



# eBox Echos3

REMOTE CONTROL

**ELENOS**<sup>®</sup>  
World Broadcast Experience



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Technical data can be subject to change without notice.



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Brochure

## eBox

Ebox is a remote control unit equipped with an HTTP web interface and SNMP protocol. It is configured to be used with all Elenos transmitters, exciters, amplifiers, and protection systems and exchange units. It is also able to provide information on a large number of parameters related to the operation of the equipment, and allows for remote control and management. The user can interface any device with an E.box from a PC, Tablet or Smartphone device.

## eBox

Elenos has equipped all of its FM transmitters with the possibility to be fully managed and controlled remotely by the use of this Ethernet interface device ("E. Box"), through which the operator can perform almost all of the operations that would be done in local mode at the site of the equipment. The connections are based either on SNMP browser or through a website. All the E. Box devices allow for remote firmware upgrades and can be interchanged between any of various types of equipment in the Elenos product lines. It is compatible with all current production equipment and may also be retrofitted to other Elenos equipment no longer in production. An IP connection is required to be able to use the E.box device and can be used over both wired or wireless networks in private or public networks.

## Features:

- | Total control of the transmitter via PC and latest generation mobile devices (smartphones and tablets, regardless of their operating systems).
- | Wide range of user custom options.
- | Ability to enable or disable SNMP traps.
- | Very large number of variables and traps can be managed.
- | Intuitive and effective graphic user interface.

## Echos3

Echos3 is a simple and effective remote control unit, which allows to connect ELENOS transmitters and environmental sensors, and to transfer the necessary information for complete control by the operator.

## Echos3

Echos3 Telemetry by Elenos is a remote command system and a remote control system that allows you to monitor up to 8 analog signals and up to 8 digital signals and to alter the state of 8 relays. The inputs and outputs are easily programmable, by setting the means and the desired management protocols via a PC connection. Echos3 is useful for accessing the main operating parameters of the transmitter. It is possible to establish a remote connection with the device to analyze the details of voltage, currents, temperature, power, efficiency, and to send commands and change the status of operation via Hyperterminal. It is also possible to analyze the state of signals at the analog and digital inputs, which may have come from the transmitters themselves or by other sensors present in the station. Echos3 is able to send and receive SMS, through which it is possible to analyze the main operating data of the apparatus and send commands. In the case of a power failure, Echos3 is able to send an SMS alert.

## Features:

- | Broad spectrum of data to be analyzed in "transparent" mode.
- | Sending of SMS alert in the case of power failure.
- | "TERM" application software for most immediate usage.
- | GSM/GPRS modem.
- | Easy installation and set up.



Datasheet

eBox

eBox | Echos3

#### DIMENSIONS

|                    |  |
|--------------------|--|
| Dimensions : W-H-D | 105.5x47x22.5mm  |
| Weight             | 95 gr  |
| Position           | Inside the transmitter.(In this case some limitation is present.Please verify whit costomer).<br>Outside the transmitter (there are not specific limitations for assembly: the module must be attached to a surface close to the transmitter using 4 screws) |

#### CONNECTORS

|                    |                                       |
|--------------------|---------------------------------------|
| Ethernet connector | RJ45 with logic speed 10-100 Mbit/sec |
| EIA485 connector   | DB9 Male                              |
| Mains connector    | MicroFit 2P Male                      |

#### BUTTONS

|               |                               |
|---------------|-------------------------------|
| Reset/Timeout | to reset the unit             |
| Wd Act.       | to stop the watchdog activity |
| 485 En.       | to disable the transmission   |

#### LEDS

|                     |                          |
|---------------------|--------------------------|
| 485 Tx (yellow)     | transmission active      |
| 485 Rx (yellow)     | reception active         |
| Reset/Timeout (red) | reset or watchdog active |
| Wd Act. (green)     | watchdog enabled         |
| 485 En. (green)     | transmission enabled     |

#### TIMES

|                           |          |
|---------------------------|----------|
| Restoring manual commands | 60 min   |
| Watchdog                  | 30 sec   |
| Reset                     | 2.5 sec  |
| Debounce buttons          | 0.5 sec  |
| Signal activity filter    | 0.25 sec |

#### FUNCTIONS AND PROTOCOLS

|               |                       |
|---------------|-----------------------|
| Hostlink      | yes                   |
| Web server    | yes                   |
| SNMP agent    | yes                   |
| SMTP protocol | yes (option ondemand) |

#### MONITORED DEVICES

|   |   |
|---|---|
| Exciter Indium series (from 20 W to 5000 W) | 124 slave OID, 26 traps                       |
| ETG2000/ETG3500                             | 126 slave OID, 26 traps                       |
| E5000                                       | 128 slave OID, 20 traps                       |
| E2000/E3000                                 | 121 slave OID, 20 traps                       |
| ET7000 (2x3.5 KW)                           | 311 slave OID, 81 traps (webserver on demand) |
| ET10000 (2x5 KW)                            | 311 slave OID, 81 traps                       |
| ET15000 (3x5 KW)                            | 357 slave OID, 94 traps                       |
| Echos6                                      | 180 slave OID, 42 traps                       |
| ET10000 (3x3.5 KW)                          | 311 slave OID, 81 traps (webserver on demand) |
| ET15000 (5x3.5 KW)                          | 311 slave OID, 81 traps (webserver on demand) |
| ET20000 (4x5 KW)                            | 357 slave OID, 94 traps                       |

#### INSTALLATION REQUIREMENTS

|                   |   |
|-------------------|---|
| Power supply      | External source with voltage 9-28 Vdc.<br>Conform to a limited power source in accordance with EN60950-1 (limited to 28 Vdc and 1A) |
| Power consumption | 2.5 W max (280-90 mA@12 V)  |

#### ENVIRONMENT

|                                   |                              |
|-----------------------------------|------------------------------|
| Temperature range (operating)     | -5 ÷ +45 °C, 23 ÷ 113 °F     |
| Temperature range (non operating) | -20 ÷ +55 °C, -4 ÷ 131 °F    |
| Humidity range (operating)        | 95% @ 40 °C, 104 °F          |
| Humidity range (non operating)    | 90% @ 55 °C, 131 °F          |
| Altitude range (operating)        | <3000 meters / <9840 Feet    |
| Altitude range (non operating)    | <15000 meters / < 49200 Feet |

#### STANDARDS

|                               |  |
|-------------------------------|--|
| Electromagnetic compatibility | EN55022:2006+A1:07<br>EN55024:1998+A1:01+A2:03 |
| Security                      | EN60950-1:2006+A11:09<br>EN62311:2008          |

**GENERAL DATA**

|                               |                                     |
|-------------------------------|-------------------------------------|
| RS232/RS485                   | Yes                                 |
| Adjustments                   | Signaling led                       |
| Dimensions : rack units       | 1U                                  |
| Dimensions W-H-D              | 48.5 cm - 4,4 cm - 30 cm            |
| Weight                        | 5 kg                                |
| Mounting in standard rack 19" | yes                                 |
| Operating type                | h24 no stop (with internal battery) |

**CONNECTORS**

|                      |                              |
|----------------------|------------------------------|
| Digital output/input | MCD 0.5/12-G1-2.5 (combicon) |
| Analog input         | DB9 Male                     |
| IEEE485              | DB9 Male                     |
| CPU                  | DB9 Female                   |
| Modem                | DB9 Female                   |
| Reecrwe battery      | 12 V 1 A                     |

**INSTALLATION REQUIREMENTS**

|                               |                                   |
|-------------------------------|-----------------------------------|
| Power supply                  | 120-240 Vac 50-60 Hz (presetable) |
| Power consumption             | 36 VA max                         |
| Breaker curve                 | C                                 |
| Current consumption @ 220 Vac | 0.2 A max                         |
| Breaker flow @ 220Vac         | 2 A                               |
| Cable section @ 220 Vdc       | AWG 18 - 0,75 mmq                 |
| Current consumption @ 110Vac  | 0,4 A Max.                        |
| Breaker flow @ 110Vac         | 4 A                               |
| Cable section @ 12 Vdc        | AWG 15 - 1,5 mmq                  |

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