

Другие языки:

English • [русский](#)

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Object management through the internet

General instructions for using static IP-address, DDNS service and setup of the NAT, Port Forwarding in the i3 lite through the internet.

How to connect i3 lite to hardware

i3 lite app can connect to iRidium server through the internet for management and to receive data from physically remote hardware. For this you need to setup your network hardware (router). Let's view the ways of hardware remote control.

Connection through the static IP address in the internet.

i3 can connect to a remote router and to a hardware through it via the router internet IP-address on condition that it does NOT change i.e. it is static.

1 Getting the static IP-address in the internet

Static IP-address can be assigned to your IP-router only by Internet provider. If you use mobile internet, assignment of Static IP-address is impossible, go to the next option (DDNS).

Permanent IP-address is called "static external" and means that you can connect to your router from anywhere in the world and it's IP-address does NOT change

[What is my internet IP-address?](#) (IP-address changes if it is NOT static)

Not all internet providers can give you the static IP-address. But if the provider does use a provider's instruction to setup the router to work with static IP-address.

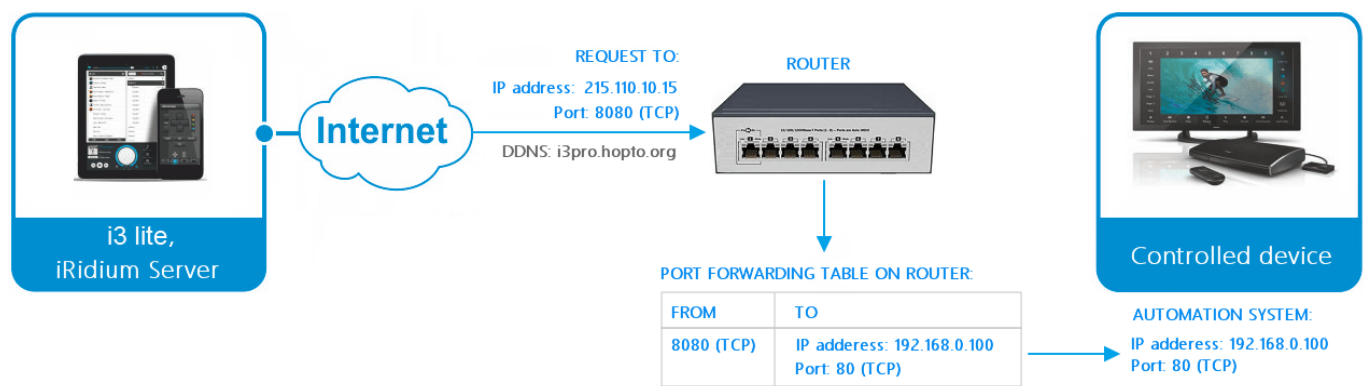
Providing access to hardware through the router is a next step - NAT and PortForwarding setting

2 Nat and PortForwarding setting on the router

The NAT service provides transfer of data sent to the router from the external network to LAN. If rules of data transfer are not set up, commands will not be sent anywhere but your router.

NAT (Network Address Translation) - the service for translation of internal network IP-addresses to IP- addresses of the external network. Before you start to set up NAT, give the equipment you use static local IP-addresses

The principle of forwarding data from the external network to the internal one:



1. a remote device sends a command to the router address in the Internet and the "external" port of the equipment specified in the table of data forwarding
2. the router forwards the command to the device in the local network specified in the table of data forwarding
3. the command is executed by the device

The number of forwarding "rules" on the router has to be set up based on what devices of your network have to receive data or commands from the Internet.

Using the example of the D-Link router, let us set up one forwarding rule (every network device needs its own rule):

D-Link

DIR-300 // SETUP ADVANCED MAINTENANCE STATUS HELP

ADVANCED PORT FORWARDING RULES

The Advanced Port Forwarding option allows you to define a single public port on your router for redirection to an internal LAN IP Address and Private LAN port if required. This feature is useful for hosting online services such as FTP or Web Servers.

Save Settings Don't Save Settings

24 - ADVANCED PORT FORWARDING RULES

Remaining number of rules that can be created: 14

	Name	Application	IP Address	Public Port	Private Port	Traffic Type
<input checked="" type="checkbox"/>		<< Application Name	192.168.0.100	8080 ~	80 ~	TCP

Helpful Hints..

- Check the **Application Name** drop-down menu for a list of pre-defined applications that you can select from. If you select one of the pre-defined applications, click the arrow button next to the drop-down menu to fill out the appropriate fields.
- You can select your computer from the list of DHCP clients in the **Computer Name** drop-down menu, or enter the IP address manually of the computer you would like to open the specified port to.
- This feature allows you to open a range of ports to a computer on your network. To do so, enter

1. "IP Address" - the local IP-address of the device on which you want to send commands from the Internet
2. "Public Port" - the port where you need to send the command from the Internet so it would come to the device
3. "Private Port" - the real hardware port that receives commands (it can be different from "Public Port")
4. "Traffic Type" - the allowed protocol for connection between the sender and receiver of commands (TCP or UDP)

Example Provider gives to your router the public static IP address **215.110.10.15**. You set a data redirection from external TCP port **8445** to internal TCP port **8443** on **192.168.0.100** host which is iRidium server IP address.

Connection through a subdomain DDNS without the static address

i3 lite can connect to a remote router via a domain name which is given to router by DDNS service. The domain name is used if the internet provider does NOT give the static IP-address or when you use a mobile internet.

Without the static IP-address, your IP will constantly change. It is called a dynamic IP-address. Change of the IP-address leads to the fact that the control program could NOT apply to hardware by the external IP-address, because it periodically loses the relevance.

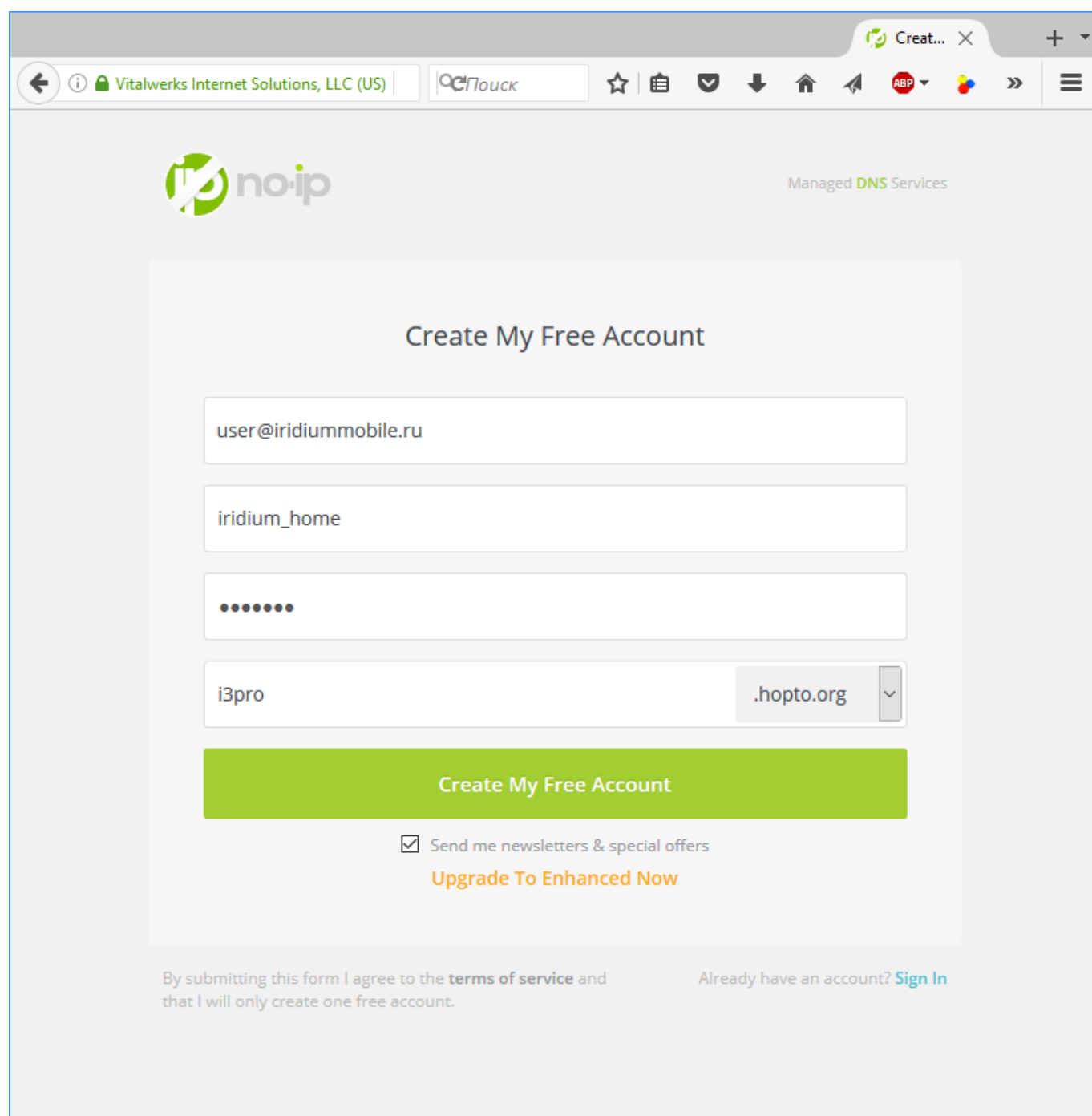
Companies which can provide a service of dynamic DNS (DDNA or DynDNS) are able to solve the problem with dynamic IP-address. This service is used to assign the constant domain name to the

router with the dynamic IP-address. This service can be provided by: [No-IP](#), [DynDNS](#) and others.

Let's consider an assignment of subdomain to the router via the paid service **No-IP**. There are 3 stages of configuration:

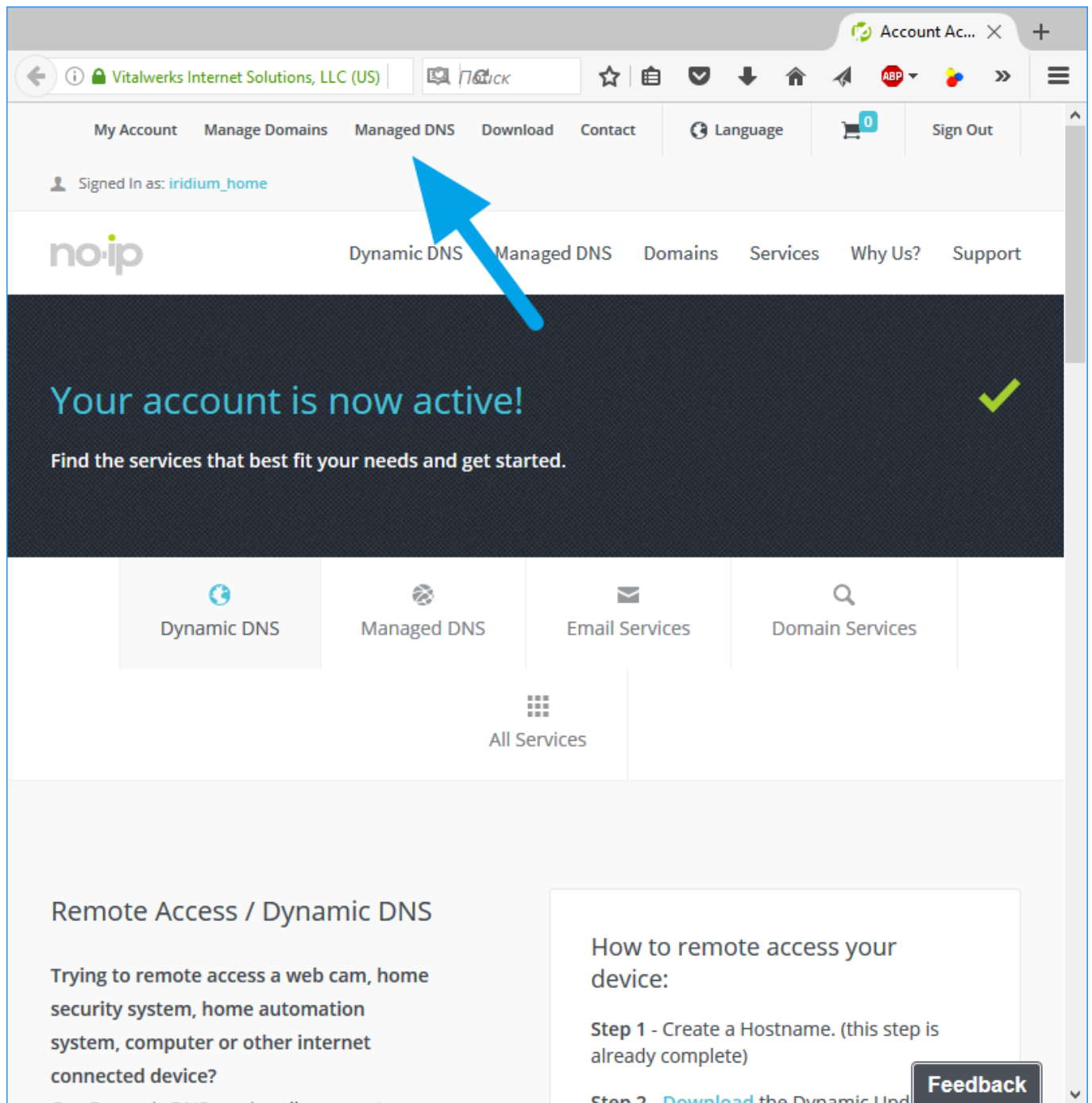
1. Register the subdomain on the site, which provide the DDNS service.
2. Set up the DDNS service on the router
3. Set up the Nat, PortForwarding service on the router

1 Account and subdomain registration on No-IP.com



The screenshot shows a web browser window with the No-IP website. The browser's address bar shows 'Vitalwerks Internet Solutions, LLC (US)' and the search bar contains 'Поиск'. The No-IP logo is in the top left, and 'Managed DNS Services' is in the top right. The main heading is 'Create My Free Account'. The form contains the following fields and elements:

- Email field: 'user@iridiummobile.ru'
- Subdomain field: 'iridium_home'
- Password field: masked with dots
- Username field: 'i3pro' and a dropdown menu showing '.hopto.org'
- A green 'Create My Free Account' button
- A checkbox labeled 'Send me newsletters & special offers' which is checked
- A link 'Upgrade To Enhanced Now' in orange text
- Footer text: 'By submitting this form I agree to the [terms of service](#) and that I will only create one free account.'
- Footer text: 'Already have an account? [Sign In](#)'



Try our new [Account Management Site](#).

Manage Hosts

Current Hosts: 1 **Need More Hosts? Enhance Your Account!** [Enhance Your Account](#)

Host	IP/URL	Action
Hosts By Domain		
hopto.org		
i3pro.hopto.org	46.165.48.48	Modify Remove

[Add A Host](#)

Add Google Apps to your Domain

We have partnered with Google to allow you to easily add email, online storage, shared calendars, video meetings and more. Built for business, designed for teams. [Learn how easy it is to integrate Google Apps with your domain today!](#) [Learn More](#)

Google Apps for Work

1. Register a new account on [No-IP](#). During the account registration select a subdomain address - you can use this address as your router address. For example: `i3pro.hopto.org`
2. Confirm account registration (a confirmation code will come on e-mail). You will get access to manage the domains in the "Managed DNS" field.
3. The subdomain registered during the creation of account is already active. Subdomain name is needed for setting the router

Note that in a free No-IP account you need to prolongate the subdomain every month (click the button on the site to prolongate). Otherwise it will stop working. You can pay one year subscription or more to create multiple domains, which will constantly work. See subscription terms on the site.

2 Setting the router for working with No-IP DDNS service

Make sure your router supports DDNS. Path to DDNS settings depends on model and manufacturer of the router. Examples:

ASUS

Home Gateway

Home

Quick Setup

Wireless

IP Config

WAN & LAN

IPv6

SNMP

DHCP Server

Route

Miscellaneous

NAT Setting

Internet Firewall

Bandwidth Management

USB Application

USB Network Devices

System Setup

Status & Log

Logout

ASUS Wireless Router

DDNS Setting

Dynamic-DNS (DDNS) allows you to export your server to Internet with an unique name, even though you have no static IP address. Currently, several DDNS clients are embedded in DIR-320. You can click Free Trial below to start with a free trial account.

Enable the DDNS Client?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Autodetect public IP address?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Server:	WWW.NO-IP.COM
User Name or E-mail Address:	user@iridiummobile.ru
Password or DDNS Key:	*****
Host Name:	i3pro.hopto.org
Enable wildcard?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Update Manually:	<input type="button" value="Update"/>

Restore:	Clear the above settings and restore the settings in effect.
Finish:	Confirm all settings and restart DIR-320 now.
Apply:	Confirm above settings and continue.

ASUS RT-AC66U

LogoutReboot

English

Quick Internet Setup

Operation Mode: **wireless router** Firmware Version: : **3.0.0.4.220**
SSID: **ASUS ASUS_5G**

Internet ConnectionPort TriggerVirtual Server / Port ForwardingDMZDDNSNAT Passthrough

General

Network Map

Guest Network

Traffic Manager

Parental control

USB application

AICloud

Advanced Settings

Wireless

LAN

WAN

IPv6

VPN Server

Firewall

Administration

WAN - DDNS

DDNS (Dynamic Domain Name System) is a service that allows network clients to connect to the wireless router, even with a dynamic public IP address, through its registered domain name. The wireless router is embedded with the ASUS DDNS service and other DDNS services.

The wireless router currently uses a private WAN IP address (192.168.x.x, 10.x.x.x, or 172.16.x.x).
This router may be in the multiple-NAT environment and DDNS service cannot work in this environment.

Enable the DDNS Client

☒ Yes ☐ No

Server

www.NO-IP.COM [Free Trial](#)

Host Name

i3pro.hopto.org

User Name or E-mail Address

iridium_home

Password or DDNS Key

Enable wildcard

☐ Yes ☒ No

Apply

TP-LINK®

Status

Quick Setup

QSS

Network

Wireless

DHCP

Forwarding

Security

Parental Control

Access Control

Static Routing

Bandwidth Control

IP & MAC Binding

Dynamic DNS

System Tools

DDNS

Service Provider:

No-IP (www.no-ip.com) [Go to register...](#)

User Name:

iridium_home

Password:

Domain Name:

i3pro.hopto.org

☒ Enable DDNS

Connection Status:

DDNS not launching!

LoginLogout

Save

Product: DCS-930L
Firmware version: 1.00

D-Link

DCS-930L //
LIVE VIDEO
SETUP
MAINTENANCE
STATUS
HELP

Wizard
Network Setup
Wireless Setup
Dynamic DNS
Image Setup
Video
Audio
Motion Detection
Mail
FTP
Time and Date
Logout

DYNAMIC DNS

The Dynamic DNS feature allows you to host a server (Web, FTP, Camera, etc...) using a domain name that you have purchased (www.whateveryournameis.com) from your broadband Internet Service Provider (ISP). Using a DDNS service, your friends can enter your host name to connect to your IP Camera regardless of your IP address.

Save Settings
Don't Save Settings

DYNAMIC DNS SETTING

☒ Enable
☐ Disable

Server Address
WWW.NO-IP.COM
<<
Select Dynamic DNS Server

Host Name
i3pro.hopto.org

User Name
iridium_home

Password

Timeout
1
hours

Save Settings
Don't Save Settings

Helpful Hints..

Dynamic DNS is useful if you have a DSL or Cable service provider that changes your modem IP address periodically. This will allow you to assign a website domain name to your camera instead of connecting through an IP address.

DDNS settings are approximately the same regardless of the router model:

1. "Enable the DDNS Client" - activate the service on the router
2. "Server" - server of the DDNS service provider. In our case: WWW.NO-IP.COM
3. "User Name or E-mail Address" - login or e-mail which you entered during account registration on noip.com
4. "Password" - your account password on noip.com

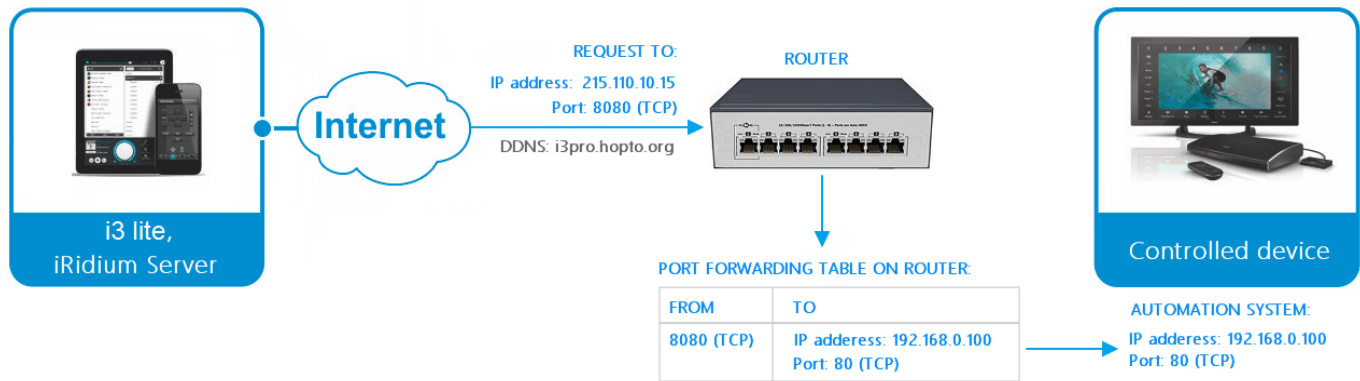
After saving DDNS settings your router will report noip.com it's internet IP-address and noip.com will redirect to the router a data sent to the subdomain's address.

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DIR-300

SETUP ADVANCED MAINTENANCE STATUS HELP

Port Forwarding

Application Rules

QoS Engine

MAC Filter

Firewall & DMZ

Advanced Wireless

Advanced Network

Routing

Logout

ADVANCED PORT FORWARDING RULES

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4. "Traffic Type" - the allowed protocol for connection between the sender and receiver of commands (TCP or UDP)

Example You have registered the subdomain **i3lite.hopto.org** on noip.com and activate the DDNS service on the router. Also you have set up on the router the data redirect rule from external **8080** TCP port to internal **8443** TCP port with **192.168.0.100** IP-address, which is the hardware address.

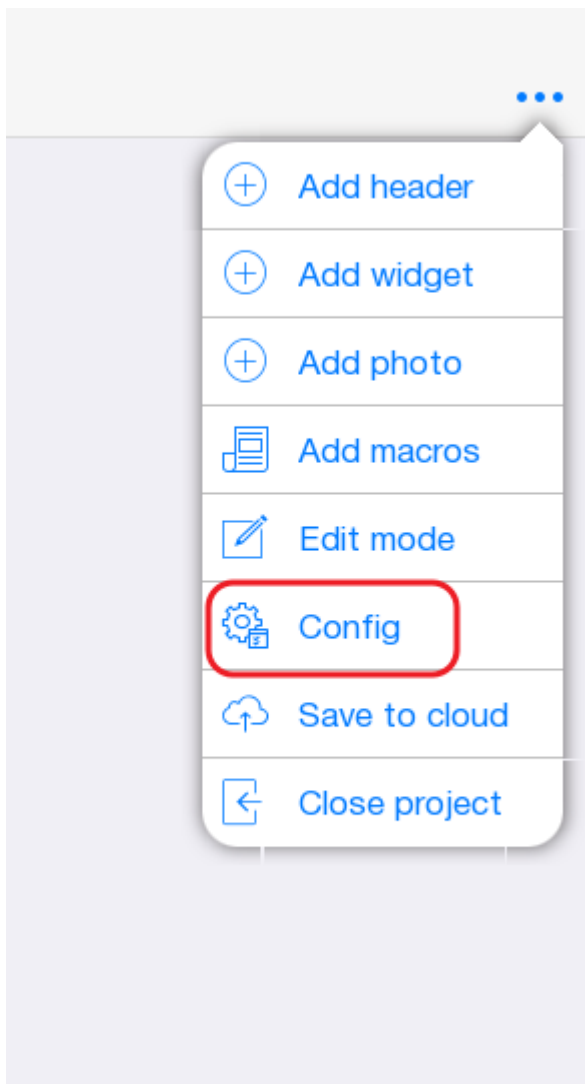
To connect to the hardware through the internet you need to specify in settings:

Host: i3lite.hopto.org, Port: 8080

Setting up a connection to iRidium server through the internet

To configure the object remote control you need to:

- 1 Open a project in i3 lite app and go to a Config



- 2 Go to a "Server" field. In this field you need:

- **Work mode** - connection mode to iRidium Server
 - Auto - automatic switching between local mode and the mode of operation via the Internet
 - Local - local connection only

- External - connection through the internet only
- **External Host** - external router IP-address
- **External API port** - port for work with authorization and service functions of the server. It uses the **8443** port in the local network
- **External Protocol Port** - port for work with devices, used in the project. It uses the **30464** port in the local network


If the project must work only in the local network you have to specify "Local" in the "Work mode" field. For work with server through the internet you have to specify "External" or "Auto" and fill the external network settings fields. For remote working you have to create on the router 2 external ports for **8443** and **30464** local ports.


3 Enter external ports and external IP-address of the router in server settings:


- In the "External Host" field enter external IP-address of the router
- In the "External Api Port" field enter external port for 8443 port.
- In the "External Protocol Port" field enter external port for 30464 port
- In the "Work mode" field specify Auto or External


Config	Server
General	Name: DESKTOP-4SH2796(Server)
Floors & Rooms	Internal Host: 192.168.0.77
Devices	Port: 30464
Server	External Host
Schedules	External API Port
Routines	External Protocol Port
Macros	Work mode: Auto switch
	PIN
	Test mode: <input checked="" type="checkbox"/>
	Project synchronization: <button>Synchronize</button>
	<button>Deactivate</button>


4 If you use an auto-switching mode (Work mode: Auto), you need to go to "General" field in the Config and enter name of your home network in the "Local WiFi" field. In the auto-mode the app defines in what WiFi network user is in. If the user is in the home network, the app connects to the server with local settings. If the app is NOT connected to WiFi or network name is different from the home network one, app connects to the server with settings of working through the internet


 General


 Floors & Rooms

 Devices

 Server

 Schedules

 Routines

 Macros

Nameываываыва >

LanguageEnglish >

Local WiFi name >

Config version1.10.0