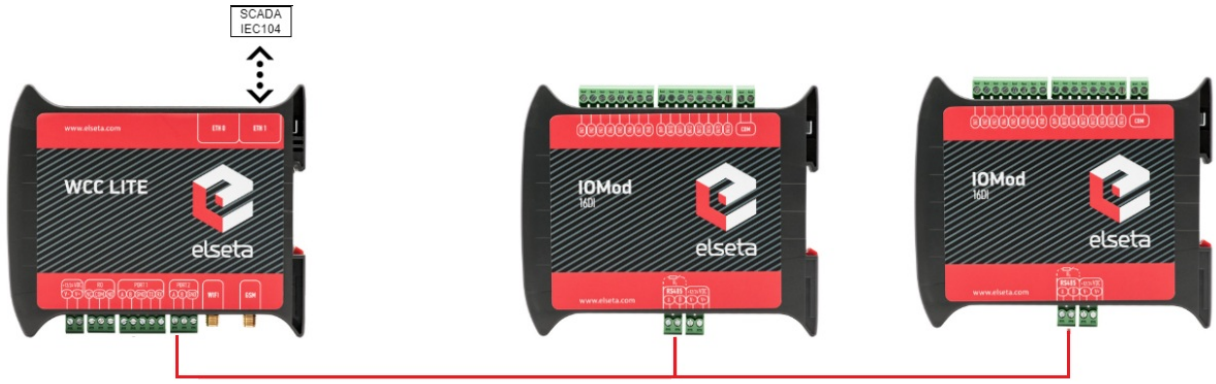
Connecting two IOMod 16DI

Description

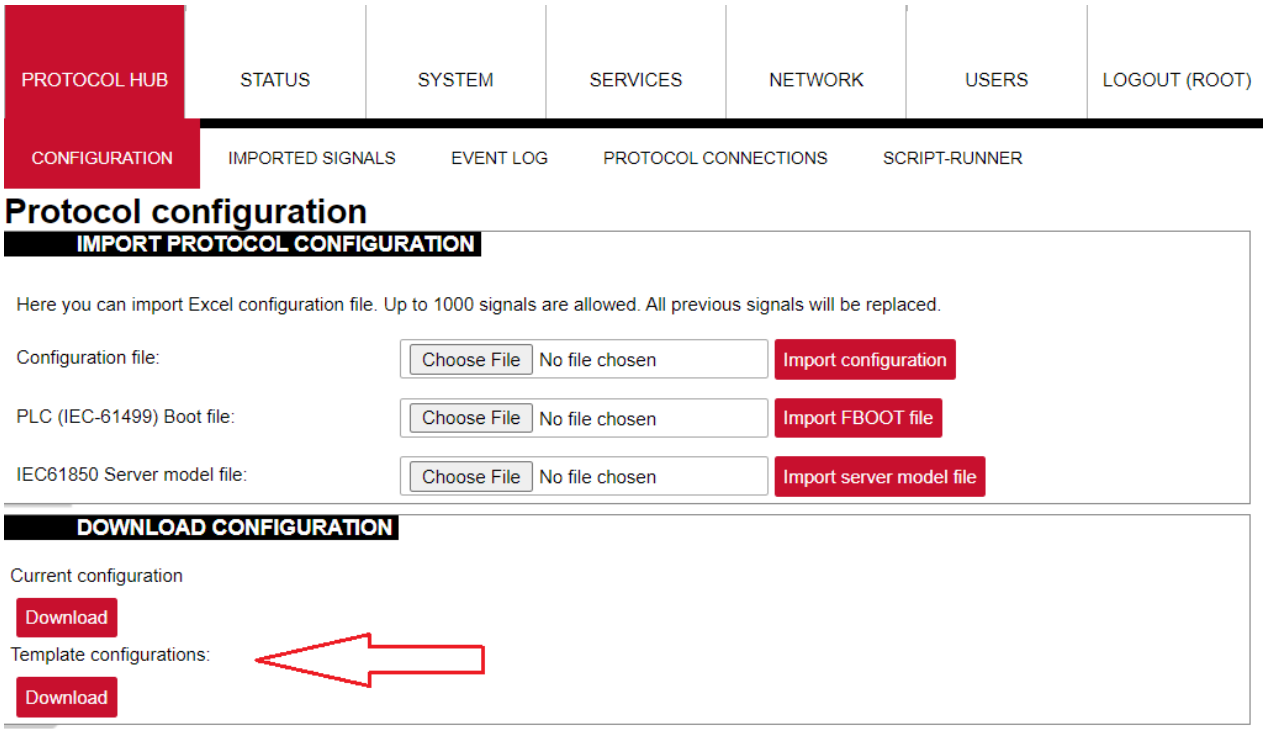
This article describes how to connect and configure two IOMods 16DI to the WCC Lite using IEC103, and Modbus RTU.



Typical connection schematic for two IOMod 16DI

Preparing the configuration

At first you need to make a configuration for the WCC Lite. This can be done using any spreadsheet editing program. Templates for configuration can be found on the WCC Lite web. Protocol Hub --> Configuration. On the bottom of the page there will be a *Download* button for template configurations.



You need to configure Devices and Signals sheets before continuing. These template configurations can also be used to configure protocols like Modbus-master and DNP3. Configuration can be modified according to functionality needed. In this case, *Device* sheet will only have three devices, WCC Lite and two IOMod 16DI. It is important to use only one protocol for each port, otherwise configuration will not work.

name	description	device_alias	id	enable	protocol	device
WCC Lite	WCC Lite	WCC Lite	1	1	modbus rtu	PORT1
IOMOD1	IOMOD1	IOMOD1		1	IEC 60870-5-103 master	PORT2
IOMOD2	IOMOD2	IOMOD2		0	IEC 60870-5-103 master	PORT2

Second step

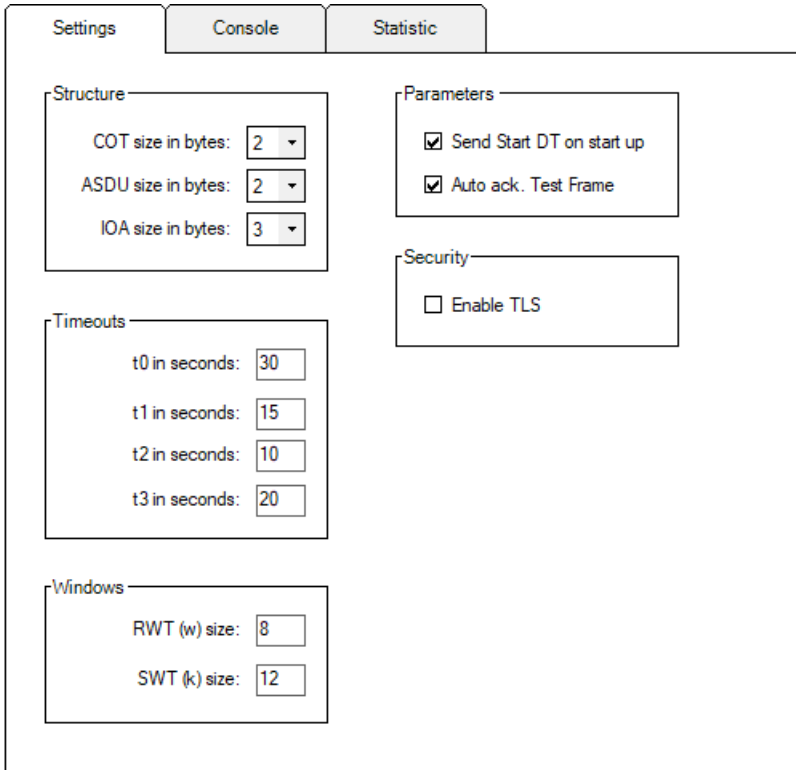
Before connecting IOMods to WCC Lite you need to configure it via mini USB. This can be done following these steps:

- For IEC103
- For IEC101(WIP)
- For Modbus

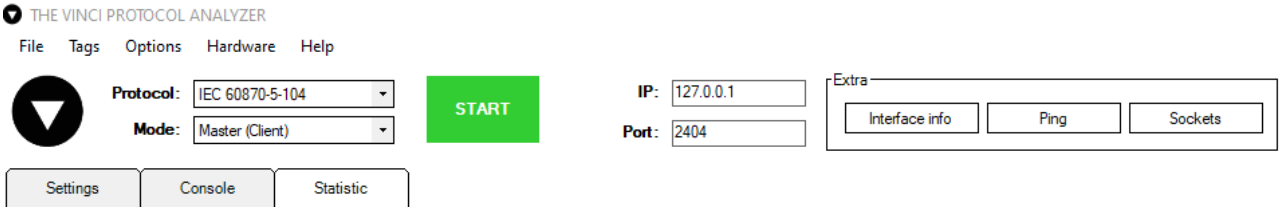
You need to configure it, like it is done in the excel configuration. To do that, fist you need to open PuTTY terminal and change these parameters: *parity, link address, asdu address*. It is important, that *link address* and *asdu address* for both IOMods are different and *parity* should be even. Other parameters such as *baudrate, databits* and *stopbits* should be set to default. Signals sheet should be mapped according to functionality needed.

Connecting IEC104-slave via Vinci

After Excel and USB configurations, you can connect to device using Vinci software. In order to simulate IEC104 slave you need to choose IEC 60870-5-104 protocol and Master(Client) mode and press start. In *Settings* tab, check Structure, Timeouts and Windows values to match Excel configuration.

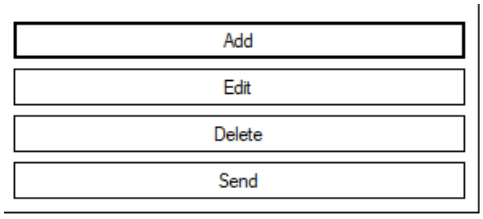


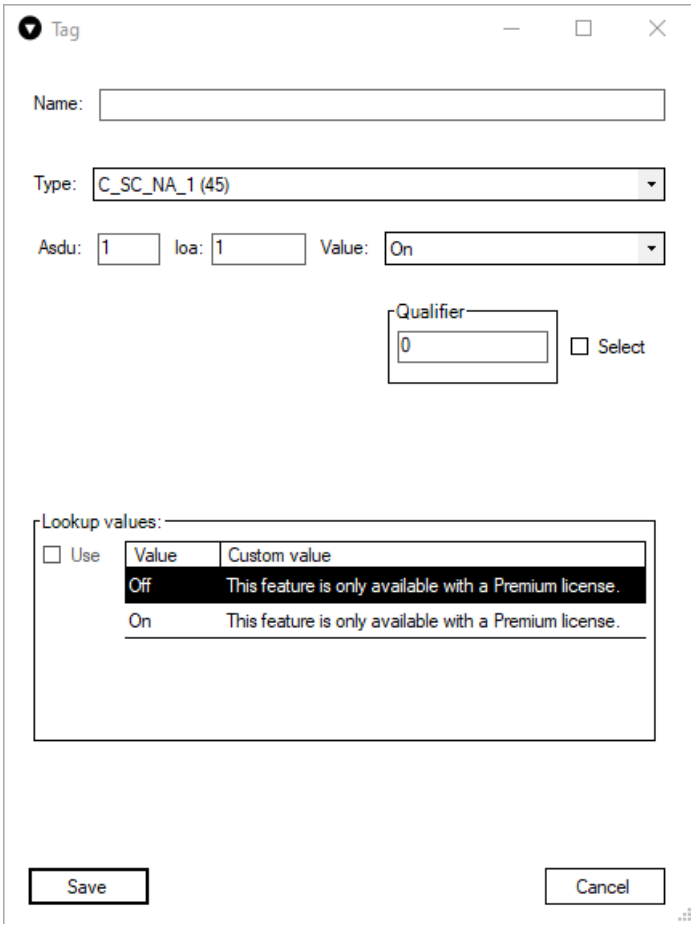
Then set correct IP address and Port at the top of the program page.**Port** for IEC104 should be 2404 and **IP address** should match your WCC Lite IP address.



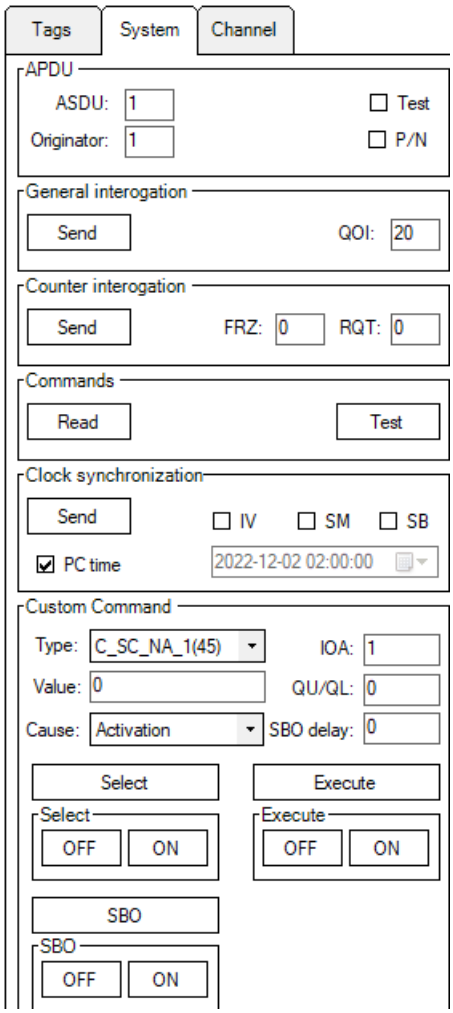
On the right side of the page you can find *Tags* and *System* tabs. In *Tags* you can create *jobs* which are described in

you excel configuration *job_todo* and *tag_job_todo.* To do so, click *Add* and choose *Type*. This type should match *data_type* described in excel configuration. If needed change asdu (in Excel configuration –*asdu_address*) and ioa (*info_address)*. Create user friendly name for this job and click save. To execute when needed click*send.*





In *System* tab you can execute commands accordingly by setting *ASDU, Type* and *IOA*. To execute commands you need to specify *Value* and *Cause*. Depending on your configuration in order to execute these commands you need to click *Execute* or *Select*. By clicking *Execute,* command will be executed immediately and *Select* will only select given command but will not execute it.



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