Connectivity solutions
Smart power monitoring for single or multiple systems

ABB offers intelligent solutions that monitor the status of your power system and thus ensure your data storage equipment or control process continues to receive clean, reliable power. The monitoring devices provide real-time visibility of the condition of your power equipment and help in identify problematic trends before they become critical.

Power and environmental monitoring
Network interface cards connect ABB’s UPS systems to the network. These cards also provide the ability to connect several environmental sensors to the UPS. This combination allows for a clear visual representation on a web interface of not only the UPS system but also its environment.

Management software
The network interface cards are provided with extensively configurable software that provide access to measurement values and to the UPS’s status information. The status of each UPS cabinet, UPS module or the entire system can be presented on a separate mimic diagram. These diagrams provide users with clear, real-time information. During normal operation, records of all events are kept in a log file. In case of a power failure, battery autonomy is monitored and network shutdown of the protected devices is initiated.

Data protection
The remote shutdown software manages a particular workstation, network or servers. Shutdown or reboot can be executed safely.

In addition, text messages, e-mails, pop-ups and mobile messages can be dispatched or displayed before the devices are shut down – giving the user the flexibility to manage or cancel the operation.

Highlights
- Remote monitoring via web
- Environmental monitoring
- Extensive alarm handling and dispatching
- Redundant UPS monitoring
- Integration into network or building management system
- Integration into multivendor and multiplatform environments
- ModBus interface
- Multiple standard protocols are supported

Applications
- Personal computers
- Servers and network devices
- Data centers
- Storage systems
- Industrial automation
- Power systems
Connectivity solutions
Network interface cards

ABB offers several network interface options to suit all the customers’ needs:

**CS141 Basic**
For interfacing the UPS with the network without the need for additional sensors or interfaces. Available in slot and box formats.

**CS141 ModBus**
For interfacing UPS with the network and the ModBus RS-485 with option to connect alarms buzzers or additional relay board. Available in slot and box formats.

**CS141 Advanced**
For interfacing UPS with the network and allowing users to connect additional sensors and I/O options either directly to the card or via sensor manager. Available in slot and box formats.

**USHA+**
For interfacing UPS with the network with an option to connect additional environmental sensors. Available in slot format only.

### Supports the following protocols

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</table>

Slot cards are UPS powered, while cards in box format require external power.
Connectivity and sensor options for CS cards and boxes

Basic
- CS141 Basic
  - No peripherals
- LAN
- SNMP
- ModBus TCP
- Others

Advanced
- CS141 Advanced
- LAN
- SNMP
- ModBus TCP
- Others

ModBus
- CS141 ModBus
  - Peripheral options
  - 1
  - 4
  - Relay board 04-0593
  - Buzzer 04-0592
  - Sensor manager
    - 04-5915
    - 04-0594
  - ProfiBus converter 04-0594
  - ModBus RS485
  - 00-6945
  - 00-6947
  - 00-5916
  - 00-6948

Connectivity and sensor options for USHA+ card
- USHA+ network interface (SNMP card) 04-0210
- EMD humidity and temperature sensors 04-0212
- Smoke detector 04-0214
- Water leakage detector 04-0216
- Door detector 04-0215
- Vibration detector 04-0213
## Connectivity solutions

Monitoring for single or multiple systems

### List of connectivity and sensor options for different network interfaces

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<td>04-3861 Box</td>
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<tr>
<td>04-3864 Slot</td>
<td>CS141</td>
<td>Aux connection</td>
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</table>

| 04-0592 Alarm buzzer CS141 | Buzzer, 60 dB | 5 m cable |
| 04-0593 Relay board CS141 | 4 digital inputs | 1 m cable |
| 04-0594 Profibus converter | External DIN rail mount device | |
| 00-6944 Temperature sensor | -25 °C to +100 °C, ±0.5% | 1.8 m cable |
| 04-3880 Combsensor for temperature and humidity | -25 °C to +100 °C, ±0.5% 0% to 100% RH, ±5% | 1.8 m cable |
| 00-5915 Sensor manager | Environmental interface | |
| 00-5916 Temperature sensor | 0 °C to +100 °C, ±0.5% | 5 m cable |
| 00-6948 Combsensor for temperature and humidity | 0 °C to +100 °C, ±0.5% 0% to 100% RH, ±5% | 5 m cable |
| 00-6945 Alarm buzzer | 85 dB | 5 m cable |
| 00-6947 Relay box | 1 input contact 1 output contact | 5 m cable |

RCCMD:
04-3869 RCCMD license For Windows, Linux, MAC X, OS / 2, UNIX, NOVELL
04-3870 RCCMD license For IBM A5 400 V4R5, V5, V6, V7
01-0014 RCCMD enterprise license >50 licenses (Windows, Linux, MAC X, OS / 2, UNIX, NOVELL)

**All CS141 cards/boxes come with one free RCCMD client and a CD containing the monitoring software.**

**All USHA+ cards come with RCCMD client and a CD containing the monitoring software.**

### USHA+ network interface card

<table>
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<tr>
<th>Network interface</th>
<th>Web/SNMP interface ModBus TCP</th>
<th>Sensor connections</th>
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<tr>
<td>04-0210 USHA+ network interface card</td>
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**EMD with temperature and humidity sensors**

| 04-0212 EMD with temperature and humidity sensors | 0 °C to +80 °C, ±1 °C 10% to 90% RH, ±3% | 2 m cable |
| 04-0213 Vibration detector | | |
| 04-0214 Smoke detector | | |
| 04-0215 Door contact detector | | |
| 04-0216 Water leakage detector | | |
| 04-0590 Water leakage detector | | |

* Specifications subject to change without notice.

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