



MICROENER

**OPERATION MANUAL
REMOTE USER INTERFACE
PROTECTA LINE**

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 Phone : +33 (0)1 48 15 09 09 www.microener.com	OPERATION MANUAL REMOTE USER INTERFACE PROTECTA LINE	FDE N°: 19AA2571500
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INTRODUCTION

This document describes the web-based user interface of the PROTECTA device family (including the S24 series). With the user-friendly interface, you can easily manage the device. Password protection is available to grant certain privileges and access special functions.

System requirements

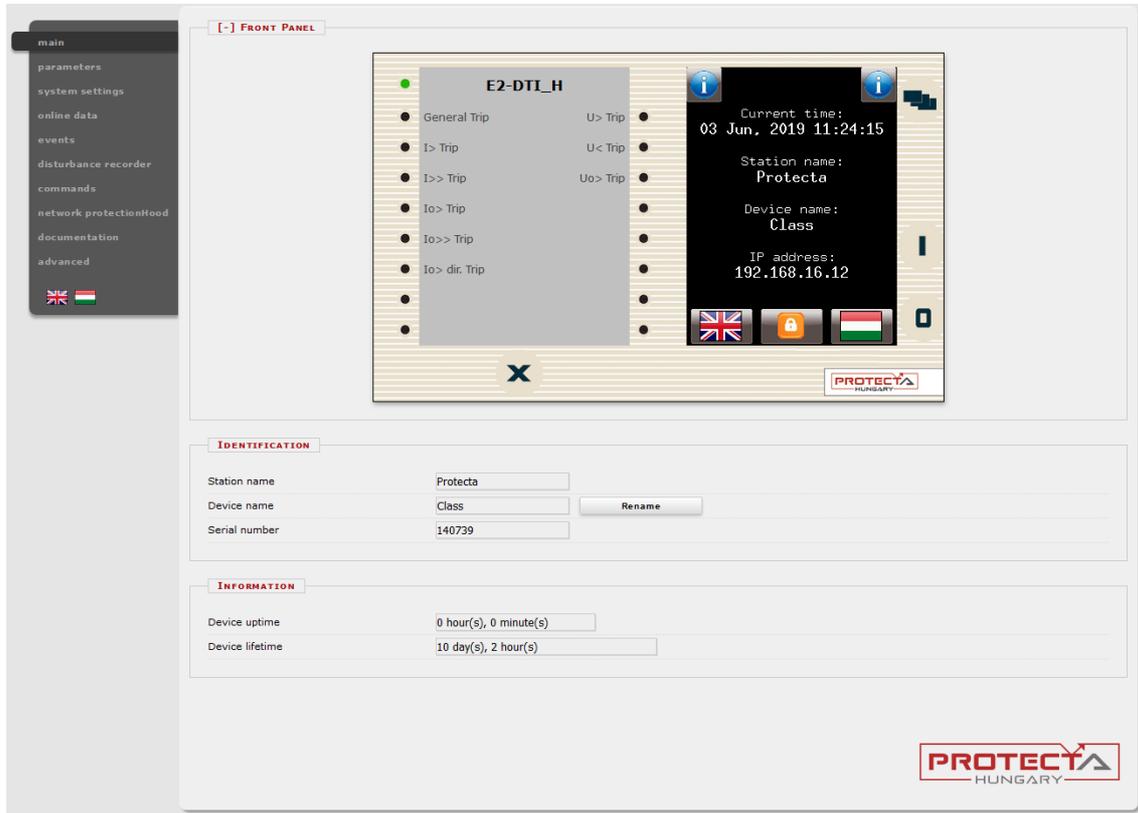
A web browser and an Ethernet connection are needed in order to access the device interface. HTML5 compatible web browser is recommended. To properly display the data on the screen, it is recommended to have a screen resolution of at least 1024x768. The latest version of the following web browsers can be used:

- Mozilla Firefox
- Apple Safari
- Google Chrome
- Microsoft Edge

JavaScript must also be enabled within your browser. For security reasons, the device allows only limited number of connections over the network.

Getting started

Make sure that you are connected to the device and have JavaScript enabled within your browser. For detailed information read the [Quick Start Guide](#). The recommended browser is the latest version of Mozilla Firefox and all examples shown in this document are performed with Firefox. Type the IP address of the device into your browser's address bar. The currently selected menu item is highlighted in black (Figure 0-1). In some configurations, the currently displayed language can be changed. To do this, simply click one of the other available languages represented by the flags and the page will be refreshed in the desired language. Changing the display language affects only the local browser of the user. Other browsers and the language of the touch screen, events and disturbance records will not be modified. In case the content area is too long, the user can scroll down, and the menu bar will follow the user.

MENU ITEMS**Main panel****Figure 0-1 Main menu**

The front panel of the device can be controlled from here (Figure 0-1). The image in the center of the screen behaves the same way as the touch screen and the LEDs, except the on (1) and the off (0) buttons. These two buttons are insensitive for security reasons.

The X button on the bottom of the front panel picture initiates a LED reset. Text appearing by a LED is coming from the configuration and may be different than the label inserted.

Identification - User can change the station and device names from this panel by typing in the new values and clicking on the Rename button. Serial number information is also available in this panel, which shall be used by contacting [support team](#) as a reference of your product.

Information part - There are two fields for measuring device operating time. Uptime field displays the time elapsed from the last power on of the device. Device lifetime field value equals the number of days of the device's energized state.

Parameters

Various parameters and variables can be viewed and changed in this menu item. The user can manage different parameter sets with the ability to set, rename, export and import them. A password can be applied for the import, export and set settings options. All parameters are part of a certain function block which can be individually opened or closed using the [+] or [-] symbol. Parameter values are displayed and can be modified in text fields, list boxes or check boxes.

	Device value (Par set 1)	New value		
Range	Type 100	Type 100		
Connection U1-3	Ph-N	Ph-N		
Connection U4	Ph-Ph	Ph-Ph		
Direction U1-3	Normal	Normal		
Direction U4	Normal	Normal		
VT correction	100	100	%	(100 - 115 / 1)
Rated Primary U1-3	100.00	100	kV	(1.00 - 1000.00 / 0.01)
Rated Primary U4	100.00	100	kV	(1.00 - 1000.00 / 0.01)

Figure 0-2 Parameter settings

Buttons on the top of the parameters' sheet provide fast expanding and collapsing all the function panels and make finding a parameter easy. Print button generates a printer-friendly layout opened in a new browser window. The [+] and [-] signs open and close the function block parameters individually.

General layout of the parameter's sheet consists of columns:

First column contains the name of the parameter, this text is coming from the configuration of the device. If it is a multilingual device (configuration prepared with multi-language titles), changing the language of the main menu will change this name also.

Second column displays the current values of the selected parameter set stored in the device. Selection can be made by choosing an item from the combo-box of the main menu. Changing the parameter set here doesn't mean activating it, only loading to the fields. You can find more information on activation in this chapter later.

Third column is used to give the desired value by the user. The expected value range and step are on the right end of the parameter line. Changing any setting in the third column will be marked with **blue function block name** and with **blue text** in the corresponding line of the first column.

The detailed description of fields are as follows:

Textfield - Text fields hold values that can be modified. To prevent invalid values from being loaded into the device, make sure that all values entered are within proper range. In case a wrong value is entered, the user is being alerted and the value is reset to the last correct value.

Listbox - By clicking on the list box, the user can choose from the available values listed within the box. (The list box represents enumerated type parameters.)

Checkbox - The user can enable or disable certain functions and properties with the check box, by clicking on the box. If the check box is ticked, the parameter is enabled. In contrast, if the check box is empty, the parameter is disabled. (The check box represents boolean type/binary parameters.)

Unit - This displays the unit of parameter where applicable. Not all parameters have units.

Range / Step - This applies only to text fields; it displays the range a value can take. The step value represents the amount by which the value can be incremented/decremented. For example, if a parameter has a default value of 100 with a range of 1-1000 and a step value of .01, its value can be changed to 99.99, or 99.98, or 99.9, or 99 or 100.01, or 100.02, or 100.1, or 101, and so on. The value cannot go below 1.00 or above 1000.00, since that would be out of range. As another example, if the same parameter had a step value of 5, then we could only change the default value of 100 to 95, or 105, and so on.

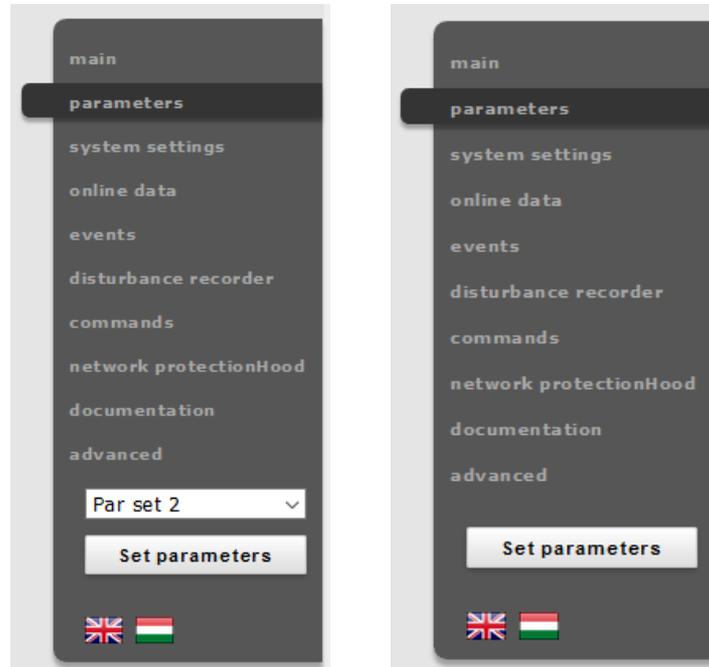


Figure 0-3 Main menu view with and without multiple parameter sets

Modified parameter values can be written into the selected parameter set by clicking Set parameters button on the main menu panel. In case of a device with only one parameter set there is no parameter set selector combo-box, as it can be seen on the right side of Figure 0-3.

Values are checked for change before the user navigates away from the actual page or another parameter set is being loaded. By pressing Cancel, the browser will remain on the actual page. By pressing OK, the browser will ignore the changes made and navigates away to the page selected.

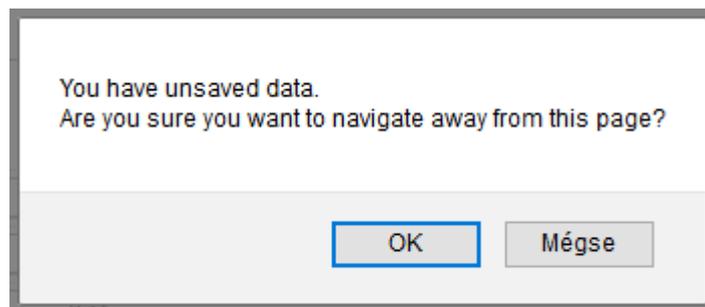


Figure 0-4 Unsaved data when leaving the page

Managing multiple parameter sets

Towards the bottom of the page there are options to manage parameter sets. These buttons and functions only appear if the device is configured to have more than one parameter set. The following buttons are available:

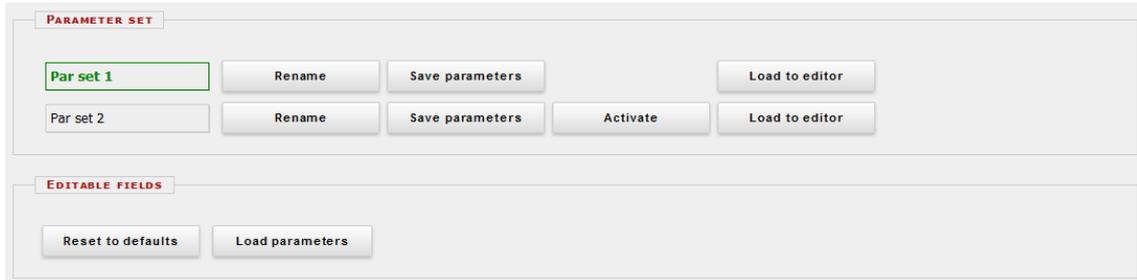


Figure 0-5 Parameter set control field

Rename - This renames the selected parameter set after the user typed in the desired name in the text field. Make sure that you use alphanumeric characters, spaces, dashes, or underscores as input and that no another set has the same name.

Save parameters - Corresponding parameter set can be saved as a *.par file.

Activate - This enables to activate the parameter set that in line with the button so the device will use the values from that specific set. This button only appears, if there is more than one parameter set and there are no other specified conditions in the configuration for activating the parameter set. The active parameter set's name will be displayed in green.

Note that activating a parameter set doesn't load the values to the edit fields above. Parameter set values can be loaded into the editable fields by using the combo-box placed in the main menu panel on the left side or by clicking on the Load to editor button.

Load to editor - This will load the parameter set in line with the button in the editable fields.

Reset to defaults - This resets the values on screen with the factory default settings.

Load parameters - This loads a previously saved parameter file and sets the values on the screen based on its contents.

System settings

This is the menu item where adjustments can be made to some device settings. This menu item can be password protected. The text fields, list boxes, and check boxes are almost the same as in the parameters menu item except for one type of text field, the IP address field, which is found only here, in the system settings menu item.



Figure 0-6 System settings menu

The behavior of the system Settings sheet is very similar to the Parameters sheet. The short description of the system settings are as follows:

System parameters - This field is used for front panel control and power system frequency settings.

Station bus settings - This field includes settings for the IPv4 based communication like IP address, IP address mode, redundancy mode, mask, gateway, and DNS addresses. The DHCP server function can be switched on with a combo-box.

Warning: uncontrolled use of DHCP server function may cause serious communication failures!

Ethernet communication - The device can communicate using several Ethernet based protocols at the same time. Only the IEC61850 communication is licensed, all the other protocols are available by default. The GOOSE repeat rate combo-box can be used for adjusting T0 time of the Generic Object Oriented Substation Event messages.

Serial communication - Only one protocol can be selected for serial communication purposes, physical parameters can be set in this field. Note that serial communication needs proper CPU card.

Time synchronization - The device handles broad range of time synchronization protocols: NTP server (SNTP), serial communication, and different pulse inputs. If Time sync. warning parameter is enabled and the device is not synchronized, an alarm is raised (status LED goes yellow).

Time zone settings - Use this field to set the offset to the GMT time and the settings of daylight saving.

LCD backlight - Parameters in this field control the behavior of the LCD panel. Backlight will switch off after its timeout. The Backlight group is useful if you have more than one device close to each other. Touching one of them will switch on the LCD screen of all devices that belong to the same group.

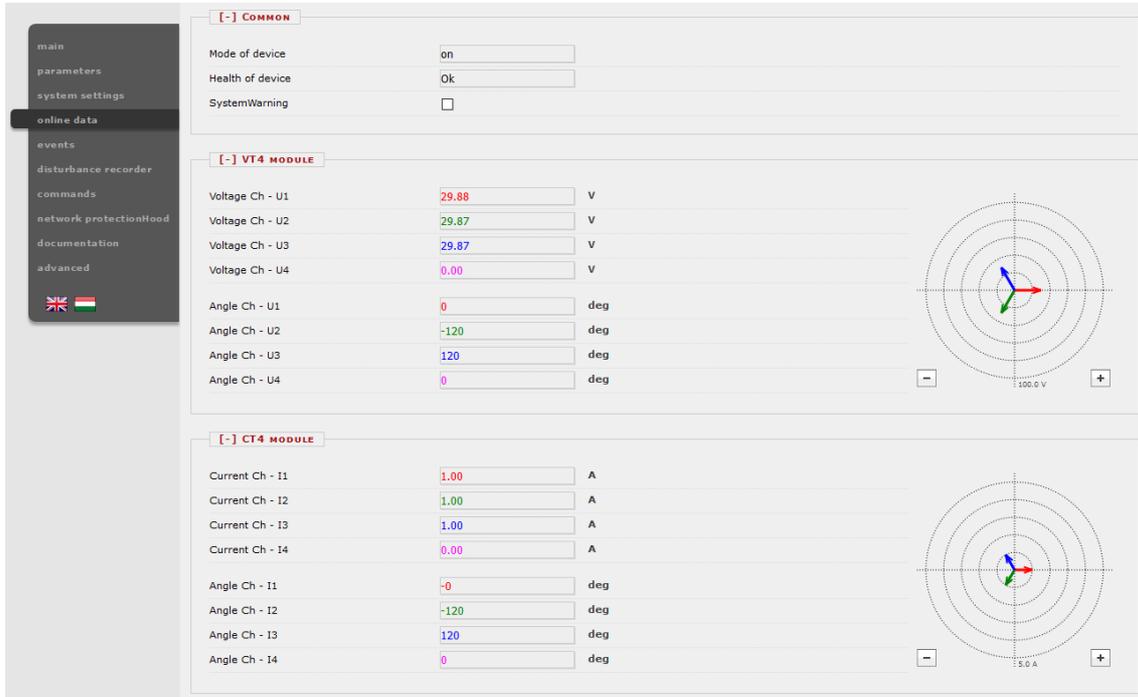
System services - Use this field to set the web interface mode, enable secure file transfer mode, discover devices on the local network, set up remote login feature and log server.

Client whitelist - If this function is enabled, only the allowed clients can access the device in the selected role.

More information can be found under the question marks located in line with the actual setting.

Online data

This displays data measured by the device. The values on the screen are updated in every second. All data on this page is read-only, therefore they cannot be modified. In case there is a counter on the page, there will be a button next to it, which will reset it.

**Figure 0-7 On-line sheet**

Binary data is displayed as check box, enumerated data will be presented as text information. If user has HTML5 compatible Internet browser, analogue measurements will be drawn as vectors.

Events

The Events page displays the internal event list of the device. Every event is listed with time stamp, function block channel name, function block channel and its new status text. Time resolution is 1 ms, the device can contain approximately 10000 events. If the list goes larger than this, the oldest events get erased.

If the mouse cursor hangs over a function block name for a short time, all event lines that belong to the same function block will be highlighted. Also, if the cursor is over a channel name, all events with the same text will be highlighted (Figure 0-8).

The Event page is not refreshed automatically, the user can refresh it by clicking on the Refresh button.

Erasing all events and exporting them to a text file is also possible.

An event filter can be utilized according to user's needs: there are filters for event row number, date and contained text, see rightmost part of the picture.

Row	Date	Time	Function Block	Channel	Status
1.	2019-06-03	10:05:48.747	Irány. 3F túláramvéd.	L1 megszólalás	↑
2.	2019-06-03	10:05:48.747	Irány. 3F túláramvéd.	Megszólalás	↑
3.	2019-06-03	10:05:48.747	Irány. 3F túláramvéd.	Irány	Hátra
4.	2019-06-03	10:05:48.817	Irány. 3F túláramvéd.	Kioldás	↑
5.	2019-06-03	10:05:48.827	Fázisszel. kioldó logika	L1 kioldás	↑
6.	2019-06-03	10:05:48.827	Fázisszel. kioldó logika	L2 kioldás	↑
7.	2019-06-03	10:05:48.827	Fázisszel. kioldó logika	L3 kioldás	↑
8.	2019-06-03	10:05:48.827	Fázisszel. kioldó logika	Kioldás	↑
9.	2019-06-03	10:05:48.867	Irány. 3F túláramvéd.	L1 megszólalás	↓
10.	2019-06-03	10:05:48.867	Irány. 3F túláramvéd.	Megszólalás	↓
11.	2019-06-03	10:05:48.867	Irány. 3F túláramvéd.	Kioldás	↓
12.	2019-06-03	10:05:48.977	Fázisszel. kioldó logika	L1 kioldás	↓
13.	2019-06-03	10:05:48.977	Fázisszel. kioldó logika	L2 kioldás	↓
14.	2019-06-03	10:05:48.977	Fázisszel. kioldó logika	L3 kioldás	↓
15.	2019-06-03	10:05:48.977	Fázisszel. kioldó logika	Kioldás	↓
16.	2019-06-03	10:05:50.157	Kikapcs. áram rögzítő	IL1 üzemi	2907 A
17.	2019-06-03	10:05:50.157	Kikapcs. áram rögzítő	IL2 üzemi	1450 A
18.	2019-06-03	10:05:50.157	Kikapcs. áram rögzítő	IL3 üzemi	1450 A
19.	2019-06-03	10:05:50.157	Kikapcs. áram rögzítő	IL1 zárlati	2908 A
20.	2019-06-03	10:05:50.157	Kikapcs. áram rögzítő	IL2 zárlati	1450 A
21.	2019-06-03	10:05:50.157	Kikapcs. áram rögzítő	IL3 zárlati	1450 A
22.	2019-06-03	10:05:52.607	Irány. 3F túláramvéd.	Hibahely km	-174.4 km
23.	2019-06-03	10:06:34.128	Irány. 3F túláramvéd.	L1 megszólalás	↑
24.	2019-06-03	10:06:34.128	Irány. 3F túláramvéd.	Megszólalás	↑
25.	2019-06-03	10:06:34.128	Irány. 3F túláramvéd.	Irány	Hátra
26.	2019-06-03	10:06:34.198	Irány. 3F túláramvéd.	Kioldás	↑
27.	2019-06-03	10:06:34.208	Fázisszel. kioldó logika	L1 kioldás	↑
28.	2019-06-03	10:06:34.208	Fázisszel. kioldó logika	L2 kioldás	↑
29.	2019-06-03	10:06:34.208	Fázisszel. kioldó logika	L3 kioldás	↑
30.	2019-06-03	10:06:34.208	Fázisszel. kioldó logika	Kioldás	↑
31.	2019-06-03	10:06:34.238	Irány. 3F túláramvéd.	L1 megszólalás	↓
32.	2019-06-03	10:06:34.238	Irány. 3F túláramvéd.	Megszólalás	↓
33.	2019-06-03	10:06:34.238	Irány. 3F túláramvéd.	Kioldás	↓
34.	2019-06-03	10:06:34.358	Fázisszel. kioldó logika	L1 kioldás	↓
35.	2019-06-03	10:06:34.358	Fázisszel. kioldó logika	L2 kioldás	↓
36.	2019-06-03	10:06:34.358	Fázisszel. kioldó logika	L3 kioldás	↓
37.	2019-06-03	10:06:34.358	Fázisszel. kioldó logika	Kioldás	↓
38.	2019-06-03	10:06:34.688	Kikapcs. áram rögzítő	IL1 üzemi	2904 A
39.	2019-06-03	10:06:34.688	Kikapcs. áram rögzítő	IL2 üzemi	1452 A
40.	2019-06-03	10:06:34.688	Kikapcs. áram rögzítő	IL3 üzemi	1452 A
41.	2019-06-03	10:06:34.688	Kikapcs. áram rögzítő	IL1 zárlati	2904 A
42.	2019-06-03	10:06:34.688	Kikapcs. áram rögzítő	IL2 zárlati	1453 A

Figure 0-8 Events sheet

Disturbance recorder

The Disturbance recorder (Figure 0-9) panel allows the user to download or view the recorded disturbances. Every record is stored in COMTRADE format and can be downloaded in a zipped file (with CFG, INF and DAT files inside). The displayed trip time information is used as a reference to the stored records. Downloading and erasing the records is possible one by one or for all of them: by clicking the Download all button, all records will be downloaded in one .zip file.

A simple built-in preview function makes work easier (Figure 0-10 and Figure 0-11). This viewer provides the fast evaluation possibility of the disturbance event. Both analogue and binary channels are displayed on the screen.

On the right side there is a floating panel with buttons to control the behavior of the display. Buttons with plus and minus sign used for adjusting the horizontal zoom of the picture. Clicking on the 1:1 button resets the view to the default horizontal size. Scale mode is a toggle button to change the way of the analogue channel drawing. By default, it is drawn using a common vertical scale calculated from all available analogue channels with the same unit parameter. In other words, it uses a grouping of the channels according to their unit. If the user clicks on this button, every analogue channel will be drawn with its individual scale calculated from the maximal value of that channel.

The screenshot shows the 'Disturbance Recorder' web interface. On the left is a navigation menu with options: main, parameters, system settings, online data, events, disturbance recorder (selected), commands, network protection/food, documentation, and advanced. The main area is titled 'RECORDED DISTURBANCES' and contains a table of records. Each record has 'Download', 'View', and 'Erase' buttons followed by a timestamp and file size. At the bottom are 'Refresh', 'Erase all records', 'Download all', and 'Manual start' buttons. The 'PROTECTA HUNGARY' logo is in the bottom right corner.

Download	View	Erase	Timestamp	Size
Download	View	Erase	2019.06.03 10:05:48.837	(123 kBytes)
Download	View	Erase	2019.06.03 10:06:34.218	(123 kBytes)
Download	View	Erase	2019.06.03 10:07:40.210	(123 kBytes)
Download	View	Erase	2019.06.03 10:08:33.494	(123 kBytes)
Download	View	Erase	2019.06.03 10:09:56.338	(123 kBytes)
Download	View	Erase	2019.06.03 10:11:18.838	(127 kBytes)
Download	View	Erase	2019.06.03 10:15:42.043	(122 kBytes)
Download	View	Erase	2019.06.03 10:16:22.274	(122 kBytes)
Download	View	Erase	2019.06.03 10:54:29.885	(123 kBytes)
Download	View	Erase	2019.06.03 10:54:32.435	(122 kBytes)
Download	View	Erase	2019.06.03 11:05:20.753	(211 kBytes)
Download	View	Erase	2019.06.03 11:05:25.862	(211 kBytes)
Download	View	Erase	2019.06.03 11:05:31.182	(211 kBytes)
Download	View	Erase	2019.06.03 11:06:46.526	(217 kBytes)
Download	View	Erase	2019.06.03 11:06:51.626	(216 kBytes)
Download	View	Erase	2019.06.03 11:06:56.746	(216 kBytes)
Download	View	Erase	2019.06.03 11:10:22.865	(211 kBytes)
Download	View	Erase	2019.06.03 11:10:27.995	(211 kBytes)
Download	View	Erase	2019.06.03 11:10:33.085	(211 kBytes)
Download	View	Erase	2019.06.03 11:11:43.528	(212 kBytes)
Download	View	Erase	2019.06.03 11:11:48.659	(211 kBytes)
Download	View	Erase	2019.06.03 11:11:53.759	(211 kBytes)
Download	View	Erase	2019.06.03 11:16:11.831	(124 kBytes)
Download	View	Erase	2019.06.03 11:16:12.931	(124 kBytes)

Figure 0-9 The disturbance records list panel

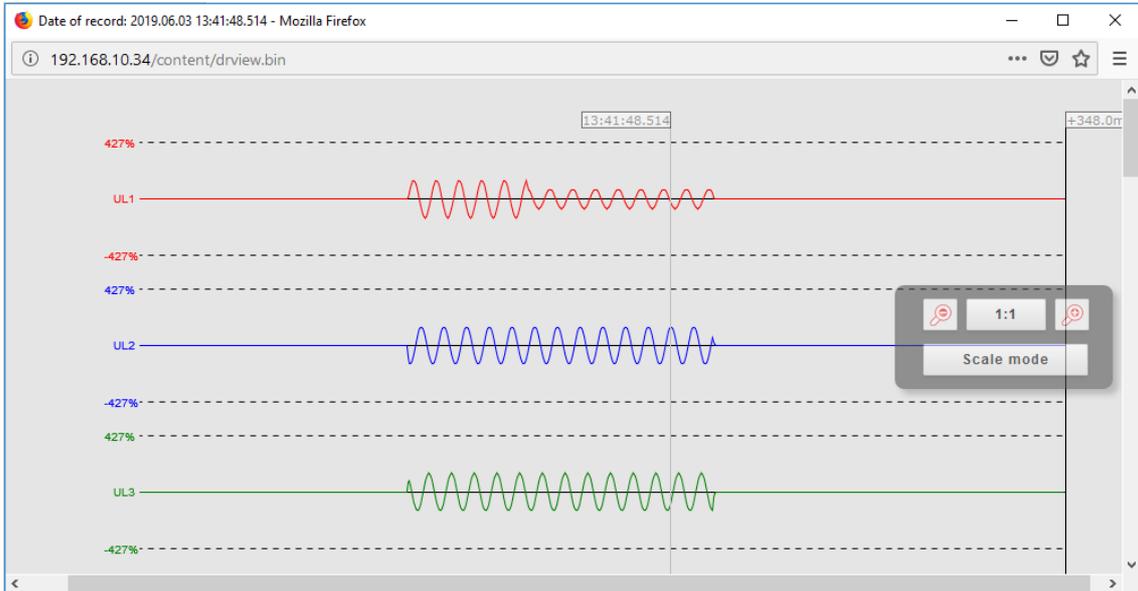


Figure 0-10 The disturbance record preview – analogue channels

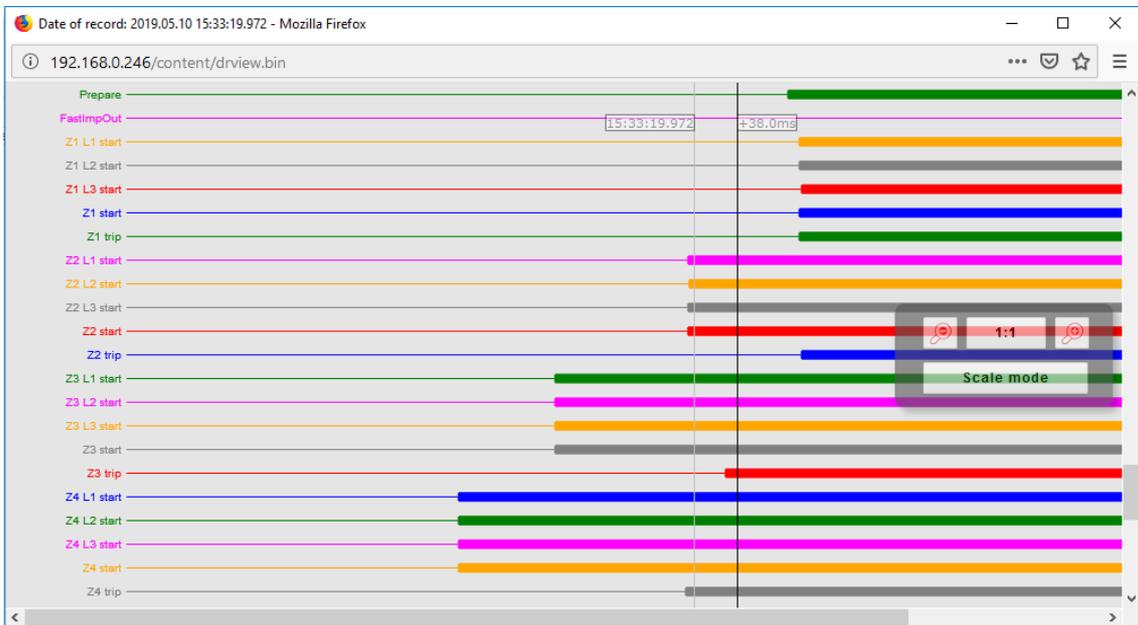


Figure 0-11 Disturbance record's binary channels

Commands

The device may contain function blocks with controllable objects whose commands appear on this page (Figure 0-12). A command can be issued by clicking the appropriate button on the field of the function. A confirmation dialog will ask the user to confirm the command (Figure 0-13).



Figure 0-12 Command sheet

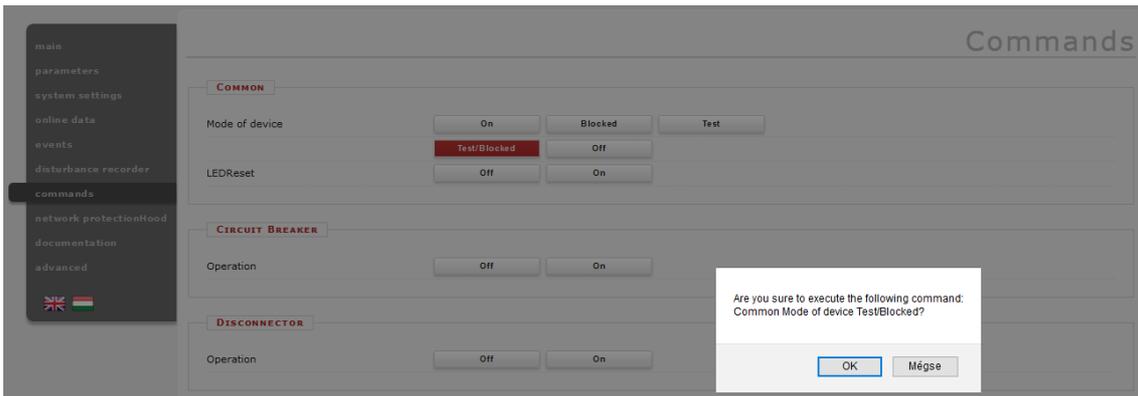


Figure 0-13 Confirmation dialog

The mode of device in the common field has 5 setting options based on IEC61850-7-410 definition:

Table 0-1 Mode of operation commands

MODE OF DEVICE:	ON	BLOCKED	TEST	TEST/ BLOCKED	OFF
Function	active	active	active	active	not active
Outputs (to process)	generated	not generated	generated	not generated	not generated
Reporting (to client)	yes	no reporting	flagged as test	flagged as test	no reporting
Control services (from client)	accepted	rejected	accepted	accepted	rejected
Functional (process related) data	visible	visible	visible	visible	not visible

Network protection Hood

This panel shows devices that are located on the same network as the device. Compatible devices are identified, and information is displayed about them. The device highlighted in red is the one that is currently accessed. By clicking on the other links, the user will be redirected to the corresponding device.

The screenshot shows the 'network protectionHood' interface. On the left is a navigation menu with options: main, parameters, system settings, online data, events, disturbance recorder, commands, network protectionHood (selected), documentation, and advanced. Below the menu are flags for the UK and Hungary. The main area displays a table titled 'DEVICES FOUND ON THE NETWORK'. The table has columns: Health, IP address, Platform, Station name, Device name, Version, Capability, RDSP/Xilinx, and C. One row is highlighted in red, indicating the currently accessed device.

Health	IP address	Platform	Station name	Device name	Version	Capability	RDSP/Xilinx	C
✓	192.168.0.746	EuroProt+	Allatorvosi lo	Geza teszt	2.8.13	I>, Id, Z<	2.8.13.2060-rc3/x0.6	2
✓	192.168.8.8	EuroProt+	Protecta	Bence teszt	2.8.13	I>, Id, Z<	2.8.13.2060-rc2/x0.6	2
✓	192.168.10.34	EuroProt+	RDSP	E2-Line	2.8.13	I>, Id, Z<	2.8.13.2060-rc3/x0.6	2.8.13.155
✓	192.168.10.99	EuroProt+	Mikó	MSZ modell	2.8.13	I>	2.8.13.2060-rc2/x0.6	2.8
✓	192.168.12.222	EuroProt+	EGETO	OGYD Bemérod_leag	2.8.13	I>	2.8.13.2040-H1/x0.6	2
✓	192.168.12.223	EuroProt+	EGETO	OGYD Bemérod_leag	2.8.13	I>	2.8.13.2040-H1/x0.6	2
✓	192.168.12.241	EuroProt+	EGETO	OGYD Bemérod_leag	2.8.13	I>, Id, Z<	2.8.13.2050-H3/x0.6	2
✓	192.168.12.242	EuroProt+	EGETO	OGYD Bemérod_leag	2.8.13	I>, Id, Z<	2.8.13.2050-H3/x0.6	2
✓	192.168.12.243	EuroProt+	EGETO	OGYD Bemérod_leag	2.8.13	I>, Id, Z<	2.8.13.2050-H3/x0.6	2
✓	192.168.15.73	EuroProt+	RDSP 2060	E2-MER	2.8.13	I>, Id, Z<	2.8.13.2060-rc3/x0.6	2.8
✓	192.168.15.99	EuroProt+	Unnamed station	Unnamed device	2.8.13	I>	2.8.13.2060-rc2/x0.6	2.8
✓	192.168.15.254	EuroProt+	Kiss F.	MSZ modell	2.8.14	I>	2.8.13.2060-rc2/x0.6	2.8.13.
✓	192.168.16.12	EuroProt+	Protecta	Class	2.8.13	I>, Id, Z<	2.8.13.2050-H3/x0.6	2.8
✓	192.168.19.4	EuroProt+	Protecta	DRL-Master	2.8.13	I>, Id, Z<	2.8.13.2060-rc3/x0.6	2.8.13.1550
✓	192.168.19.5	EuroProt+	Protecta	DRL-Slave	2.8.13	I>, Id, Z<	2.8.13.2060-rc3/x0.6	2.8
✓	192.168.50.59	EuroProt+	Unnamed station	Unnamed device	2.8.13	I>, Id, Z<	2.8.13.2060-rc3/x0.6	2.8
✓	192.168.73.15	EuroProt+	EGETO	LDC_G703_TESZT_2	2.8.13	I>, Id, Z<	2.8.13.2040-H1/x0.6	2
✓	192.168.143.20	EuroProt+	Fejlesztés	LineDiff_A	2.8.13	I>, Id, Z<	2.8.13.2060-rc2-54-gf9d903b94/x0.6	2.8.13.155

At the bottom of the table area is a 'Refresh' button and the PROTECTA HUNGARY logo.

Figure 0-14 Network protectionHood

Documentation

This panel displays the documentation files on the device. The user can upload any type of documents and files, which will be saved on the device and will be accessible for later use. There is an 8 MB limit available, single file size maximum is 2MB.

The screenshot shows the 'Documentation' interface. On the left is the same navigation menu as in Figure 0-14, with 'documentation' selected. The main area is divided into two sections: 'EMBEDDED DOCUMENTS' and 'USER DOCUMENTS'. The 'EMBEDDED DOCUMENTS' section shows 'Files not found'. The 'USER DOCUMENTS' section shows a file 'E2-DTI_H.epc (1.7 MB)' with a 'Delete' button. Below this, it states 'File limit is 2048k per file. Available storage size is 6.2 MB.' and has an 'Upload' button. The PROTECTA HUNGARY logo is at the bottom right.

Figure 0-15 User documentation

Advanced

This menu item displays a submenu of other options available. A password can be set to allow access to these menu items.

Password manager

The screenshot shows the 'Passwords' management interface. On the left is a sidebar menu with options like 'main', 'parameters', 'system settings', 'online data', 'events', 'disturbance recorder', 'commands', 'network protectionHood', 'documentation', 'advanced', 'password manager', 'status/log', 'I/O tester', and 'update manager'. The main area is titled 'Passwords' and contains three password management sections: 'MASTER PASSWORD', 'PASSWORD FOR SETTINGS', and 'PASSWORD FOR CONTROL'. Each section includes a brief description of the password's function and two buttons: 'Modify password' and 'Clear password'. The 'PROTECTA HUNGARY' logo is located in the bottom right corner of the dialog.

Figure 0-16 Password manager dialog

Passwords are used to prevent unauthorized access to the device. There are three password levels defined:

- Master password controls the access to the *advanced* menu. This prevents unauthorized access to the password control dialog also.
- Password for settings makes the parameterization (*parameters* and *system settings*) safer. When creating new password, the user is allowed to define its target: password for local (LCD) setting operation, password for remote (web) operation or both.
- Password for control works very similar to the password for settings. This is the protection for the *commands* web page.

The user must type in the password two times to avoid typing mistakes (Figure 0-17).

The 'New password' dialog box features two text input fields for password entry. Below these fields are three radio button options: 'Local and remote operations' (which is selected), 'Local HMI (LCD) operation only', and 'Remote (WEB) operation only'. At the bottom of the dialog are 'OK' and 'Cancel' buttons. The 'PROTECTA HUNGARY' logo is positioned in the bottom right corner.

Figure 0-17 Password input dialog

Status/log

Status fields' detailed information is as follows:

In the **Cards** field (Figure 0-18) device hardware configuration must match to the configuration file created by the PC software. In case of any deviation, user can get more information about the problem in this field.

Status/Log

CARDS

Slot	Configured	Detected	Serial Nr.	Status
J	CPU+/1201	CPU /1211	14102071	matched
I(0)	CT+/5151	CT+/5151	10009702	matched
H(1)	VT+/2211	VT+/2211	14108622	matched
D(5)	R8+/00	R8+/00	18102191	matched
C(6)	O12+/2201	O12+/2201	10026014	matched
A(8)	PSTP+/2101	PSTP+/2101	17132356	matched, internal use only!
HMI	HMI+/3502	HMI+/3521	10014736	matched
BUS	BUS+/4201			passive bus

Figure 0-18 Card info field

Device nameplate (Figure 0-19) contains product information and basic data of the device.



Figure 0-19 Device nameplate

In **LOG files** field (Figure 0-20) internal information about the specific part of the device (RDSP, system, LCD, etc.) can be found.

LOG FILES

System log files	<input type="button" value="RDSP log"/> <input type="button" value="System messages"/> <input type="button" value="Security log"/>
HMI log files	<input type="button" value="LCD log"/>
Communication log files	<input type="button" value="SPORT comm. log"/> <input type="button" value="Serial comm. log"/> <input type="button" value="IEC61850 log"/>

Figure 0-20 LOG files field

Serious errors (red status LED) and warnings (yellow status LED) are listed in the **Warnings and Errors** field (Figure 0-21). In the example below, time synchronization error is generated when its check box is ticked on the time sync. part of system settings page and there is no synchronization message received. For more information please refer to the [Troubleshooting guide](#).

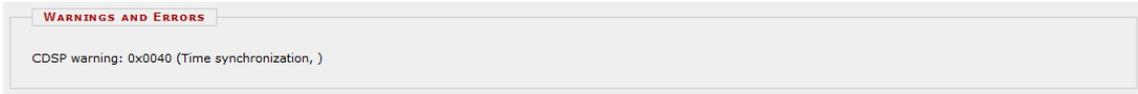


Figure 0-21 Warnings and Errors

In case of any error, it is recommended to generate a report file (Figure 0-22) using the button in the **Backup/Report** field and send it to the [support team](#). The file has .zip extension and includes event log, parameter settings, configuration data and RDSP firmware for the actual device. However, it does not include disturbance records. Oscillographic fault records can be downloaded as shown on Figure 0-9. Make sure to check the size of the downloaded report.zip file: it should be above 10 kB. If it is below this, try to download it again.

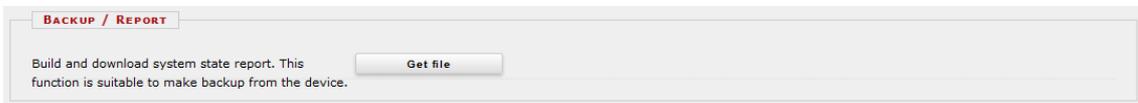


Figure 0-22 Button for getting the report.zip file

Communication files (Figure 0-23) for various protocols can be downloaded by clicking the appropriate button.

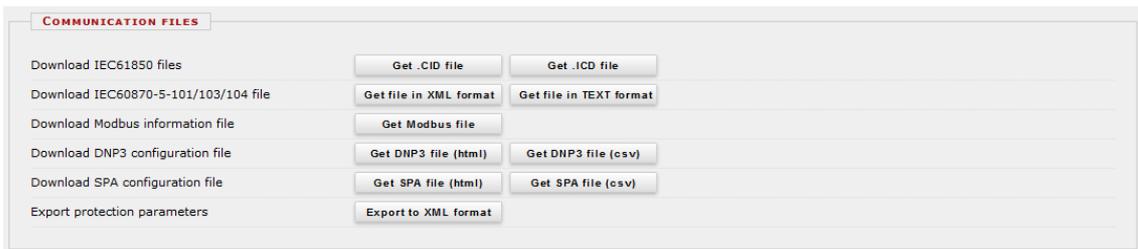


Figure 0-23 Communication files

The status of the ports of the internal switch are displayed in the **Ethernet links** field (Figure 0-24).



Figure 0-24 Ethernet link info

The memory info field (**Device housekeeping**, Figure 0-25) provides information about the CDSP resources.

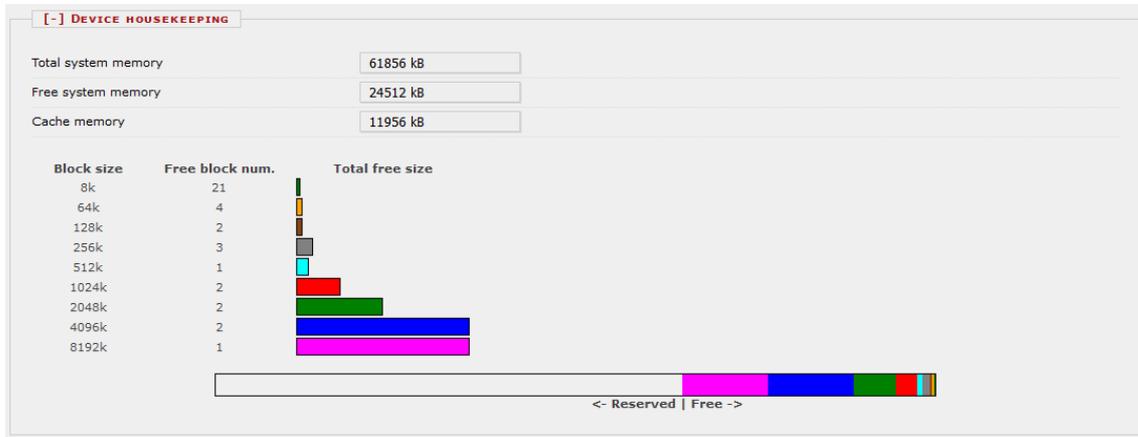


Figure 0-25 Memory info

The **Time synchronization** field (Figure 0-26) shows information about time synchronization supervision. If no external source is available, the PC operating system time can be set in the device with the Set device button.



Figure 0-26 Time synchronization info

I/O tester

The web page for advanced functions provides I/O simulation.

Front panel LED test - by clicking on this button the front LEDs will be tested with a blink sequence

Simulate binary inputs (Figure 0-27) - by enabling this function user can simulate the inputs. For safety reason this function must be confirmed on the LCD screen on the device. The LED symbol between the SET and RESET buttons shows the current state of the input: red if activated, green if inactive. Simulation mode can be disabled with the button on top of the input control buttons.

Caution: in this mode the device is fully functional, meaning that it can still give trip signals!

Direct control of the output contacts - prior to use this function the device should be switched to Test/Blocked mode on the command screen. If the mode has been changed, the output contacts can be forced by the user. The confirmation request must be accepted on the LCD. The LED symbol between the SET and RESET buttons shows the current state of the output: red if activated, green if inactive. To disable this function, change the mode of the device to ON state on the commands web page.

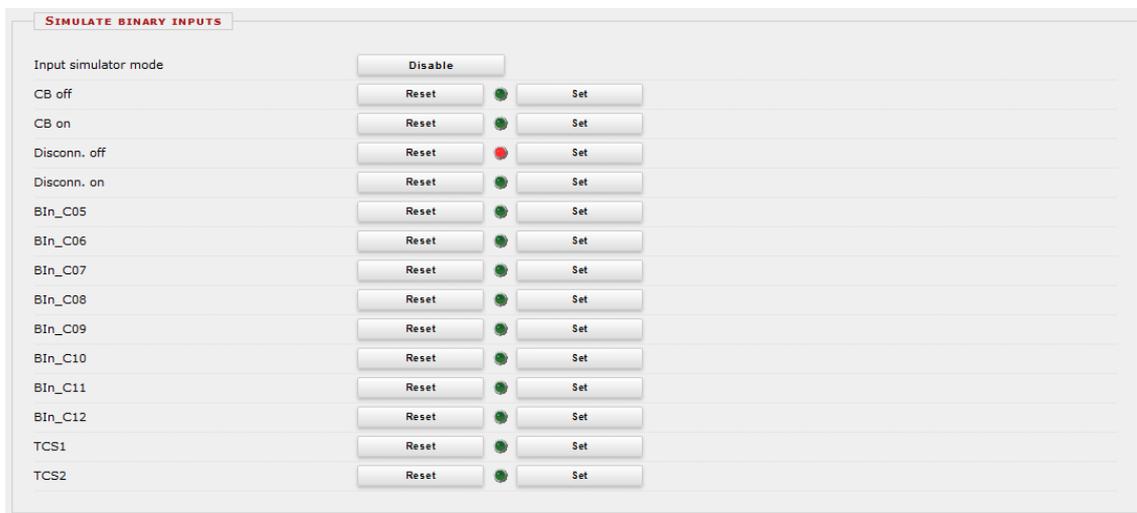


Figure 0-27 Input simulator mode

Update manager

In the **Restore** field the user can upload configuration and parameter settings from a *report.zip* file into the device.

Device firmware can be upgraded when a new version is available. Information about the current **RDSP/CDSP firmware** and for the downloaded configuration file can be found in the text fields (Figure 0-28).

To update, click on the Update button, select the appropriate file and click OK. A dialog on the LCD will ask you to confirm updating. Detailed information about the latest firmware updates can be found on the Protecta website in the [release and revision history](#) (login required). If new firmware update is needed, please contact Protecta [support team](#).

In the **Configuration** field the user can download configuration file (.epc) from the device.

The screenshot shows the 'Update' interface with four main sections:

- [-] RESTORE**: A section with the instruction 'Use this function to restore the device from backup file' and an 'Upload ZIP file' button.
- [-] RELAY DSP FIRMWARE**: A section displaying firmware details: 'Version: 2.8.13', 'GIT tagname: 2.8.13.2050-H3', 'On branch: master', 'Compile date: 2019-01-17 15:16:30', 'Compiled on: GOMBOS-WIN10, OS: Windows NT/2000/XP, Username: gombos', 'Xilinx revision: 0.6', 'SHA-256: 708f55b4ee2f', and 'Active firmware: 'B''. It includes an 'Update RDSP' button.
- [-] COMM. DSP FIRMWARE**: A section displaying system details: 'EuroProt+ system version: 2.8.13', 'Bootloader: U-Boot 2013.07 (ADI-2013R1)-git1520 (May 02 2018 - 09:55:27) (SHA-256: 1fe7fa66fb84)', 'Active firmware: 'A'', 'SHA-256: 85cb3829967f', 'kernel: Linux release 3.10.108-epb, build #2 Mon Dec 3 15:29:33 CET 2018', 'toolchain: /bfin-uclinux-gcc release gcc version 4.3.5 (ADI-2013R1-RC1)', and 'user-dist: release git-2.8.13.1540-H1, build Mon Dec 3 15:27:24 CET 2018, gombos@gombos-ubuntu'. It includes an 'Update CDSP' button.
- [-] CONFIGURATION**: A section displaying configuration details: 'Config name: E2-DTI_H', 'Config version: 1.4', 'Config ID: ConfigID', 'Customer ID:', 'File date: 04-Jun-2019 08:14:34', 'Load date: 04-Jun-2019 08:14:35', and 'File name: E2-DTI_H_v4.epc, 1882227 bytes'. It includes a 'Download EPC file' button.

Figure 0-28 Update manager