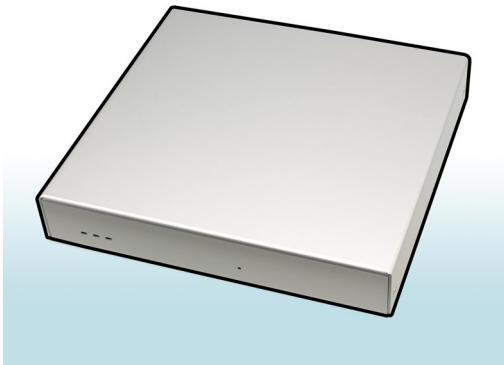


BlackBox Silver Installation and Programming manual



BlackBox Silver is a gateway device between the customer alarm panels and any conventional Central Monitoring Station which features serial RS232 communication with receivers. BlackBox Silver receiver is receiving SIA IP DC9 Contact ID format through Ethernet from the customer alarm modems such as SPG 1000 and forwards this information in Radionics D6600 or Surgard MLR 2 format to the CMS software.

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 (100mA)
- One fix IP address needed to operate
- Full continous 24/7 connection to modules and control panels of customers
- 128 bit high security encryption
- Real time , synchronized clock
- Serial (RS232) communication to monitoring automation softwares
- Heartbeat (test signal) watch at desired interval

General description:

DC12V, Power supply connector:

Use Power supply only supplied with the unit.

2x RJ45 Ethernet connector:

To connect with LAN , WAN network.

One fix IP address required to operate the unit.

RS232 connector:

To be connected to the monitoring automation software.

Specification:

Power supply : 12VDC
 Factory default IP address: 192.168.254.252 Port : 80
 Max Current consumption: 100mA
 Factory default User name: Admin
 Factory default password: admin
 Size , LxWxH: 14x140x25mm
 Power Connector : 2,5mm jack
 Max nr of clients : Unlimited
 Ethernet Connector: 2 (3) RJ45
 Test signal interval: from 10 sec
 RS 232 connector: Standard 9 pin
 Ethernet communication: 128bit AES encrypted
 Serial communication: D6600, D6500, Surgard MLR 2

System setup:

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.

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.

Remark:

- The BlackBox programming computer must have connection to the same network and have an Internet browser installed.
- The web interface RJ 45 socket is the next one to the RS232 socket.
- For further BB upgrade could be done by Internet connection if necessary.

Installation:

1. Connect router to the socket provided by your Internet service provider.
2. Program your network router that giving fix internal IP address within the network by register by its MAC address. Set port forwarding to this internal address on the port where you want to handle the incoming IP alarms.
3. There are two ethernet socket on the BlackBox one of them is for the web server access and this can not be changed. The other is for the IP communication and this is DHCP on a network.
4. Program BlackBox according to the installation manual on its default IP port (<http://192.168.254.252:80/>) Set the required port, set your own encryption key and select the speed for the serial port communication to the central station automation software. Timeout is the periodical test message from each panel. This should be unified value within the system. If control panel will fail to send test signal, BlackBox silver will send a 608 Contact ID message to the Monitoring station.
5. You may change default password at the password menu.

- [Settings](#)
- [Log](#)
- [Password](#)
- [Update](#)

Connection parameters:

- Data bits: 8
- Parity: none
- Stop bits: 1

TCP/IP receiver settings

Please, enter the correct receiver parameters, according to Your monitoring application and client configuration settings.
Note that You have to assign a permanent IP address lease for the listener Ethernet interface via DHCP.
This can be done easily on most routers or DHCP servers.

Timeout:	<input type="text" value="60"/>	second timeout before kick out a non-communicating client
Port:	<input type="text" value="22000"/>	TCP port to listen for TCP/IP clients
Key:	<input type="text" value="0102030405060708090A0B0C0D0E0F02"/>	AES key for client communication, 32 hex chars
Serial device:	<input type="text" value="S0"/>	s0 for built-in serial port, usb0 or usb1 for USB-serial cable
Baudrate:	<input type="text" value="9600"/>	standard values: 2400, 4800, 9600, 19200, 38400
RS-232 format:	<input checked="" type="radio"/> RADIONICS D6500 <input type="radio"/> Sur-Gard CPM2 Monitoring application data log format	
Wait for [ACK]:	<input type="radio"/> 10 sec. <input type="radio"/> 4 sec. <input checked="" type="radio"/> No ACK time to wait for monitoring app ACK	
Log verbosity:	<input type="radio"/> Debug <input checked="" type="radio"/> Error <input type="radio"/> Emergency events to be stored in the log	
<input type="button" value="Save"/>		

6. Connect

6. Connect router to the Blackbox. Modify your network router settings that the internal IP address assigned to the BlackBox silver will remain the same all the time. The best is to assign the BlackBox Silver Mac address to the assigned port in your router. Then make a port forwarding of the external incoming port to the BB silver's assigned internal IP address.
7. Connect the serial port of the BlackBox to the monitoring station software with standard RS232 serial cable. (Pinout on a canon 9 pin connector : 2 to 3, 3 to 2, 5 to 5) Set correct serial properties in your monitoring software (D6600 receiver)
8. Apply power router
9. Apply power on BlackBox
10. Enable RS232 port receiving on your automation software, and adjust serial port setting according to your software installation manual.
11. Test system that BlackBox from sending communication from existing control panel, or through Sky Laboratories compatible modems and devices.



Timeout:

The time interval which is expected to report each field device (eg. SPG 1000 or SPG 1022) If this so called „null message” is missing the BlackBox silver will generate a 608 Contact ID message to the central station that particular account is not connected.

Port:

The port which is designated to BlackBox silver communication with the accounts.

Key:

It is the encryption key which requires for 128 bit AES encryption, The key must match the key in the account devices.

Serial device:

S0 has to be selected for the 9 pin RS232 communication.

RS232 Format:

The communication format to the CMS software through it s RS232 port.

Wait for ACK:

BlackBox sends heartbeat in every 10 second to the CMS software. If you chose wait for ACK means that if ACK message is not received the blackbox will not take any account incoming alarm message in order to prevent loss of any alarm signals. Only if the receiver software is capable to receive the data from the BlackBox, the handshake will be given to the site units (e.g. SPG 1000 or SPG 1022)

Log verbosity:

You may select what sort of content you want to see in the logs of the BlackBox.

Troubleshooting: We suggest that if you have trouble with BlackBox Silver setup than connect the serial port to the computer and use Hyperterminal Windows program to look at rebooting screen of the BB receiver. The hyperterminal settings are 9600, 8,n,1, No flow control.