NOKIA

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Nokia UltraSite EDGE BTS, Rel. CX5, Product Documentation, v.1

Legal and Safety Statements for UltraSite EDGE BTS

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1 Statutory statements

1.1 CE Marking

Standard	Description
CE 0523 ⓘ	Hereby, Nokia Corporation, declares that this Nokia UltraSite EDGE Base Station is in compliance with the essential requirements and other relevant provisions of Directive: 1999/5/EC. The product is marked with the CE marking and Notified Body number according to the Directive 1999/5/EC.

1.2 FCC Statement

Standard	Description
FCC Statement	This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. The term "IC:" before the radio certification number only signifies that Industry Canada technical specifications were met.

2 SW Licence Terms

Related to the Nokia Networks software licensing, some terminology in the BTS customer documentation has changed. New SW product categories have been introduced and what was earlier referred to as:

- Standard feature, is now referred to as *Operating SW*
- Optional feature, is now referred to as *Application SW*

3 Warnings and cautions

3.1 Warnings in Nokia UltraSite EDGE BTS, Rel. CX5, Product Documentation, v.1

Warnings are used to alert the user to precautions needed to protect people. Warnings concern, for example, information about dangerous voltages or actions that could result in bodily harm or injury. A danger is a warning used to alert the user to an imminently hazardous situation that could result in death or serious injury.

The symbol denoting a warning is presented below.

Warning

This is a warning!

3.1.1 Dangerous voltages

Warning

Danger of lethal voltages! Make sure that the mains power breaker is off, and that the cabinet is properly earthed (grounded), before removing any connections from the cabinet.

Warning

Danger of lethal voltages! When connecting power cables, there is a risk of electric shock. Make sure that the site power is off and that the cabinet is properly earthed (grounded).

Warning

Damage to cabinet components or personnel can occur if the power cable is not secure. Ensure that the power cable is secure within the strain relief.

Warning

Danger of lethal voltages! Switch the base transceiver station (BTS) power off using a disconnecting device or circuit breaker before starting maintenance.

Warning

Danger of lethal voltages! Make sure that the mains power breaker is off before routing the AC filter unit cables.

Warning

Danger of lethal voltages! Make sure that the mains power breaker is off before repositioning the backplane connectors of the PWSx power supply unit.

Warning

Danger of lethal voltages! The power is switched on in the GSM/EDGE part of the base transceiver station (BTS). Be careful when handling the PWSx or WPS power supply units and power cables.

Warning

Danger of lethal voltages! The power is switched on in the base transceiver station (BTS). Do not disconnect the antenna cables from the antenna box.

Warning

Risk of electric shock. Hold the DVxx and RTxx cables clear of all conductive surfaces during installation and removal.

Warning

Danger of lethal voltages! Route cables in a manner that avoids potential damage. If not routed properly, power cables may be damaged when the cabinet door opens and closes.

Warning

Risk of electric shock. Ensure that the mains power supply is off before starting the installation of the AC filter unit, the DC filter unit, and the heater unit (HETA).

Warning

Risk of electric shock. Always install the earthing (grounding) cable before installing the units. See the earthing (grounding) cabling instructions.

3.1.2 Handling the BTS

Warning

The cabinets are heavy. Additional personnel or lifting equipment may be needed when the cabinets are moved, unpacked, or lined up. In addition, follow any local regulations applicable to the installation.

Warning

Empty cabinet cores are heavy. Use a lifting device when moving a cabinet core.

Warning

The cabinet door is heavy. At least two people are needed to remove the cabinet door.

Warning

When lifting or positioning a cabinet, loose components may fall out. Do not tilt the cabinet forwards.

Warning

Base transceiver station (BTS) cabinets have sharp edges. Take care when working with or near the BTS.

Warning

Risk of personal injury. Do not touch the fans in the rear of the cabinet.

3.1.3 Installing and removing the BTS

Warning

Risk of personal injury. Wear the necessary protective gear, such as gloves and safety glasses, when drilling.

3.1.4 Handling, installing and replacing units

Warning

Risk of electric shock. Always install the earthing (grounding) cable before installing the units. See the earthing (grounding) cabling instructions.

Warning

Always use an ESD wrist strap when handling units labelled with the ESD sign. Labelled units are sensitive to electrostatic discharge.

Warning

Unit-mounting fasteners may be nickel-plated. Personnel who are sensitive to nickel should wear protective gloves when handling units.

Warning

The unit is heavy. Take care when lifting the unit.

Warning

Risk of personal injury. When replacing fans within the BTS, the new fans may start operating when the power/signal cable is connected.

Warning

Risk of personal injury. Ensure that the fan has stopped rotating before removing the cabinet fan cover.

3.1.5 Connecting cables

Warning

Risk of fire. The cable cross-section dimensions must meet national, state, and local regulations.

3.1.6 Electromagnetic fields and RF power

Warning

This equipment generates electromagnetic fields. Always observe all the necessary safety precautions, and keep a safe distance from the antenna when the transmitter is switched on. To calculate the minimum safety distance, refer to the formula in the documentation.

Warning

Radio frequency emissions from the base transceiver station (BTS) may interfere with medical equipment such as life-support devices or other electrically or magnetically sensitive devices. Do not install the BTS or its antennas where there is a risk of such interference.

Warning

This equipment generates electromagnetic fields at radio frequencies. Do not exceed the safety time limit when working with antennas.

Warning

The antenna generates electromagnetic fields at radio frequencies. Do not cross the compliance boundary.

Warning

This equipment generates electromagnetic fields. If performing installation or maintenance procedures on the BTS, make sure that all the transmitters in the area are switched off.

Warning

The compliance boundary calculation in the example is for reference only. Use the measurements for the actual site during installation and maintenance. Compliance boundary calculations must be made by qualified personnel.

Warning

Risk of electric shock. When the mains power breaker is switched on, the terminals on the filter are live. Make sure that the cover is replaced before switching the mains power on.

3.2 Cautions in Nokia UltraSite EDGE BTS, Rel. CX5, Product Documentation, v.1

Cautions are used to denote possible damage to equipment but no danger to personnel. The symbol denoting a caution is presented below.

Caution

This is a caution!

3.2.1 Storage and transportation

Caution

Unprotected equipment may be damaged during transportation. Transport the equipment to the installation site in its original transportation package.

Caution

This equipment is sensitive to humidity. Keep the units in their packages until installation.

3.2.2 Handling the BTS

Caution

Floating ground on transmission lines may damage equipment. The 75 Ω radio transmitter (TX) is earthed (grounded) only when the earthing (grounding) bridge between the TX and radio receiver (RX) connectors is in place.

Caution

Floating ground on transmission lines may damage equipment. If you remove the earthing (grounding) bridge, the earthing (grounding) of the radio receiver (RX) connector's outer conductor changes from direct earthing (grounding) to capacitive.

3.2.3 Installing and removing the cabinet

Caution

If the installation site is in an area affected by seismic activity, follow the earthquake mounting instructions and any instructions specific to that particular country.

Caution

Risk of overheating. Secure adequate ventilation around the base transceiver station (BTS). The ambient air temperature must not exceed 55°C (131°F).

Caution

To ensure proper cooling, pay attention to the indoor cabinet back clearance. The recommended back clearance of 52 mm (2.0 in.) ensures proper air intake for the unit cooling fans.

Caution

Risk of damage to bottom interface connectors. When unpacking or installing the cabinet, do not stand the cabinet on its base as this damages the base interface connectors.

Caution

Risk of damage to the back stop. When lifting the cabinet and placing it on the ground, be careful not to damage the back stop at the lower rear of the cabinet.

Caution

Do not overtighten the bolts. Make sure the bolts are tightened evenly, or it can damage the cabinet.

3.2.4 Handling, installing and replacing units

Caution

Backplanes and connectors are fragile. Take great care when installing the plug-in units in the slots.

Caution

The connector pins are fragile. Do not use force to insert the plug-in unit.

Caution

The connector pins are fragile. Do not use force when inserting the transceiver (TSxx) unit into position during installation.

Caution

The backplane connector is fragile. When removing a plug-in unit, pull it straight out of the backplane with no upward force.

Caution

The backplanes and connectors are fragile. Do not force the transmission (VXxx) unit into position during installation. Gently tilt the rear of the transmission (VXxx) unit up to engage the backplane connector.

Caution

To avoid interference with other sites during local transceiver (TRX) tests, make sure that an RF attenuator is connected to every TRX in the base transceiver station (BTS) before starting the tests.

Caution

Using interface loopback in the outdoor unit cuts the connection to that unit. To restore the connection, switch the Flexbus power off and on, or wait for the timeout to expire.

Caution

Risk of damage to the laser module. If the receiving power is above -10 dBm, attenuate the optical input power.

3.2.5 Connecting cables

Caution

Cables age through bending and may be damaged. Minimise the number of times you bend cables.

Caution

Cables may be damaged if they are caught between the door and the doorframe. Use the doorstop to hold the door open. When you close the door, ensure that the cables are not caught.

Caution

If the DC power cables are reversed during installation, a fuse will blow or open in the transceiver unit (TSxA). Before you connect the power cables, check their polarity with a multimeter.

Caution

If the DC power cables are reversed during installation, a fuse will blow or open in the power-supply (PWSC) unit. Before you connect the power cables, check their polarity with a multimeter.

Caution

Do not overbend the RF and antenna cables. The minimum bending radius is 25 mm (1 inch).

Caution

Overbending the feeder cables and jumper cables damages the cables and can detach or damage the connectors. If the cabinet is mounted on a plinth, do not bend the feeder cables or jumper cables to a radius smaller than the minimum radius of 35 mm (1.38 inches).

Caution

Overbending the RF cables and antenna cables damages the cables and can detach or damage the connectors. If the cabinet is mounted on a plinth, do not bend the feeder cables or jumper cables to a radius smaller than the minimum radius of 25 mm (0.98 inches) for internal cabling.

Caution

Overbending the optical fibre cables damages the cables and can detach or damage the connectors. Do not bend the optical fibre cables to a radius smaller than the minimum radius of 75 mm (2.95 inches).

Caution

The cabinet does not contain dust filters. Protect all unused connectors and slots in the outdoor cabinet with connector caps and sealing units.

Caution

Risk of damage to units. Terminate unused radio receiver (RX) outputs and use environmentally sealed protective caps for any unused antenna ports.

Caution

The optical fibre cable is fragile. Be careful when connecting the optical fibre cable to FXC STM-1.

Caution

The optical fibre cable is fragile. Do not put the fibre under permanent tensile stress.

3.2.6 Commissioning

Caution

Changing the parameter values may make the system unstable or inoperative. Do not change the parameter values unless you are an experienced user and know the correct values.

Caution

A very small alarm-monitoring interval puts a strain on the Q1 bus resources and delays other activities. Do not set the alarm-monitoring delay to a very small value when monitoring a network element remotely.

4 Environmental information

4.1 Collection and disposal directive within European Union

Note

This directive is applicable only within European Union (see WEEE Directive 2002/96/EC).

Do not dispose of the product as unsorted municipal waste. The crossed-out wheeled bin means that at the product end-of life the product must be taken to separate collection.

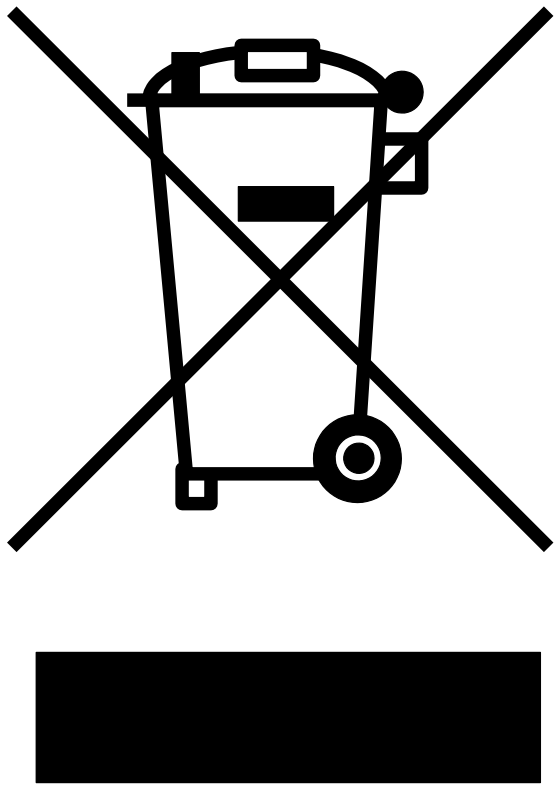

Figure 1. Separate collection icon

4.2 EU RoHS statement

Nokia UltraSite EDGE BTS will comply with the European Union RoHS Directive 2002/95/ EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment 1 July 2006 at the latest. The directive applies to the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB), and polybrominated diphenyl ethers (PBDE) in electrical and electronic equipment put on the market after 1 July 2006.