.0.0.0

Working via the Internet: Connecting of control panel via Ethernet. Working in one address of ACS server via two gateways

Description:

1. LAN addressable 192.168.1.xxx/255.255.255.0 (network mask)
2. Gateway 1 to the Internet (router) has address 192.168.1.1
3. Gateway 1 to the Internet (via router) has address 192.168.1.2
4. Free IP is identified for access control panel - for example, 192.168.1.11
5. ACS server has static IP address in the Internet

Scheme:



Steps for setting of connection to the server (denoted by Roman numerals in the figure):

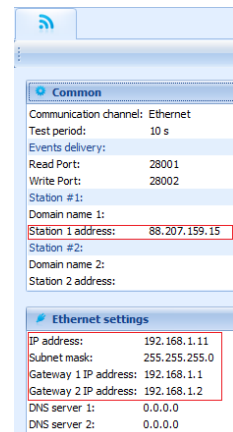
- I. Direct transfer via router from the Internet to static address of the server, if the messages transfer fails – go to the next router.
- II. Redirection (Port Forwarding) of data from the control panel to ACS server.

Settings made by using the Configurator software (in red)

1. Ethernet link is set
2. IP address for ACS server is indicated
3. IP address of control panel is indicated
4. The subnet mask is indicated
5. Gateway 1 to the Internet is indicated
6. Gateway 2 to the Internet is indicated

To work with DNS server name it is enough:

1. To indicate "Domain Name" for server address
2. To indicate DNS server/servers address in Ethernet configuration

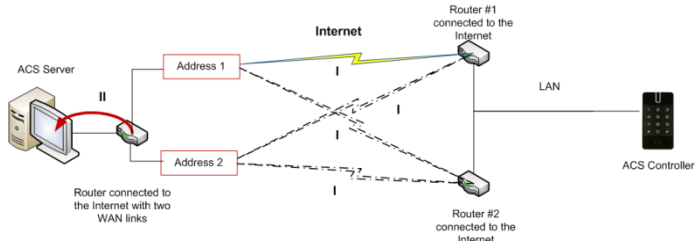


Working via the Internet: Connecting of control panel via Ethernet. Working in two ACS addresses via two gateways

Description:

1. LAN addressable 192.168.1.xxx/255.255.255.0 (network mask)
2. Gateway 1 to the Internet (via router) has address 192.168.1.1
3. Gateway 2 to the Internet (via router) has address 192.168.1.2
4. Free IP is identified for access control panel - for example, 192.168.1.11
5. ACS server in the Internet has two static IP addresses

Scheme:



Steps for setting connection to the server (denoted by Roman numerals in the figure):

- I. Direct transfer via routers on the Internet to static address of the server, if transfer of messages fails - go to the next address of the server and then move to the next router.
- II. Redirection (Port Forwarding) of data from control panel to ACS server.

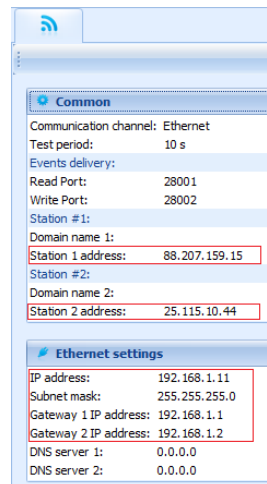
Settings made by using the Configurator software (in red)

1. Ethernet link is set
2. IP address 1 for ACS server is indicated
3. IP address 2 for ACS server is indicated
4. IP address of the control panel is indicated
5. Subnet mask is indicated
6. Gateway 1 to the Internet is indicated
7. Gateway 2 to the Internet is indicated

To work with DNS server name it is enough:

1. To indicate "Domain name" for server address

To indicate DNS server/servers address in Ethernet configuration

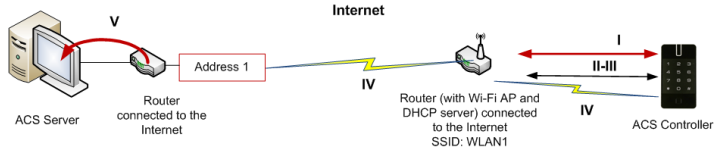


Working via the Internet: Connecting of control panel via Wi-Fi. Working on 1 address of ACS server via single Wi-Fi router

Description:

1. Control panel is connected on Wi-Fi via router with Wi-Fi access point .
2. In LAN (or a built-in router) DHCP server is working.
3. There is a gate (output) to the Internet via router
4. ACS server on the Internet has static IP address

Scheme:

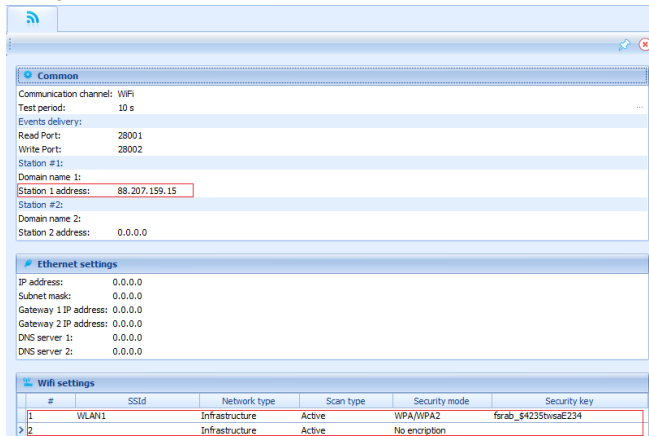


Steps for setting connection to the server (denoted by Roman numerals in the figure):

- I. Setting of connection on Wi-Fi, if transfer of messages fails - move to the next Wi-Fi network
- II. Request of free IP from DHCP server
- III. Getting IP from DHCP server
- IV. Direct transfer via the Internet router on static server address.
- V. Redirection (Port Forwarding) of data from the control panel to ACS server.

Settings made by using the Configurator software (in red)

1. Wi-Fi Channel is set
2. IP address for ACS server is indicated
3. Setting for Wi-Fi network with SSId WLAN1 is set



To work with DNS server name it is enough:

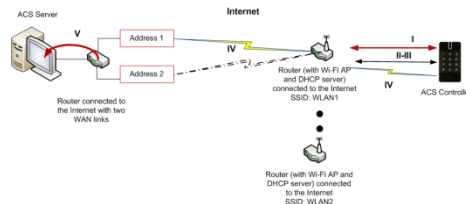
1. Indicate "Domain name" for server address

Working via the Internet: Connecting of Control panel on Wi-Fi. Work in two addresses of ACS server via several Wi-Fi routers

Description:

1. The control panel is connected on Wi-Fi via routers, passing between them in series when the transfer fails
2. Built-in in router DHCP server runs.
3. There is a gate (output) to the Internet via router
4. ACS server on the Internet has two static IP addresses.
5. When the transfer fails a switch to the second IP (till the change of the router) takes place

Scheme:

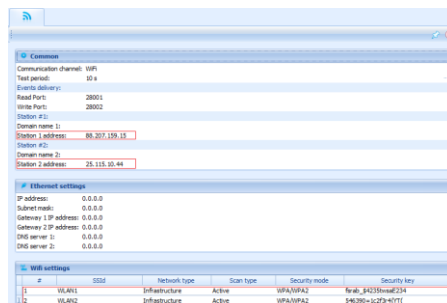


Steps for setting of connection to the server (denoted by Roman numerals in the figure):

- I. Setting of connection on Wi-Fi, if transfer of messages fails - move to the next IP server and then move to the next Wi-Fi network
- II. Request of free IP from the DHCP server
- III. Getting IP from DHCP server
- IV. Direct transfer via router via the Internet to static address of the server.
- V. Redirection (Port Forwarding) of data from control panel to ACS server.

Settings made by using the Configurator software (in red)

1. Wi-Fi Channel is set
2. Two IP addresses for ACS server are indicated
3. Setting for Wi-Fi network with SSId WLAN1 - WLAN2 is set



To work with DNS server name it is enough:

1. Indicate "Domain name" for server address