

BlackBox extended Installation and Programming manual



Features:

- Expand existing monitoring stations to encrypted TCPIP and GPRS reception.
- Minimal investment to entry level TCPIP and GPRS monitoring
- Easy to Install, no major training needs
- Easy to program by any Web browser
- No need to extra desktop, computer and does not include moving parts such as HDD or fans.
- WEB firmware upgradeable
- Small size
- Low current consumption
- 500 clients per Blackbox for GPRS and TCPIP
- One fix IP address needed to operate
- Full continuous 24/7 connection to modules and control panels of customers
- 128 bit high security encryption
- Real time , synchronized clock
- Serial (RS232) communication to monitorin automation softwares
- D6600, D6500, Surgard, Ademco 685 serial protocol
- Heartbeat (test signal) watch at desired interval
- Status review per connected module, control panel
- 25000 event log if not connected to automation software

1.0. General description:

1.1. Front panel:



1.1.1. Power up:

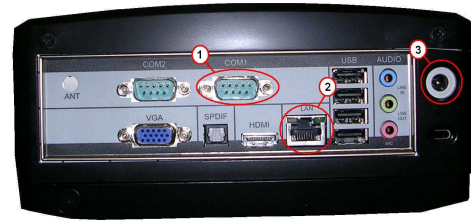
Push the power button on the front of the unit. Power button has a blue backlite.

Note:

All other outputs and connectors are not to be used.

1.2. Blackplate:

All other outputs and connectors are not to be used.



1.2.1. RS232 connector:

To be connected to the monitoring automation software. Programming is detailed below in this manual.

1.2.2. RJ45 Ethernet connector:

To connect with LAN , WAN network. One fix IP address required to operate the unit.

1.2.3. DC12V, Power supply connector:

Use Power supply only supplied with the unit.

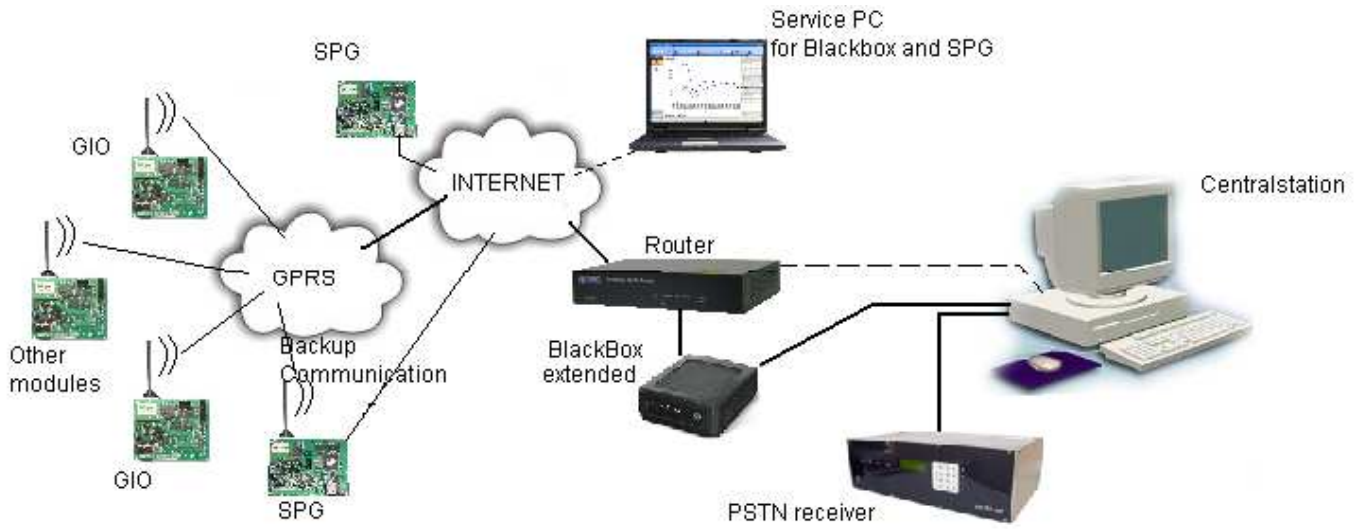
Note:

All other outputs and connectors are not to be used.

1.3. Specification:

Power supply:	12VDC	Factory default IP address:	192.168.254.254:8080
Max Current consumption:	3A	Factory default User name:	Admin
Size , LxWxH:	92 x 200 x 235mm	Factory default password:	admin
Power Connector:	3,5mm	Max nr of clients :	500
Ethernet Connector:	RJ45	Test signal interval:	from 10 sec
RS 232 Connector:	Standard 9 pin	Event log:	25000
Ethernet communication:	128bit AES encrypted		
Serial communication:	D6600, D6500, Surgard, Ademco 685, (expandable)		

2.0. System setup:



2.1.1. Application:

The unit is designed to keep direct constant connection, and logging with Ethernet and GPRS TCP/IP communication devices and transfer encrypted communication to serial RS232 port communication in order to connect it to most usual monitoring softwares.

2.1.2. Minimum HW and SW requirements:

1. The automation software must have one free RS232 port
2. The automation software should be able to handle standard Contact ID communication.
3. Install the router behind firewall or router
4. Need of one free fix public IP address.

Note:

- The BlackBox programming computer must have connection to the same network and have an Internet browser installed.
- For further BB upgrade could be done by Internet connection if necessary.

Warning:

Blackbox is able to log 25000 event until power is applied. Mains voltage supplying BlackBox must be an uninterruptable power supply.

1.1. Installation:

1. Connect router to the socket provided by your Internet service provider.
2. Program router according to the installation manual
3. Program BlackBox according to the installation manual.
4. Connect router to the Blackbox.
5. Connect the serial port of the BlackBox to the monitoring station software with standard RS232 serial cable.
6. Apply power router.
7. Apply power on BlackBox
8. Enable RS232 port receiving on your automation software, and adjust serial port setting according to your software installation manual.
9. Test system that BlackBox from sending communication from existing control panel, or through Sky Laboratories compatible modems and devices.

3.0. BlackBox Programming:

3.1. Enter into programming mode:

1. Open Internet browser
EG.: Internet Explorer, Mozzilla, etc.
2. Type first the factory IP address setting into browser address field
<http://192.168.254.254:8080>

Warning:

If this address exist in your network you should either re-program any of the two unit first or remove BlackBox from the network and program by cross cable direct from the computer.

Note:

The panel will be reachable through two IP addresses so the factory IP address will always remain in BlackBox setting as one of the connection IP address.

3. Successful contact will provide you the window for User name and Password fields:



- Set the User name
- Set the password

Note:

Factory pre-set

- User name: **Admin**
- Password: **admin**

Make sure you have capslock off since its case sensitive.

Warning:

- If you click your browser to remember password and someone else is using that computer, you might have unauthorized person to re-program the BlackBox.

Therefore we suggest : **DO Not accept Password save.**

- If you miss password 3 consecutive times, the unit disables programming entry until hardware reset. Hardware reset could be performed by removing power and applying it again. This will erase event log, but not erase BlackBox program settings. This is a feature to provide higher security agaiings hackers.

3.2. General description:

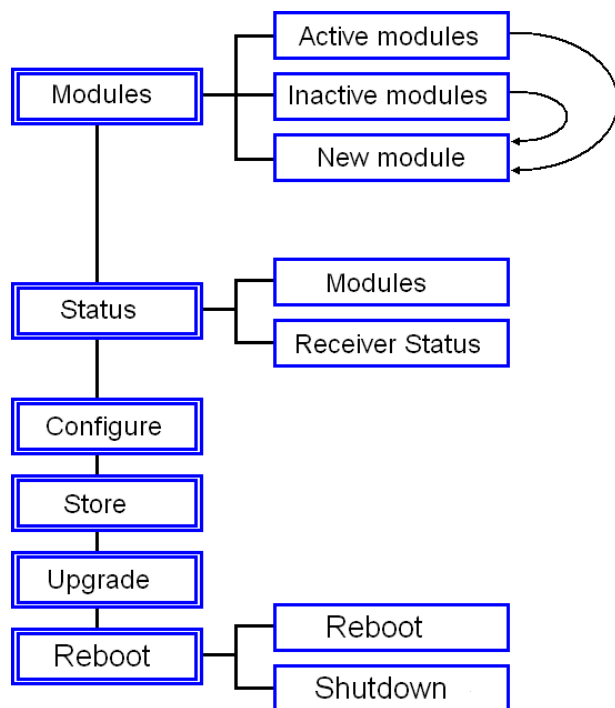


All BlackBox pages contains menu points below which will help you to find your way around.

1. Main menu
2. Sub menu
3. The subscription of the selected menu

Main menu:

Sub menu:





3.3. Modules:

Modules are the pre-installed units which are communicating with BlackBox.

3.3.1. Active Modules:

Selecting Moduls will direct you to Active Modules sub menu. The pre-programmed modules could be seen in this window.

Name	Serial	Module ID	Account ID	Disp. ID
1. SkyLaboratories LTD	FE0200000023FF35	65535	FFFF	0
2. Alarmsensor	FE020000000012D	32131	0200	0
3. City Hall	FE02000000000FD1	102	0334	0
4. tobacco-shop	FE02000000000EE1	103	0335	0
5. Kindergarten	FE0200000000BEF7	104	0336	0
6. Car shop	FE0200000000B357	105	0337	0

Window description:

- **Name:**
Could be any end user account specific description.
- **Serial Number:**
The modul hardware ID which is a unique serial ID number on each module. Its show non a printed label on the pcb of the module.
- **Modul ID:**
Module ID
- **Accunt ID:**
The customer Contact ID as required by the automation software you currently use.
- **Dispatcher ID:**
This is a fix , not changeable number (Fix, nem változtatható)



Deleting a Module:

If you would like to delete one module from the connections in order not to monitor further, click the icon, you will be asked again to verify if you really want to delete.

Note:

If you go to Edit Modules point, you may dis-activate modules without deleting it.

Name	Serial	Module ID	Account ID	Disp. ID
1. BANK				0000
2. AL				0000

3.3.2. Inactive modules:

Registered but communication ignored modules. As shown in section 3.3.3.

Name	Serial	Module ID	Account ID	Disp. ID
1. Food Shop	FE02000000003FE04	107	0110	0

Window description:

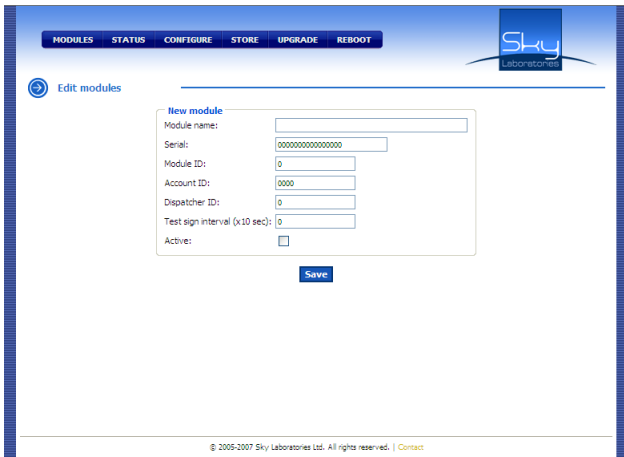
- **Name:**
The name is given to that module at time of registration.
- **Serial number:**
The hardware ID of the modul. There are no two same hardware ID in the World by factory setting. Label with the number is to be found ont he pcb.
- **Modul ID:**
The ID number of the module at BlackBOX
- **Accunt ID:**
The account ID as to be identified in your existing monitoring automation software.
- **Dispatcher ID:**
Dispatcher ID (Fix, not changeable)

Note:

If you would like to delete one module from the connections in order not to monitor further, click the icon, you will be asked again to verify if you really want to delete.

Name	Serial	Module ID	Account ID	Disp. ID
1. Bank Automata				0000
2. Pénz				00000000
3. Fémipari vállalat Igazgatóság				00000000

3.3.3. Setting up a new modul:



Window description:

- **Modul name:**
Could be any customer specific max 32 character long.
- **Serial Nr:**
Labelled on the module. 16 digit HEX character sequence.
- **Dispatcher ID:**
Factory set, all modul must have same Dispatcher ID.
- **Test Signal Interval (10sec)**
To ignore test signal failure within the duration programmed in this section. For open socket communication disruption.
This signal interval is not determined by the BlackBox but the user module.
The test signal interval is to be used to overlap a few test intervals set in the user modules.

Example:

If the test signal interval in the end user modules is set for 10 second, but the network quality is low, it may happen that it will be not processed within 10 second. We suggest to set BB test signal interval to 20 or even 30 seconds to overlap more test signals and wait for reconnected open socket, in order to create less communication failure reports.

Warning:

Use this function only if you are sure that communication disruption and reconnection will not cause extensive overbilling in the GPRS usage.

Note:

If you use GIO2 or SPG 804 panel leave this field open with („0”).

- Activ:

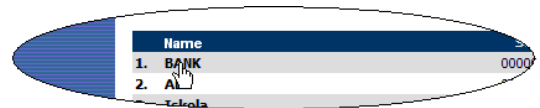
To show whether the module is active or inactive. Inactive modules are not communicating with the BlackBox
Inactive modules are listed on Inactive modules window,

Use .:

Temporarily you can disable communication between the BlackBox and the Module, this way is to ignore certain modules.

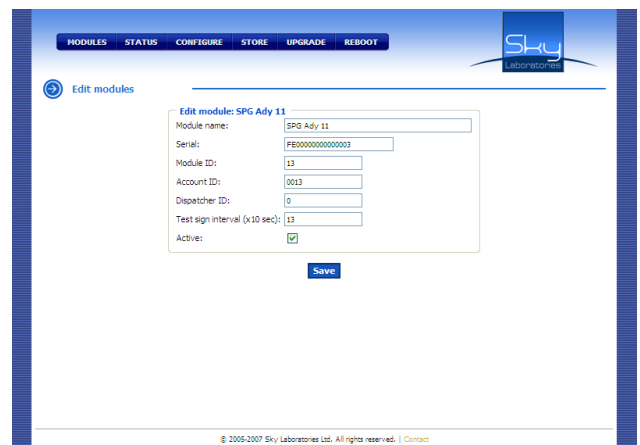
Example, maintenance of the system of the customer or for unpaid accounts.

3.3.4. Change modul settings:



Click on the name of the module wither on Status or Modul page.

You will ba directed to the setup page of the module.



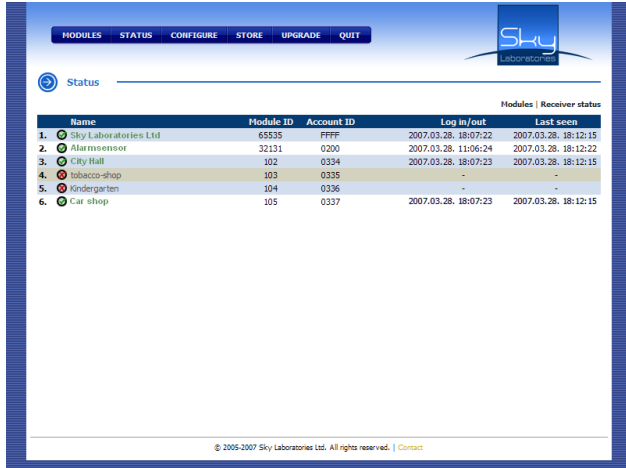
3.4. Status:

Temporary status display.

Note:

There is no on line periodical refreshing therefore you need to refresh this frame manually by pressing F5 key or browser refres Icon.

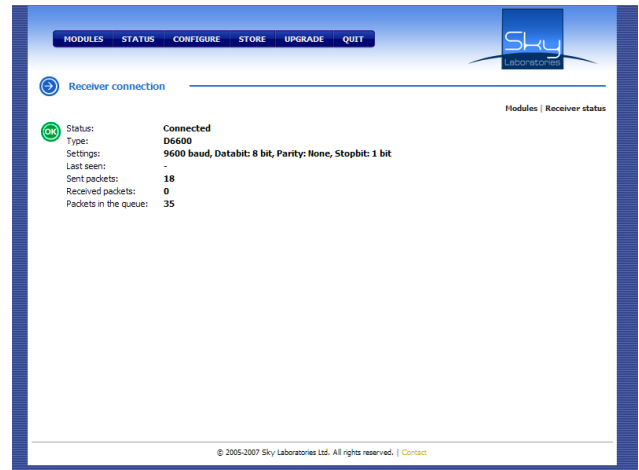
3.4.1. Modul status:



Name	Module ID	Account ID	Log in/out	Last seen
1. Sky Laboratories Ltd	65535	FFFF	2007.03.28. 18:07:22	2007.03.28. 18:12:15
2. Alarmcenter	32131	0200	2007.03.28. 11:06:24	2007.03.28. 18:12:22
3. City Hall	102	0334	2007.03.28. 18:07:23	2007.03.28. 18:12:15
4. tobacco-shop	103	0335	-	-
5. Kindergarten	104	0336	-	-
6. Car shop	105	0337	2007.03.28. 18:07:23	2007.03.28. 18:12:15

- **Name:**
The name is given to that module at time of registration.
- **Modul ID:**
The ID number of the module at BlackBOX
- **Account ID:**
The account ID as to be identified in your existing monitoring automation software.
- **Check in and out :**
Last connection or disconnection date and time of the module.
- **Test signal:**
Time and date of the last test signal.

3.4.2. Connection :



Receiver connection

Modules | Receiver status

Status: **Connected**

Type: **D6600**

Settings: **9600 baud, Databit: 8 bit, Parity: None, Stopbit: 1 bit**

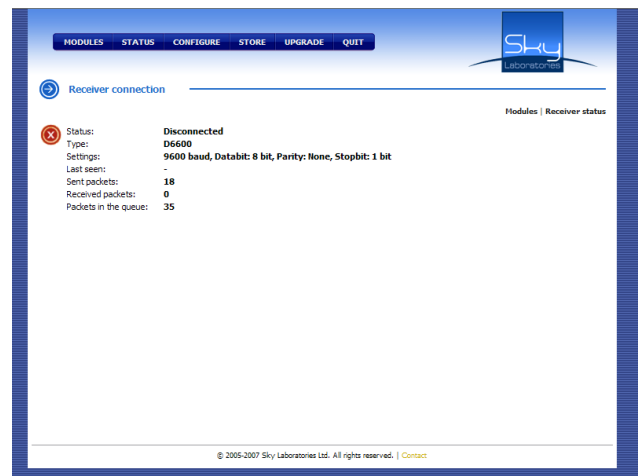
Last seen: -

Sent packets: 18

Received packets: 0

Packets in the queue: 35

© 2005-2007 Sky Laboratories Ltd. All rights reserved. | Contact



Receiver connection

Modules | Receiver status

Status: **Disconnected**

Type: **D6600**

Settings: **9600 baud, Databit: 8 bit, Parity: None, Stopbit: 1 bit**



Last seen: -

Sent packets: 18

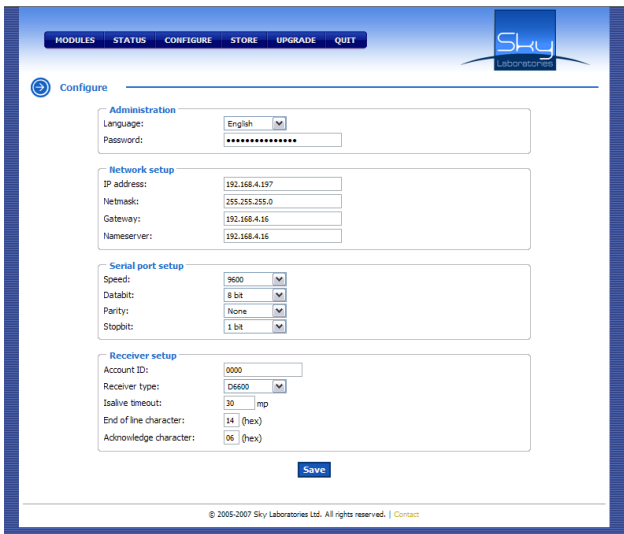
Received packets: 0

Packets in the queue: 35

© 2005-2007 Sky Laboratories Ltd. All rights reserved. | Contact

- **Icon signs:**
 -  : Connection is OK with the automation software.
 -  : There is no or fault in connecting with the automation software.
- **Status:**
Momentary state of the connection with the automation software.
- **Type:**
Type of the communication (protokol)
- **Settings:**
The serial port, communication settings.
- **Last test signal time:**
The last test signal time of the automation software.

3.5. Configure:



The screenshot shows the 'Configure' page with the following sections:

- Administration:** Language (English), Password (masked).
- Network setup:** IP address (192.168.4.197), Netmask (255.255.255.0), Gateway (192.168.4.16), Nameserver (192.168.4.16).
- Serial port setup:** Speed (9600), Databit (8 bit), Parity (None), Stopbit (1 bit).
- Receiver setup:** Account ID (0000), Receiver type (D6600), Inactive timeout (30 mp), End of line character (14 (hex)), Acknowledge character (06 (hex)).

A 'Save' button is located at the bottom right of the configuration area.

3.5.1. Admin:

- **Language:**
Select your language hereby. Blackbox supports multi lingual settings.
- **Password:**
To change administrator password. Max 32 character.

Warning:

- After changing password you need to Store new password or the previous password will be used further on with no change.
- If you loose your password, only factory can re-set password and re setting password meaning complete restore of factory default values. All admin programmed datas will be lost.
- You may miss your password 2 times only , 3rd wrong password will result disable the programming entry function. You need to disconnect and connect power again to Blackbox. Disconnecting the power will erase event memory.

3.5.2. Network settings:

- **IP address:**
Fix Ip address given by the Internet or Network service provider, or pre-set fix ip address in the router.
- **Network mask:**
Enter network mask, provided by your IT personnels.
- **Gateway:**
This is the IP address of the unit which connected to TCPIP networks and routing TCPIP communication.
- **Domain Name Server:**
This is the ISP Domain name server. Yould enter the IP address of the name server into this field. (Router could also be a name server)

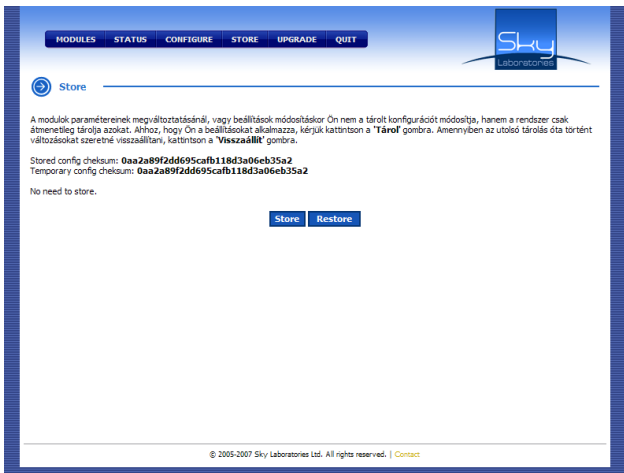
3.5.3. Serial Port settings:

- **Speed or Baudrate:**
Set speed according to your monitoring automation software.
- **Data bit:**
Set it according to your monitoring automation software.
- **Parity:**
Set it according to your monitoring automation software.
- **Stopbit:**
Set it according to your monitoring automation software.

3.5.4. Receiver settings:

- **Type of receiver:**
Emulation of most popular receiver could be set here. These formats will be communicated to the security monitoring automation software.
- **Heartbeat:**
Between the BlackBox and the monitoring station there are constant heartbeat on the serial port. You may set the timin here. If heartbeat is missing Blackbox will display fault by blinking yellow LED.
- **End of line and acknowledge character:**
Set it according to your monitoring automation software. (Hexa characters!)

3.6. Store:



By changing the parameters you temporarily save them into a memory. If the parameters are correct you need to STORE those values in order to activate them. To re-cover previous settings you may do so with the „restore” button.

Note:

On each page you need to save the setting by Save and Enter buttons. Then the program will display a warning icon on the bottom of the screen to store these settings.



Warning:

If you do not use save-enter on each page than previous values will be used as new setting after hitting STORE.

3.7. Firmware updates:

In constant development and for new functions manufacturer may provide new functions. To download and activate these functions you do not need to dismantle Blackbox, but could be easy downloaded from a designated site.



Warning:

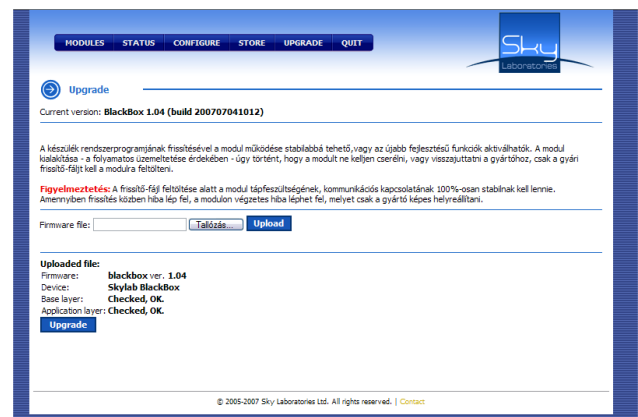
During Firmware update power and communication must be 100% secured, otherwise not recoverable damage may occur.

3.7.1. Selecting Firmware Update:

By browsing you may select the required firmware.

3.7.2. Upload:

You start to upload the firmware file by hitting Upload button.

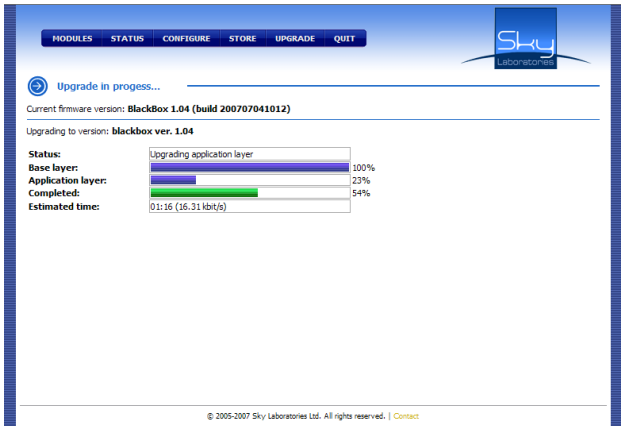


Note:

Firmware change BlackBox does not support any communication or between modules neither to automation software. Uploading may take a few minutes.

3.7.3. Update flow display:

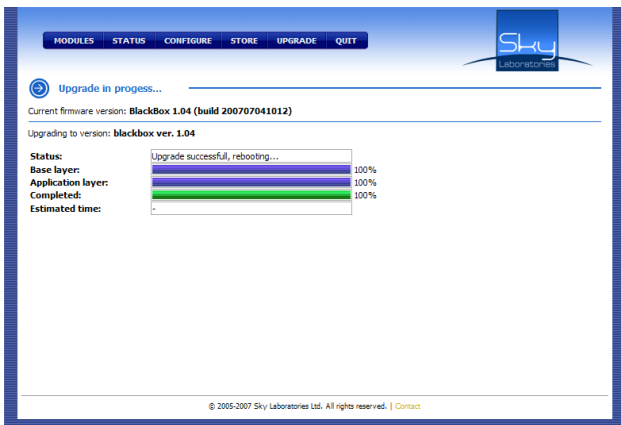
After Upload command you may see the following.



Warning:

Don't close window and do not disconnect during upload.

3.7.4. Finishing firmware update:



After successful firmware update you may see Successful firmware update and restart.

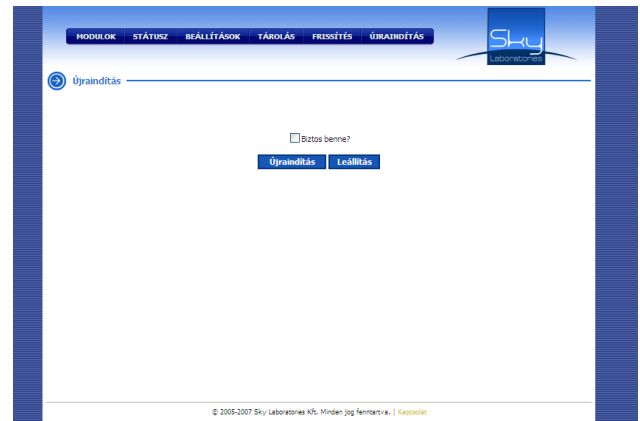
Warning:

System will automatically restart in 15 second.

3.8. Reboot:

By clicking this button you may choose two option

- **Reboot:**
The system will shut down and restart automatically. All non volatile memory content will be lost.
- **Shutdown:**
The system will shut down. All non volatile memory content will be lost.



The options will work only if you checkmark the box above.



Availability:



Sky Laboratories Kft.
Cím: 2146 Mogyoród, Pf.: 16, Kerektó u. 2
Tel.: +36-28-542-250
Fax: +36-28-542-251
Email: sales@skylaboratories.com