

# IPCorder KNR-410 – Installation manual

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# Chapter 1

## Installation

### 1.1 Package contents



Figure 1.1: Package contents

1. IPCorder
2. Power cord
3. Network cable
4. Basic firmware CD
5. Quick Installation Guide
6. License agreement

## 1.2 Disk installation

It is possible to connect up to six SATA or SATA 2 disks (disk types can be combined) to IPCorder, four internal and two external.

- Each of internal disks must be inserted into one of the fillers at the front of the device. Use this procedure for installation a disk into the filler:
  1. remove the filler
  2. remove the cover
  3. insert the disk and secure it with screws
  4. insert the filler back into the device
- External disks are to be connected to IPCorder using eSATA interface. Proper connectors marked eSATA 1 and eSATA 2 are on the back side of the device. External disks must have its own power source.

Do not remove already installed disks without first correctly removing them from the system (see Section 1.4).

## 1.3 IPCorder connection

### 1.3.1 Connecting

Connect the IPCorder to the computer network (use a net connector marked 1, the other is unused). The RJ-45 socket is located between the power socket and the reset switch (Figure 1.2).



Figure 1.2: Connecting the computer network

Connect the IPCorder to the mains power. The power supply socket is located at the base of the rear panel (Figure 1.2). If the cable is connected correctly the LED marked POWER will light and the device will start up.



Figure 1.3: Connecting the power cable

### 1.3.2 Accessing the IPCorder over network

On start-up, IPCorder tries to obtain an IP address via DHCP; if unsuccessful, the IP address defaults to *192.168.1.78*. If the IPCorder is in the same subnet as the PC the IPCorder is to be accessed from, it should appear in Network Devices (under Microsoft Windows).

After entering the IP Address of the IPCorder in a www browser's address bar (Mozilla Firefox or Internet Explorer 6, for example), the rescue mode interface should display.

## 1.4 Storage settings

This version of IPCorder supports the creation of RAID arrays across multiple disks. This means one to four disks are possible for storage.

Storage space configuration is done in Rescue Mode and is described on the *Storage Configuration* page (Section 1.4). The page can be accessed using the link by the same name. There, the system indicates the status of each disk.

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If RAID has not been configured, the system allows new arrays to be created.

The array type needs to be selected (*RAID type*):

- **Linear** –the resulting array will have a capacity equal to the sum of the disks. If one of the disks malfunctions, the data from the entire array may be lost. The speed is the same as that of a single disk.
- **RAID 0** –identical to the linear RAID array, but has faster data access. It can only be created from disks of the same capacity.

If all disks have the same capacity, the *RAID 0* array type is recommended.

Once the choice has been confirmed with the *Create RAID Array* button, the system creates the array and initializes the storage space. This step may take a long time, depending on the array type, and must not be interrupted. Any interruption may cause damage to the system.

### RAID Array Configuration

RAID array is not configured. You can create it now.

Model	Capacity [GB]	Status
ST3320620AS	320	Available

RAID type:

**Other actions:**  
[Back to main menu](#)  
[Restart in normal mode](#)

Figure 1.4: Creating RAID arrays

### RAID Array Configuration

RAID array is OK.

Model	Capacity [GB]	Status
ST3320620AS	320	In use

RAID type: raid0

**Other actions:**  
[Back to main menu](#)  
[Restart in normal mode](#)

Figure 1.5: Dismantling a RAID array

If the array is already configured, it may be dismantled using the *Destroy RAID Array button* (Figure 1.5). The array must be dismantled whenever a new disk is added or any existing ones are removed.

## Chapter 2

# LED indicators and buttons of the device

### 2.1 Device states and their indication

The Power LED always lights up in blue, which indicates the device is on.

The device may further indicate one of the following statuses:

- Normal mode –the System LED lights orange
- Start –the System LED flashes green
- Shut down –the System LED is simultaneously lit in orange and flashes green
- Rescue Mode –the System LED is lit in orange, and the individual disk LEDs flash red in sequence from top to bottom

### 2.2 Controlling the device using the buttons

The device has two control buttons; the Power button is located on the front panel, and the Reset button is in a small hole on the rear panel.

- When the Power button is pressed and released, the device goes to Shut Down, after which it restarts.
- When the Power button is pressed and held for 2 seconds, the device shuts down. When this is complete, the device may be safely disconnected from the mains supply.
- When the Reset button is pressed in Normal Mode, the device goes to Shut Down, and subsequently restarts in Rescue Mode.
- Similarly, by pressing the Reset button in Rescue Mode, the device reverts back to Normal Mode.



## Chapter 3

# Upgrading the firmware

1. Upgrading the firmware is always done with a *device key*. A key should be downloaded from every device. Downloading a device key is described in the *User Manual*.
2. The firmware upgrade package is always unique for each device. Each device should therefore be registered under your account at <http://updates.ipcorder.com>. If you do not have an account at <http://updates.ipcorder.com>, navigate to this address without delay and follow the on-screen instructions for creating a new account.
3. A *firmware package* can be generated for a given device by following the instructions on the server at <http://updates.ipcorder.com>.
4. Firmware upgrades are carried out in *Rescue Mode*. Switching to *Rescue Mode* is described in the *User Manual*.
5. Once in *Rescue Mode* go to the *Firmware Upgrade* page.
6. The generated *firmware package* should be entered in step 3. *Run Upgrade*. When the *Upload FW button* is pressed the upgrade will begin.
7. The upgrade must not be interrupted; any interruption may damage the device. When the upgrade is complete the system will give a notification.
8. To switch back to normal mode, click the *Restart in normal mode* link.

## Firmware Upgrade

To upgrade firmware please follow these steps. If you already have your firmware package prepared proceed directly to *step 3. Run Upgrade*. If you have generated your product key, but you do not have a firmware package go to *step 2. Download Firmware Package*. Otherwise start with getting your product key.

### 1. Get Product Key

Click [download](#) to get your product key.

### 2. Download Firmware Package

Go to [updates.ipcorder.com](http://updates.ipcorder.com) and get the latest firmware.

### 3. Run Upgrade

Upload firmware package. The upgrade procedure starts automatically right after the upload.

#### Other actions:

[Back to main menu](#)  
[Restart in normal mode](#)

Figure 3.1: Firmware upgrade

## Chapter 4

# Factory reset

A factory reset may be required, for example, if the device becomes damaged, or before a re-sale. This function erases all stored data on the disks and returns the settings to their default state.

The process must not be interrupted, otherwise permanent damage to the device may be caused. Verify in advance that the device's power source is stable, and do not turn the device off until the process is complete.

**WARNING:** data on magnetic media (hard disk) cannot ever be entirely removed. If the disk contained sensitive data, which should not be passed into the hands of any third party, we recommend not reselling the disks, but rather having them physically destroyed.

A return to factory settings is performed from the *Factory Reset* page in *Rescue Mode*. For a description on how to enter *Rescue Mode* see the *User Manual*. In *Rescue Mode*, select the *Factory Reset* link from the main page (Figure 5.1 on page 15). The *Factory Reset* page will be displayed (Figure 4.1). On clicking the *Factory Reset* button the system will begin to erase the data. This process may take some time, during which a notification page is displayed. The system will display a final notification when the process is complete.

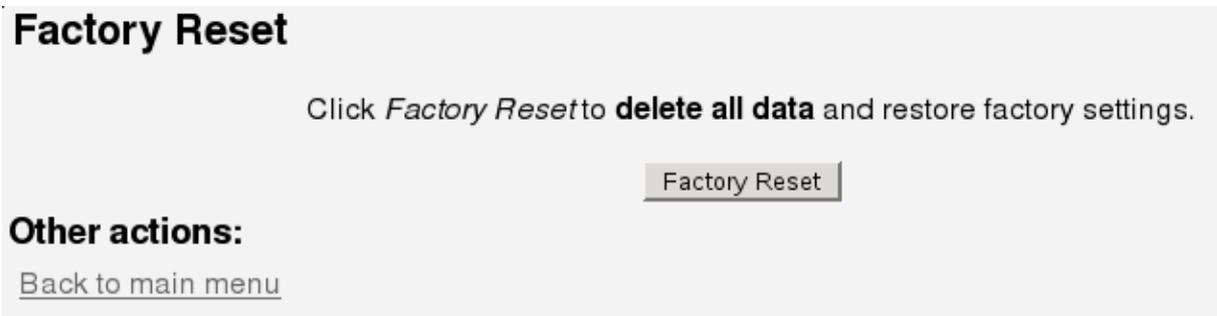


Figure 4.1: Factory reset

A system, which has undergone a *Factory Reset* will require new firmware activation before use.



# Chapter 5

## Troubleshooting in Rescue Mode

**IPCorder – Rescue Mode**

The system started into rescue mode either because it is not yet installed properly or because something went wrong.

rescue layer: *L-Rescue*  
rescue info: *diskManagement*

**Choose action**

- [Firmware Upgrade](#)
- [Firmware Repair](#)
- [Storage Configuration](#)
- [Factory Reset](#)
- [Restart](#)

Figure 5.1: The main Rescue Mode page

If any system faults are detected the device will automatically switch to *Rescue Mode*. If specific faults are identified, their appropriate page will be displayed, indicating the recommended course of action.

If the problem is more general, the *main Rescue Mode page* will be displayed (Figure 5.1). An overview of each component's status is accessible on the *Firmware Repair page*, which is opened by clicking on the link by the same name.

If the standard upgrade procedure fails, the firmware can be repaired via the *Firmware Repair page* (Figure 5.2).

**Firmware Repair**

On this page you can fix problems related to the firmware and upgradable parts of IPCorder. First there is a product.key that is used to identify box. You can regenerate invalid or missing keys. Then you can download firmware upgrade and install it via this interface.

**Status**

Test	Result	Solution
Product key exists	good	Fix   <a href="#">Download</a> (fixes product key if invalid)
Product key validity	good	---
Firmware/System validity	bad/bad	<input type="text"/> <input type="button" value="Browse..."/> <input type="button" value="Upload FW"/>

**Other actions:**

- [Back to main menu](#)

Figure 5.2: The Firmware Repair page



# Chapter 6

## Exchanging disc

If a disc is broken or filled, for exchanging the disc please follow the instructions:

- switch to Rescue mode and destroy RAID array using the button in Storage configuration page
- turn the device off a, remove the disc and add a new one like in Disc installation Section 1.2
- after turning the device on the RAID array has to be created again
- the others configurations will be preserved, the only data, that will be removed, are camera records



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