NOKIA

Alarm Descriptions

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CE

CE 0523 ⓘ Hereby, Nokia Corporation, declares that this Nokia InLite 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

FCC

FCC §15.21 - Information to user - The Nokia InLite is used as an intentional radiated equipment and any changes or modifications on the equipment without any approval by Nokia could void the user's authority to operate the equipment.

FCC §15.27 b) - Special Accessories - If a device requiring special accessories is installed by or under the supervision of the party marketing the device, it is the responsibility of that party to install the equipment using the special accessories. For equipment requiring professional installation, it is not necessary for the responsible party to market the special accessories with the equipment. However, the need to use the special accessories must be detailed in the instruction manual, and it is the responsibility of the installer to provide and to install the required accessories.

FCC §15.105 - Information to user - 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. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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History

Date	Version	Author	Details
March 2001	Version 1	Brian Searle	
20 - 07 - 2001	Version 2 Draft 1	Tom Dumic	Included US Type Approval information
22 - 08 - 2001	Issue 2	Tom Dumic	Release for Product v1.0 US
05 - 09 - 2001	Issue 2, Draft 1	Tom Dumic	Draft for Product v2

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1 About this document

This document describes the Nokia InLite system alarms. The document provides detailed explanations of the alarms and provides instructions so that the operator can correct faults and maintain traffic in the air interface. All alarms can be monitored via the InLite Supervisor software Version 2.3.2

The document includes:

- Detailed alarm instructions for InLite system
- Alarm classification (Major on Minor)
- Actions to take for each alarm

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2 Nokia InLite system alarms

2.1 Alarm classification

Alarms are classified in two categories that are sent to BTS external alarms.

- Major Alarm=>Indicating service effecting failure
- Minor Alarm=> Indicating a non-service effecting failure

2.2 Main Unit alarms

2.2.1 Switch matrix unit alarms

Alarm	Description	Alarm Category	Auto Recovery	Action
Excess RF input power*	TRX with a RF power higher than the Over Power threshold. The TRX's indicator is red.	Major	Yes	Reduce the TRX output power to less than +33 dBm(2W). Note: the nominal TRX port input RF power is +30dBm(1W) maximum
* This feature is NOT available for InLite 1.0 US.				

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Table 1. Switch Matrix Unit Alarms

2.2.2 Control Unit alarms

Alarm	Description	Alarm Status	Auto Recovery	Action
CU AL	CU alarm for Self Test Failure: one or more units in the system do not respond to CU queries. Red led is ON.	Major	Yes	Remove the faulty unit(s) and insert known good units; check that the system functions correctly.
BkUp	PSU or External Temperature alarm: an alarms backup has been performed and stored in the CU to avoid the loss of data if the system power supply drops. Red led is ON.	Major	Yes	See PSU alarms description
System Al	All alarms; red led is ON and alarm is either major or minor.	-	-	See Figure Alarm

Table 2. Control Unit alarms

2.2.3 Local Unit alarm

Alarm	Description	Alarm Status	Auto Recovery	Action
UPLINK Alarms				
Tone_L	UL Tone transmitted by RU below the threshold (Low).	Minor	Yes	Clean UL Fiber Optical cable or replace if if it is damaged or stretched.
Tone_F	UL Tone transmitted by RU absent (Fail)	Major	Yes	RU laser broken, switched off or fibre optic cable broken; check RU or fibre optic cable.
General Alarms				

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Alarm	Description	Alarm Status	Auto Recovery	Action
RF_UL_F	Current of the RF uplink amplifier out of range	Minor	No	Remove and fit a known good unit
RF_DL_F	Current of the RF Downlink amplifier out of range	Minor	No	as above
DL_LA_F	Downlink laser broken or switched off by the Shut Down command.	Minor	Yes/No	Yes: Switch ON LU laser by Shut Down command No: LU laser broken, remove and fit a known good LU.
SH_AL	Board in short-circuit condition or no power supply to LU	Minor	No	Remove and fit a known good unit
TEM_AL	Temperature alarm out of range:[0...+75](C	Minor	Yes	Wait until the temperature returns to the normal operating range. Check LU board.

Table 3. Local Unit alarms

2.2.4 Power Supply Unit alarms

Alarm	Description	Alarm Status	Auto Recovery	Action
Pw1_Temp (Master) Pw2_Temp (Slave)	Power supply temperature critical; System Shut Down. Red led is ON.	Major	Yes	System Shut Down while temperature over threshold.
Pw1_Vout (Master) Pw2_Vout (Slave)	Power supply voltage out of range; System Shut Down. Red led is ON.	Major	No	Remove the module and fit a known good one.
Pw1_Vin (Master) Pw2_Vin (Slave)	Mains voltage out of range; System Shut Down. Red led is ON.	Major	No	Check the mains supply source

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Table 4. Power Supply Unit alarms

2.2.5 Other alarms

Alarm	Description	Alarm Status	Auto Recovery	Action
Ext_Temp	Temperature in the Main Unit cabinet above the threshold. System Shut Down. Red led is ON.	Major	Yes	System Shut Down while the temperature value exceeds the threshold.
OpDoor (Open Door)	The cover of Main Unit is open. Red led is ON.	Minor	Yes	Close and lock the main unit cover.

Table 5. Other alarms

2.3 Remote unit alarms

Alarm	Description	Alarm Status	Auto Recovery	Action
DC_Loop	Antenna connector open (no load). Max attenuation of the downlink paths of the RU is automatically set.	Minor	Yes	Check if antenna is connected or correct type.
DL_Tone	Downlink RF tone below the threshold.	Minor	Yes	Clean DL fibre optic cable or fit a new cable if this one is damaged or stretched.
DL_OptP	Downlink Optical Power below threshold: automatic DL laser shut down of the RU.	Minor	Yes	as above.
AGC	Automatic Gain Control: out of range	Minor	Yes	as above.
DL_900	900 MHz Downlink amplifier current out of range	Minor	No	Remove the RU and fit a known good RU

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Alarm	Description	Alarm Status	Auto Recovery	Action
DL_1800	1800 MHz Downlink amplifier current out of range	Minor	No	as above
Ext1	External alarm	Minor	Yes	Depends on what is connected to the External Alarm
Ext2	External alarm	Minor	Yes	Depends on what is connected to the External Alarm

Table 6. Remote Unit alarms

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3 Alarm Tree

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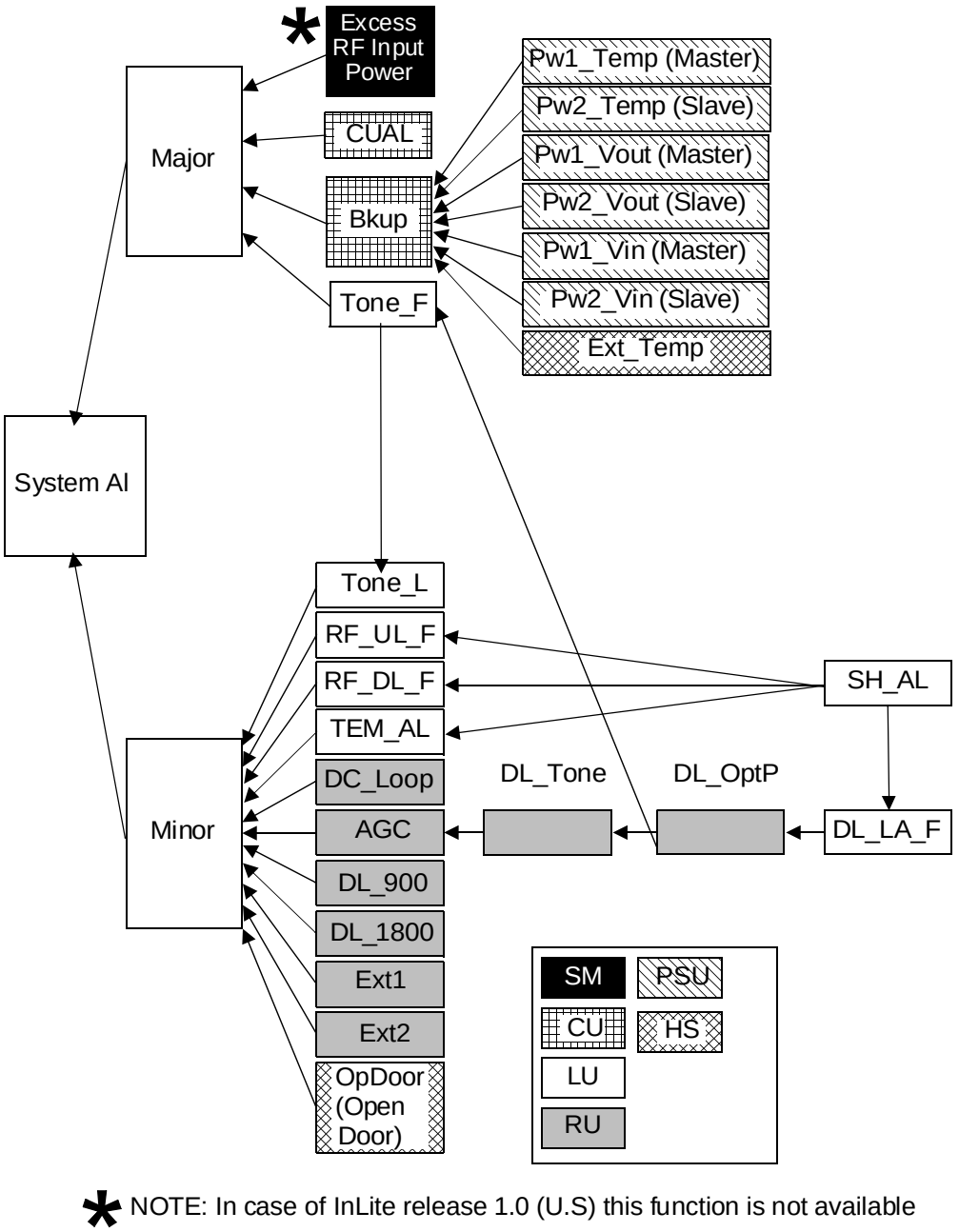

NOTE: In case of InLite release 1.0 (U.S) this function is not available

Figure 1. Alarm

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