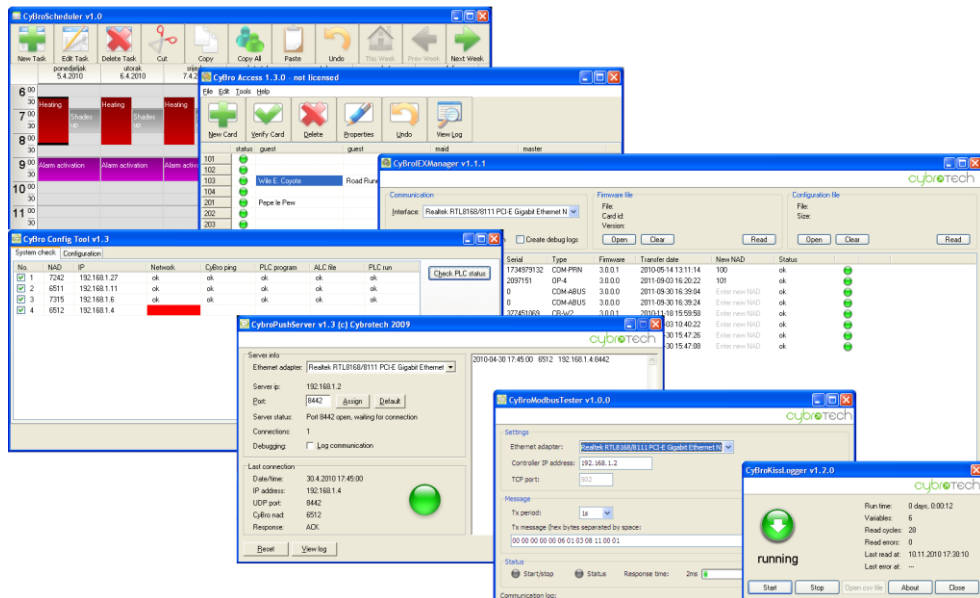# Cybrotech software tools

rev. 02

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Index
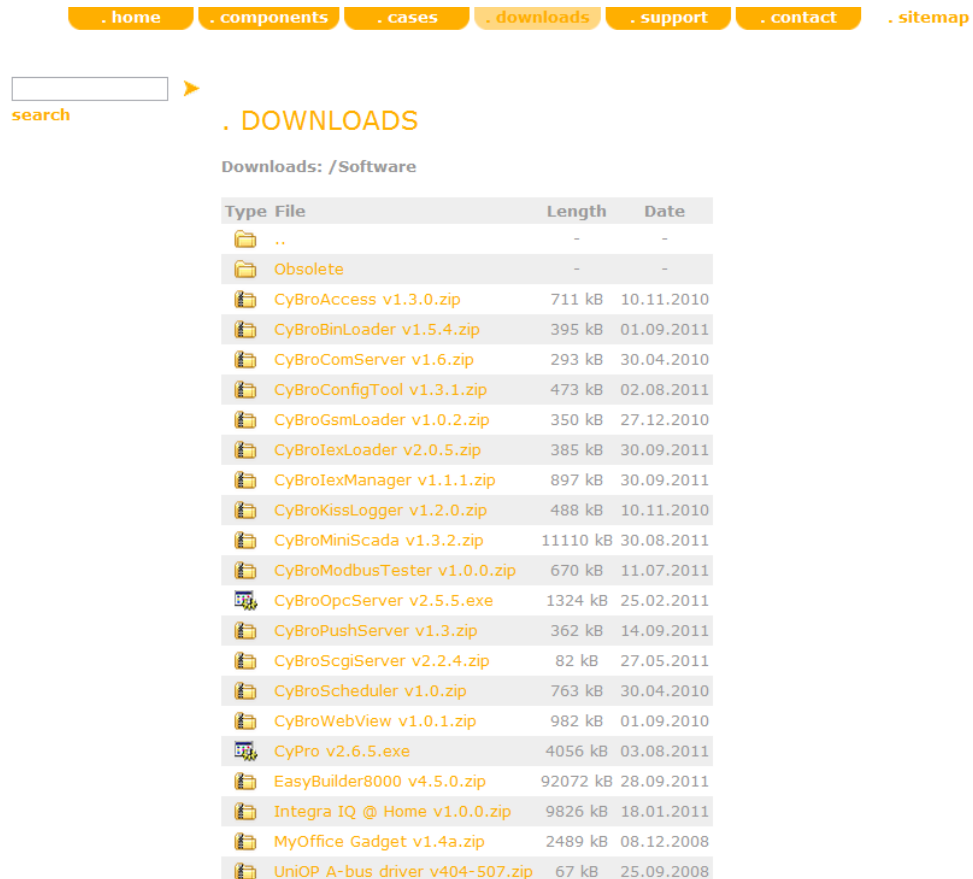
Introduction

Download

Cybrotech has prepared lot of software tools. Some of them are designed to ease programming and debugging phase, others can be nice functional addition for automation end users.

Visit www.cybrotech.co.uk and download all software in downloads / software menu.

Unzip and use

Nice focus functionalities of all tools came in small applications which all came in zip files. Tools just need unzip and run.

Beside application there are also some files with important information about tool:

- Readme.txt with functionality description, instructions for use and if licencing protocol if there is.

- History.txt with revisions new features, updates and bugs fixed.

Most of the tools are freeware and support for that is limited to Readme file. In case of licencing there comes full Cybrotech stuff support.

CyBroMiniScada

CyBroMiniScada is visualization system for CyBro controllers. Its function and appearance is defined by xml configuration file and external images.

Xml file is an ordinary text file created by text editor. It contains pages, and pages contain objects. Objects are created manually (copy/pasted from "Reference.xml"), then positioned using internal editor.

MiniScada works in local network only. Internet access and serial connection are not supported. If more than one network adapter is active, communication may not work properly.

There is no installation, just unzip and run. No external programs are needed.

MiniScada comes with a library of graphical symbols and buttons. Select icons and buttons you need, and copy them to /Images directory.

To use specific national characters, proper encoding should be selected in first line. Generally, MiniScada supports most encodings supported by operating system and selected font. Unicode is fully supported.

CyBroMiniScada is free software. It works normally without a licence, it is not limited or crippled by any means. However, if you want to get rid of Cybrotech logo in the top left corner, you need a licence. Licence is granted for a single application and single computer.

CyBroAccess

CyBroAccess application is part of CyBro access control solution. Typical usage is hotel reception desk, but it may be used in other access control applications as well. Basically, it is used to manage allowance tables, stored in controllers.
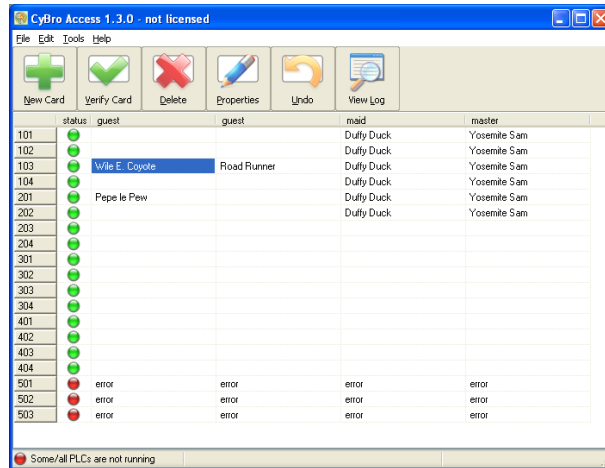
CyBro access control system consists of:

- RFid reader
- CR-W2 module
- CyBro-2 controller (running AccessControl)
- PC/Windows computer (running CyBroAccess)

To configure CyBroAccess, edit CyBroAccess.ini according to your application. Each controller may have a different number of rooms, but all programs should have the same allowance array and event array size.

CyBroAccess writes codes to CyBro allowance array. Decision to allow access (or not) is made by CyBro.

Events (door open, access denied) are temporary stored in CyBro event array. CyBroAccess periodically reads event log (every 10 seconds), and store events to file (CyBroAccess.log). File format is csv (comma separated values).

If network is down, controllers will continue to work, but it won't be possible to add new or delete existing keys.

Access log is read from controllers periodically, every 10 seconds, and written to log file. File size is not limited.

MyOffice Gadget

Gadget is a personal interface to Integra-BM system.

Unlike touch screen or operating panel, gadget is a piece of software, small program running on your computer. You may use gadget exactly the same way as you use wall thermostat, switch or dimmer.

MyOffice is a series of gadgets made to control Integra-enabled office. They all have the same functionality, and differ only in design.

MyOffice needs 8Mb or system RAM and almost no CPU cycles, so it is neglible load even for a thin PC.

Operations:

 HVAC mode – heating, cooling or inactive.

 Fan-coil water intake temperature.

 Outdoor temperature, humidity and lightness.

 Requested room temperature in °C.

 Fan-coil speed and valve position.

 Fan-coil speed limit.

 Bio-offset

 Temporary activates heating/cooling at maximum speed.

 Room presence timer.

CyBroScheduler

CyBroScheduler executes a given task at predefined time. Task is entered at specific day, and has beginning and end time, associated with begin action and end action. Action basically means setting one or more CyBro variables.
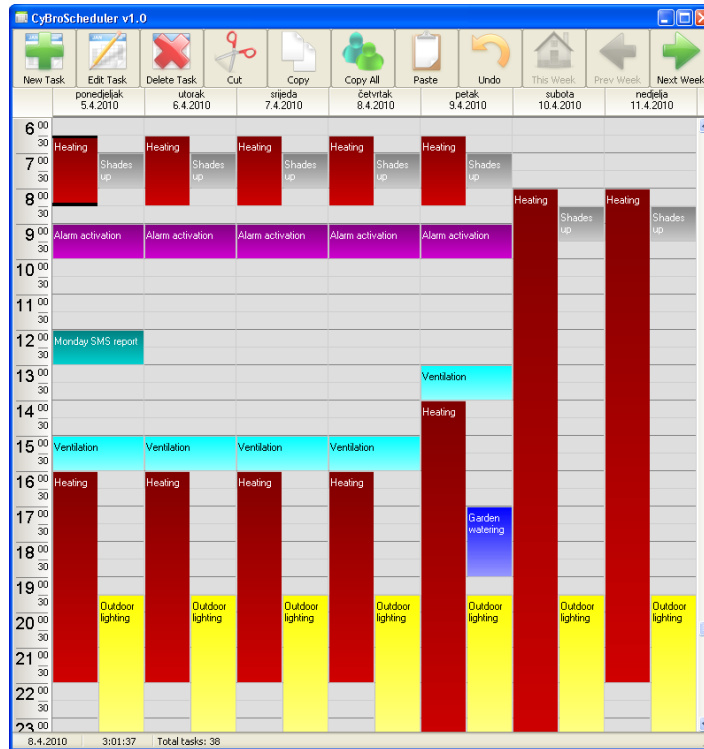
Scheduler runs on PC. If program is not started, or computer is off, action will not be performed.

Tasks are configured by internal editor. It provides some common functions, such as new/edit/delete and cut/copy/paste task. Task is inserted at cursor position. Command "copy all" copies all tasks on clipboard, which allows copying one week to another.

Scheduler deals with current week and next three weeks, so tasks can be specified up to 28 days ahead. At week end, midnight Sunday to Monday, current week is discarded, next becomes current, second becomes first, third becomes second, and is also duplicated as new third.

Scheduler works in local network only. Internet access and serial connection are not supported. If more than one network adapter is active, communication may not work properly.

CyBroKissLogger

CyBroKissLogger is a simple data logger for CyBro controllers. Configuration is defined by CyBroKissLogger.ini file. Data is saved to CyBroKissLogger.csv file. Both periodical and alarm/event reading is supported.
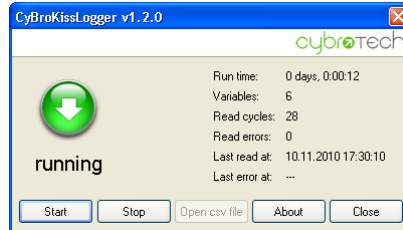
For periodic reading, groups 1s, 10s, 1min, 10min and 1h are available.

For alarm/event reading, one variable, entered as a group name, is used as trigger. Trigger is read once per second. When trigger is set (value other than zero), logger will read all variables in group. Trigger variable is not saved. If AutoReset is 1, logger will automatically write zero to trigger variable.

Logger works in local network only. Internet access and serial connection are not supported. Network adapter is selected automatically.

Periodic reading is triggered on round interval, not related to when logger is actually started. For example, if logger is started at 7:45, first hourly event will be triggered at 8:00, second at 9:00 and so on.

When logger is open, and Autorun is set, reading will start automatically. To open with Windows, put logger in /Programs/Startup directory.

Logged data can be imported to any data analysis program, like Microsoft Excel. To check one example, open ExcelExample.xls. To insert your own data, delete columns A-D, import csv file with semicolon delimiter, and use Autofilter to select a single variable.
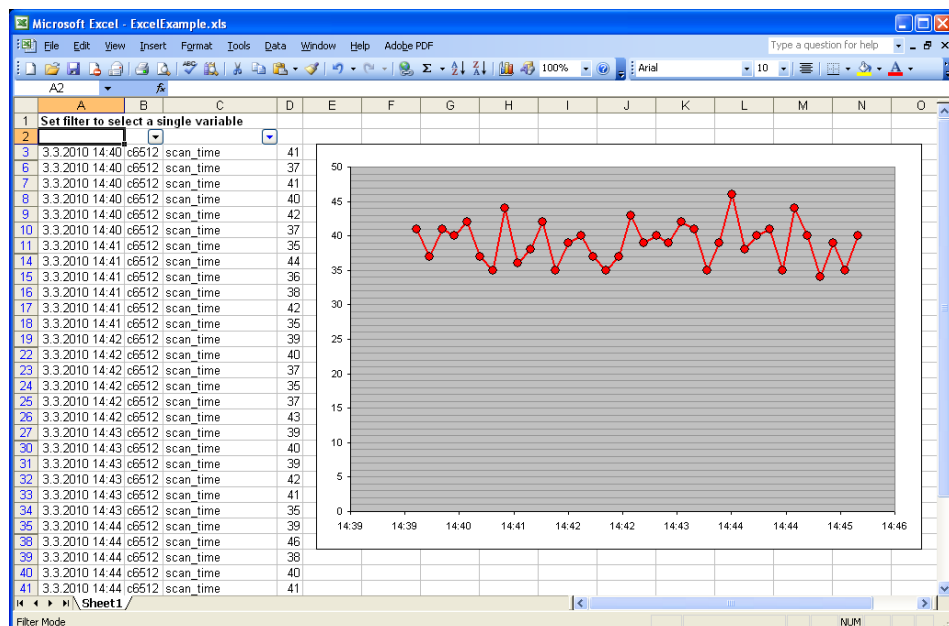
CyBroDataTool

CyBroDataTool is application for checking a network of CyBro controllers, and reading/writing a predefined set of variables (configuration). It can also be used to adjust RTC.
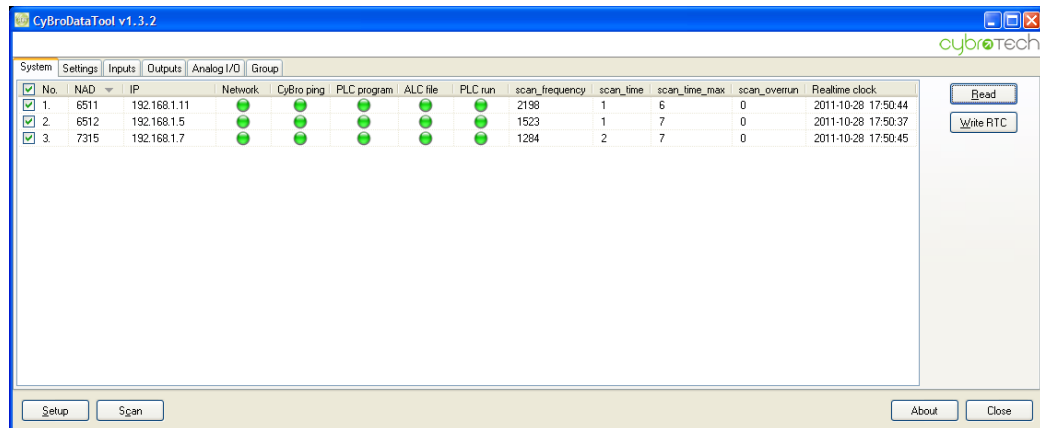
Server works in local network, or directly connected to CyBro. Internet access and serial connection are not supported.

CyBroIexManager

CyBroIexManager is a tool for managing IEX devices. It works in local network, or directly connected to CyBro. Internet access and serial connection are not supported.
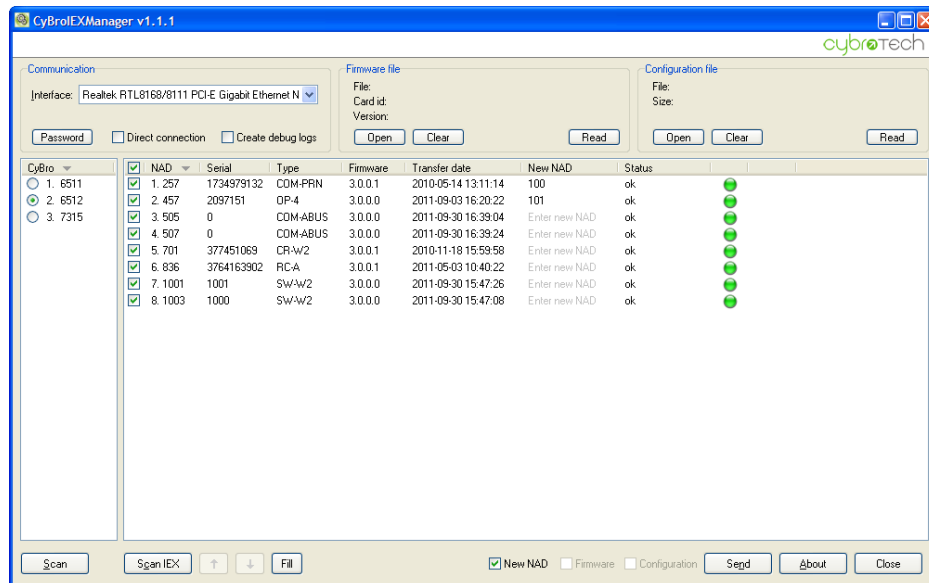

Features:

- autodetect IEX devices
- change network address
- read/write firmware
- read/write configuration file (GSM-1/GSM-SA)
- detect/split duplicate network address

Connection to IEX bus is made through CyBro, no additional adapter is needed.

CyBroIexLoader

CyBroIexLoader is a software tool for transferring program to IEX modules. It may also be used to manage network address of an already programmed module.
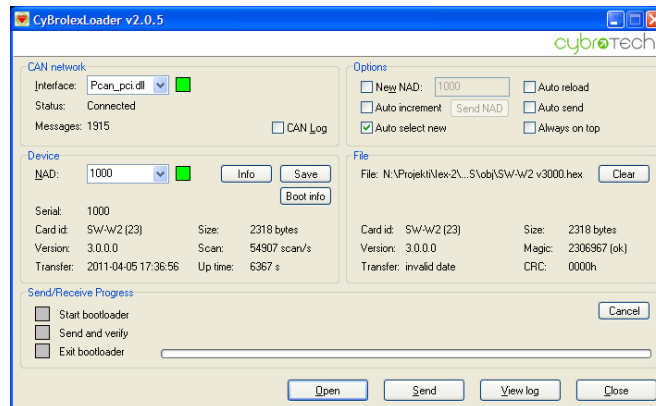
IEX modules have IEX bootloader, programmed in hardware programmer. Atmel bootloader is not supported. Bootloader is compatible with programs v3.x.x.x. IEX modules can be re-programmed in a running network, not affecting other modules. CyBro may also be connected and running. IEX Loader opens hex files only, binary files are not supported.

Sending new program (or new NAD) will also set serial number, if the present value is not valid (zero for new devices, FFxxxxxx for older devices). Valid serial number will never be changed.

To reverse NAD to original serial number, send 0 as new NAD. If device has no valid serial number, it'll use a random address in range 2,000,000-2,001,999. That function is called address splitting, and may be used when two (or more) modules have same network address.

IEX module is programmed in about 10 seconds, depending on program size.
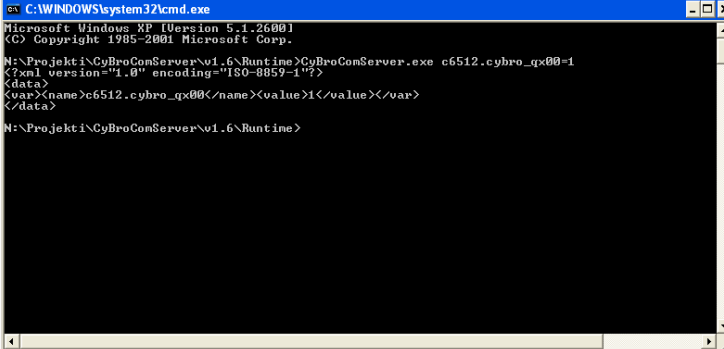
CyBroModbusTester

CyBroModbusTester is small utility used for testing MODBUS/TCP communication.
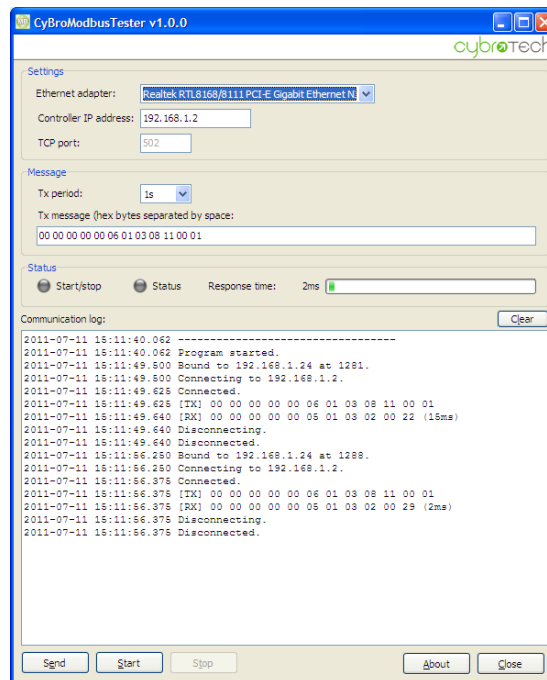
Tester is MODBUS/TCP master, tested device (CyBro) is MODBUS/TCP slave. Tester works in a local network, direct connection is not supported (i.e. CyBro should have valid IP address).

CyBroComServer

CyBroComServer is command line application for reading/writing CyBro variables by name. Request is given as command line, result is returned in XML format.

Server works only in local network. Internet access and serial connection are not supported. Operation is fully automatic, no installation and no configuration is needed. Network adapter is selected automatically.

Request string may contain multiple variables and multiple controllers. Mix of reading and writing is supported. Server may receive request as:

- command line (DOS application)
- environment variable (CGI application, used by web server)
- xml file (same as output format)

Applications:

- time schedule driven by Windows Scheduled Tasks
- desktop shortcut for frequently used commands
- data backup/restore tool
- communication engine for Visual Basic or other user applications
- communication engine for web server

CyBroPushServer

CyBroPushServer helps to reach CyBro behind the NAT, using push function.
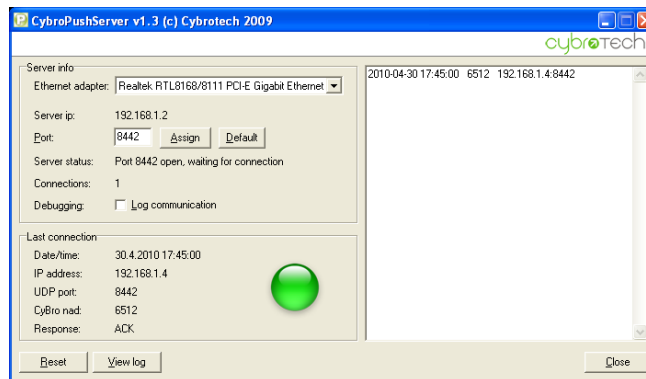
CyBro is configured to send push message to server, opening NAT translation and allowing server to send back any number of A-bus messages.

CyBroPushServer is primarily designed as a proof of technology, but it may also be a supplementary tool to display a list of available devices, later used by CyPro.

CyBroScgiServer

CyBroScgiServer is communication server for reading and writing CyBro variables.

Connection options are:

- local access
- wan access with static ip (CyBro has static ip)
- wan access using push messages (server has static ip or DynDNS)

It may be used as:

- command line (stdin for request, stdout for answer)
- CGI interface (web server, no additional modules)
- SCGI interface (web server with SCGI module)

Server is written in Python and works on any platform (Windows, Linux, Mac).

Server has access to controllers in push list and, if LocalAccess is true, local controllers listed in config.ini. Not-listed controllers are not accessible.

CyBroWebView

CyBroWebView is simple solution to access and control CyBro system using web browser. Both local and Internet access are supported. Server requirements are very low; most microcontroller-based devices (like network storage or network player) are capable enough. Server may run on Windows or Linux.
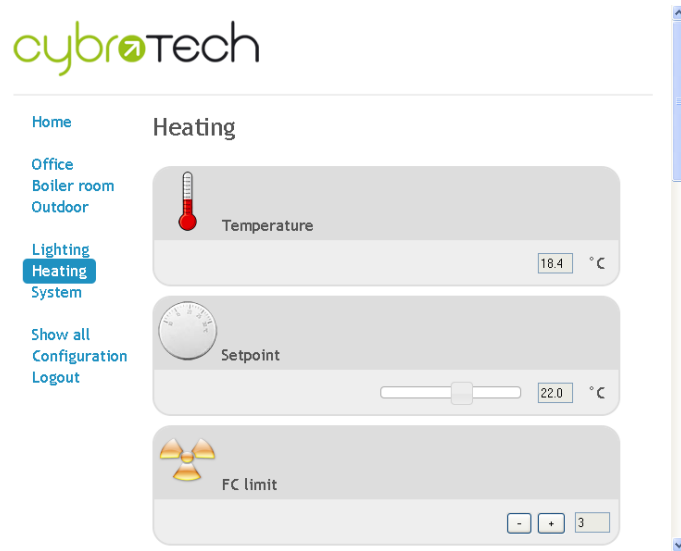
System consists of:
  web browser - CyBroWebView - Apache web server - CyBroComServer - CyBro

Communication with CyBro is established via CyBroComServer (Windows only) or CyBroScgiServer (platform independent).

CyBroWebView is compatible with all major web browsers. XMLHttpObject and JavaScript are required. Some mobile-phone browsers do not comply. In that case, use OperaMobile instead.