



# **SUPPORT GUIDE FOR THE NOKIA OBSERVATION CAMERA**

**NOKIA**



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## 1. INTRODUCTION

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This guide briefly describes how to set up and use the Nokia Observation Camera. The following requirements need to be met before proceeding:

- Nokia Observation Camera, GPRS and MMS enabled SIM card and power supply are the basic requirements
- For configuring the Nokia Observation Camera you need to have either a compatible PC or a GSM phone with SMS capability (Separate Support Guide)
- To take full advantage of the Nokia Observation Camera you need to have either an email account or MMS capable phone

With Nokia Observation Camera you can:

- Image requesting by SMS
- Automatic imaging at defined intervals
- Automatic imaging triggered by motion detector
- Call the camera and listen
- Get temperature updates and alerts

## 2. GETTING STARTED

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The Nokia Observation Camera sales package contains the following items:

- Nokia Observation Camera
- Desktop/wall stand
- Mounting screws and a tool for tightening them
- Serial data cable
- Power source and wall mount cradle
- CD-ROM with PC Suite software
- User's guide



The front panel of the Nokia Observation Camera (Figure 1) features:

- Infrared light source for capturing images in low light (1)
- Start button for motion detection (2)
- Motion detector (3)

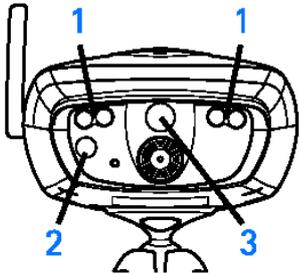


Figure 1. Nokia Observation Camera front view.

The back panel of the Nokia Observation Camera (Figure 2) features:

- SIM card slot (4)
- Serial cable connector (5)
- External antenna connector (6)
- Power connector (7)
- Thermometer (8)

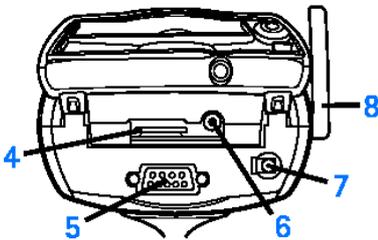


Figure 2. Nokia Observation Camera back view.

Attach the desktop/wall stand to the camera bottom using the metal screw. Now insert the SIM card to camera and connect the camera to mains.



**Tip:** Before inserting the SIM card into Nokia Observation Camera you need to take the PIN code request off if you plan to configure the camera with SMS messages. It is also a good idea to put a piece of adhesive to SIM card before inserting it if you for example use the same card occasionally with a mobile phone.



After inserting the SIM card and connecting the camera to mains the 3 LEDs on the camera should light up in the following way (if PIN code request is off and SIM card is correctly inserted):

- All LEDs scan green: Connecting to network
- After connecting to network the camera indicates the field strength:
  - One green LED: Weak
  - Two green LEDs: Moderate
  - Three green LEDs: Good
- After a few seconds LED 1 goes green -> The Observation Camera is connected to GSM network
- If there is something wrong then
  - All LEDs flash red and green: No SIM card / SIM card inserted incorrectly
  - Middle LED flash red: Enter PIN code either by using the PC software or remove the SIM card and use your phone to take off the PIN code request



For more information on the Nokia Observation Camera please refer to User's Guide.

### 3. SETTING UP THE NOKIA OBSERVATION CAMERA

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There are two ways to set up your Nokia Observation Camera either by using the PC Suite Software supplied in the sales package CD-ROM, or by using your GSM phone and SMS messages (described in a separate Support Guide).

#### 3.1 SETTING UP NOKIA OBSERVATION CAMERA USING PC SOFTWARE

Install the Nokia Observation Camera PC Suite to your PC. If you have not yet inserted the SIM card and connected the power cord then do so. Also connect the data cable to the camera and to the serial port on your PC.

- Start the Nokia Observation Camera PC Suite
- Choose the right PC COM port from "File -> COM port settings" if needed. You should see  on bottom right corner of the Nokia Observation Camera User Interface if the connection is OK.
- When the PC Suite connects to camera, the Security code is asked automatically. The default code is 1234 (please note that 4 digits is the maximum length).
- After inserting the correct code, the SIM card PIN code is automatically asked (if PIN query is active)
- When the correct PIN code is inserted, the camera uses the AutoPIN feature to insert the PIN code automatically in later camera start ups



Figure 3. Entering Security Code

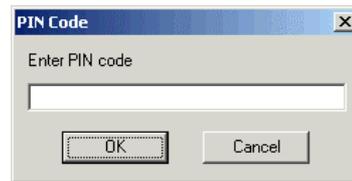


Figure 4. Entering PIN code

- The PC Suite asks whether to import current settings from camera to PC Suite (Figure 5). Choose yes. Please note that applying a new user list without first importing the current user list from the camera the new list overwrites previous user list from the camera.

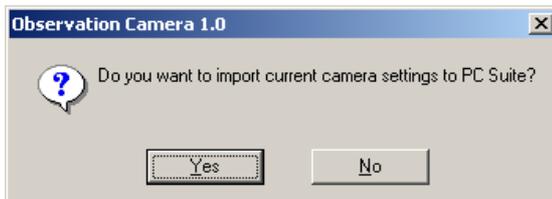


Figure 5. Importing settings from camera to PC.

- From PC Suite left hand side menu bar choose 
- Choose the UI and SMS language and define a name for the Nokia Observation Camera (Figure 6)

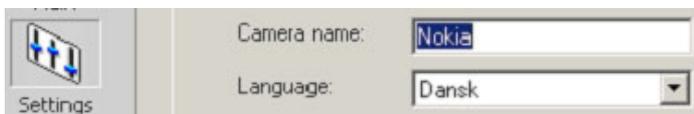


Figure 6. Entering camera name and setting the language

Choose image resolution and quality settings

Resolution suggestions for different use:

- High = 640 x 480 pixels (VGA resolution) (Good for e-mail use)
- Normal = 320 x 240 pixels (Good for bigger screen MMS phones like Nokia 3650)
- Compact = 160 x 120 pixels (Good for small screen MMS phones like Nokia 6800)

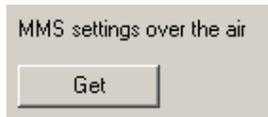
Quality suggestions for different use:

- High = Almost no compression (best image quality, image is quite crisp and has fairly good detail) (Best suited for email use as the image file size is fairly big for MMS use especially if used together with High resolution setting)
- Normal = A bit more compression (usable for bigger screen MMS phones)
- Basic = hardest compression (Best for small screen MMS phones)
- Accept the new settings and write them to camera device by pressing the "Apply" button



If your network operator provides MMS settings via OTA (over the air) configuration messages then

- From PC Suite left hand side menu bar choose
- Go to Connection tab
- MMS settings over the air
- Now click on “Get”



Now you should see “Get MMS Settings” window on the screen (Figure 7)

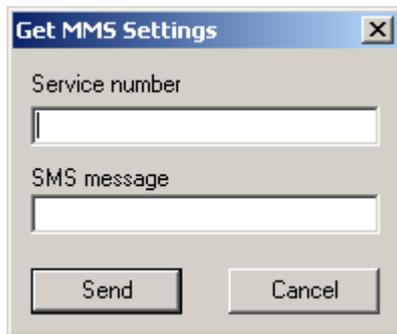


Figure 7.

Enter the MMS service provider’s service number and command.

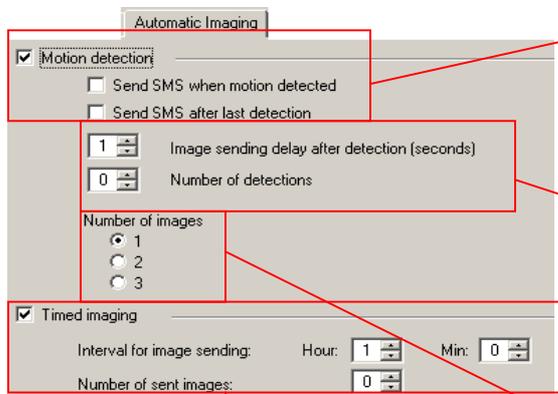
When operator settings arrive, a message is shown in the PC-Suite: “Operator settings received, do you want to import settings to PC Suite?” By answering Yes you can see the settings received message.

If your MMS service provider does not provide OTA configuration, enter the settings in the “Connection” window according to your service provider’s information.

If needed, enter your network service provider’s SMS centre number to the “SMSC” field. This is required if your SIM card doesn’t already have this number and you wish to get SMS notifications from the Nokia Observation Camera. If you encounter problems in setting the SMSC number with PC Suite application you can set it also with your GSM phone via SMS.

After you have successfully set the Connection and General Settings you can configure the Automatic Imaging (Figure 8) and Thermometer (Figure 9).





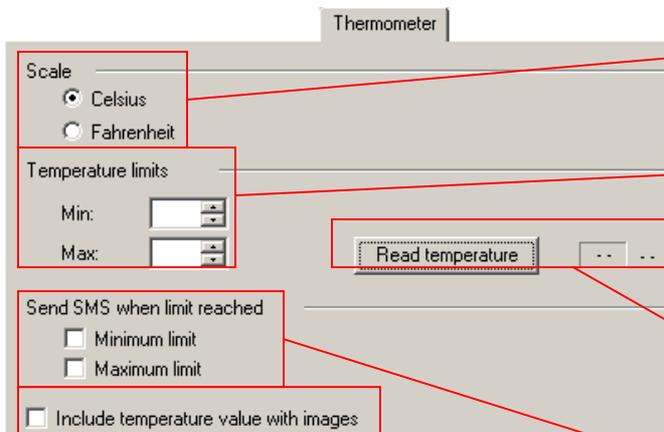
**Motion detection** = set ON if you wish to receive a picture message to your phone or to your email address  
**Send SMS when...** = Set this ON if you wish to receive a SMS notification when motion is detected  
**Send SMS after...** = Only applicable if you set the number of detections to other than 0

**Image sending...** = How many seconds the camera waits after motion detection till it starts to send the image via MMS  
**Number of...** = Can be anything between 0-10. Zero (0) means infinite number of images. If other than 0 then the camera sends the number of images set and stops sending after that you can however for example set the Send SMS when motion detected ON to receive information from the camera without pictures.

**Timed imaging** = Set this ON if you wish to receive images for example every half an hour  
**Interval for...** = The hour can be set between 0-24 and minutes between 0-59.  
**Number of sent...** = Can be anything between 0-10. Zero (0) means infinite number of images. If other than 0 then the camera sends the number of images set and stops sending after that  
*This function can be used together with Motion detection.*

**Number of images** = How many images (MMS or email) is sent to you after each detection.

Figure 8. Configuring Automatic Imaging



**Scale** = Select the scale which you wish to use. Either Celsius or Fahrenheit.

**Temperature limits** = Set the minimum and/or maximum temperature in degrees (can be between -10 - +50 C or 14 - 122 F). Suggested to use together with Send SMS when limit reached option.

**Read temperature** = Reads and displays the current temperature (C or F)

**Include temperature...** = If this option is selected all the MMS messages that you receive from the Camera will also include the current temperature in its own row in textual format.

**Send SMS when...** = You can set the Nokia Observation Camera to send you a SMS when Minimum and/or Maximum temperature has been reached near the Camera.

Figure 9. Configuring the Thermometer settings.

Now you can set the user information and after that your Nokia Observation Camera is ready for use.

- From PC Suite left hand side menu bar choose



The screenshot shows a configuration window for users. It includes fields for Name, Phone number, and E-mail address, a checkbox for Master user, and options for sending SMS notifications about motion detection, temperature limits, and power failure. There are also options for default image address (Phone or E-mail) and user rights (Allow image request, Allow audio connection, Allow timed imaging, Allow motion detection). At the bottom, there is a table of users with columns for Status, Name, Mast..., Phon..., E-mai..., Motio..., Temp..., and Powe... Below the table are buttons for Add, Update, and Remove, and a checkbox for Disable image request authentication.

**Master user** = Owns full user access rights and is the only user having access to configure the camera with SMS commands.

The user name and phone number fields are mandatory to fill.

**Send SMS...** = If you wish to receive notification to your phone via SMS about some or all of the listed items just select them. Please note that the camera sends Power Failure notification after it gets the power back.

**Default image...** = Select either Phone or E-mail. It is recommended to choose E-mail if you have set the image size and quality to High.

**User Rights** = Select the items you wish for this user you are currently adding or editing. Please note that if you select the **Disable image request...** then anyone who knows the Camera's phone number can request images even if he/she is not in the user list.

**Users** = Click on the **Add** button to add user to the Camera user list (maximum is 20 users; only one master user). Click on **Update** to synchronize the lists between the Camera and the PC Suite. If you wish to remove a user from the list just select the user from the list and click on **Remove**.

When all wanted users are created and added to the user list, press the "Apply" button to write the user list to Observation Camera. The Status-column in user list changes from "PC" to "Camera".



**Note:** Applying a new user list without first importing the current user list from the camera overwrites previous user list from the camera!



You can use the Monitor window to test the camera or for saving images from the camera to your PC (Figure 11).

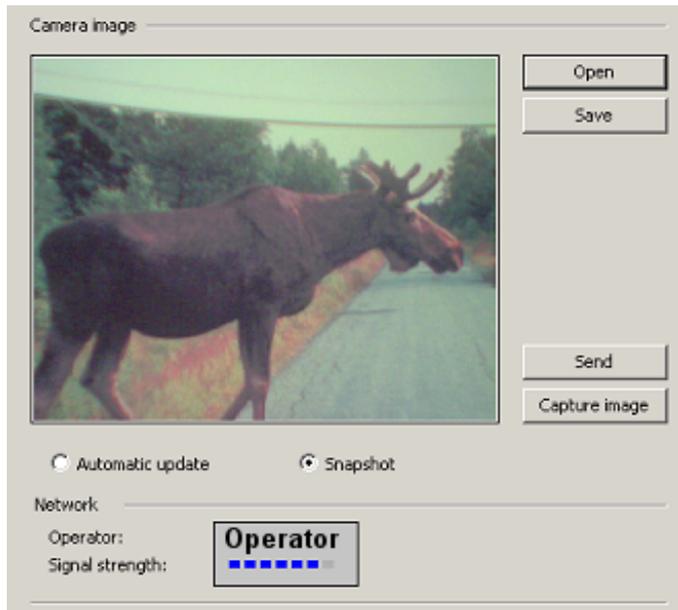


Figure 11. Monitor window.



**Note:** Connection settings need to be modified only when the Observation Camera is taken in to use for the first time.



After these basic settings the camera is ready for use. Now go to  and click on Write. It is also a good idea to save the camera settings to your computer's hard disk for later use or if you want to configure several cameras with the same settings.

Disconnect the power cord and the data cable from camera and close the back lid.

The settings are saved in camera's non-volatile memory.

Now you can install your camera and check the functionality and aiming. Send SMS "1" (without quotation marks) to your camera and your camera should send you a picture via MMS or e-mail depending on your camera settings.

## 4. TECHNICAL INFORMATION ON THE NOKIA OBSERVATION CAMERA

|                           |   |
|---------------------------|---|
| Weight                    | 200 g   |
| Dimensions                | 120 x 85 x 52 mm  |
| GSM Frequency Bands       | GPRS 900 / 1800 MHz   |
| Resolution                | VGA, adjustable 640 x 480, 320 x 240 and 160 x 120 pixels   |
| Encoding (picture) format | JPEG  |
| Camera View Angle         | 58 degrees  |
| Camera Focus              | Automatic focus from 1 meter to infinity  |
| Antenna                   | In-Built<br>External antenna adapter available as an accessory (XRM-1)  |
| Power supply              | Power supply ACW-6 (100-240 VAC)<br>Back-up battery BBW-6 (Accessory)<br>12/24 VDC Fixed Vehicle Power Supply (Accessory) |
| Operating temperature     | -10° C - +50° C   |

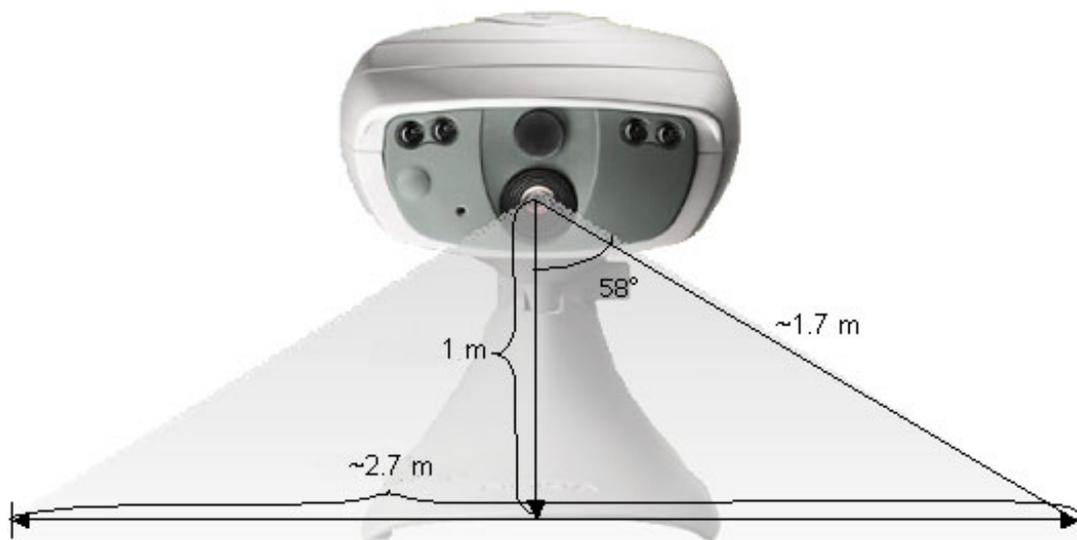


Figure 12. Camera viewing angle.