

NOKIA

BSC

**Minimum CPU and Memory
Requirements for BSC S10.5 SW
Release**

**HW Technical Note
No. 115**

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TN115 Minimum CPU and Memory Requirements for BSC S10.5 SW Release

Validity:

Software X S10.5	X GSM 900 X GSM 1800	X GSM 1900 X GSM 800
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Summary: This TN describes the minimum BSC CPU and memory consumption in BSC SW release S10.5. The requirement for S10.5 consists of BSC SW S10 minimum level and in addition upgrades for OMU and MCMUs memories. The minimum memory requirement for BSCs OMU and MCMUs CPU units is 128 Mbytes in S10.5. New BSC and High Capacity kits delivered from S10 onwards will include already CP6MX and 128Mbytes in all BSC CPU units.

Description:

Every effort is made to ascertain long life cycle for existing BSC products in operator's networks as well as smooth evolution path to new additional functionality. However, new SW releases with new set of features also requires more memory and processing power from functional units in BSC. Now minimum memory consumption for new functionalities in S10.5 SW package has been confirmed to require at least the following minimum memory capacity from BSC CPU units.

Described below both the CPU and minimum memory requirements for the SW Release S10.5.

Allowed Central Processing Unit (CPU) types:

CPU type	Micro-processor	Clock Frequency, MHz
CP4HX	486	100
CP4HL	486	100
CP6LX	Pentium II	266
CP6MX	Pentium III	500

Required memory amount per computer unit:

Computer unit	Current S10 Memory amount, Mbytes	Required S10.5 Memory amount, Mbytes

OMU	64	128
MCMU	128	128
BCSU	64	64

Instructions:

In OMU and MCMUs CPU units the memory requirement will increase to 128 Mbytes. In BCSUs the minimum memory amount will stay in 64 Mbytes. Therefore CP4HX, CP4HL and CP6LX type CPUs used in OMU and MCMUs need to be upgraded in all BSC variants (BSCE, BSCi, BSC2, BSC2i). CP6MX introduced with S10 deliveries does not require any change no matter in which computer unit it is used since CP6MX has already equipped with 128Mbytes memories.

Memory configuration can be flexibly extended to 128Mbytes in existing CPU types in all BSC variants. However, concerning the HW requirements in forthcoming SW releases Nokia recommends upgrades to High Capacity HW level. As example existing BSC2E/A products utilising CP4HX or CP4HL processors can be upgraded with high capacity upgrade kits. Upgraded BSC2i with CP6MX CPUs corresponds the S10 new delivery of BSC2i product from memory capacity (128Mbytes) point of view.

Memory can be extended for CP4H-units for example by adding 2 x MM32M-S memory modules into CP4HX/CP4HL. Correspondingly CP6LX memory configuration can be extended by adding MS64M or MS128M into CP6LX unit. Detailed memory upgrade instructions (TN) for BSC CPUs BSCE, BSCi, BSC2, BSC2i with 10.5 SW will be published on 10/01 at latest.

Note:

Reference: BSC HW TN094, Minimum CPU and Memory Requirements for BSC S10 SW.

Technical Note Revision History

DATE	VERSION	EDITOR	SUMMARY OF CHANGES
11.09.01	1.0	M.Pöllä	
04.04.02	2.0	J.Bärlund	S10 MCMU memory amount updated

BSC HW Technical Notes

Type	Set	Nbr.	Title	S8	S9	S10	10.5
GEN	-	115	MINIMUM CPU AND MEMORY REQUIREMENTS FOR BSC S10.5 SW RELEASE				X
GEN	-	114	NEW PLUG-IN UNITS FOR BSC S10 DELIVERIES			X	
ANSI	-	113	ET2A INTERCHANGEABILITY C	X	X	X	
GEN	-	112	AS7-VA VERSION 02		X	X	
GEN	-	111	AS7-V VERSION 05	X	X	X	
GEN	-	110	SW64B INTERCHANGEABILITY B	X	X	X	
GEN		109	ET2A VERSION 3A	X	X	X	
GEN	-	108	MC1C INTERCHANGEABILITY D	X	X	X	
GEN	-	107	TC1C VERSION 03	X	X	X	
GEN	-	106	ALTERNATIVE CONFIGURATION FOR VT525	X	X	X	
GEN	-	105	CPU MEMORY UPGRADE			X	
GEN	-	104	CVKT POWER SUPPLY CABLE	X	X		
GEN	-	103	TRCO VERSION 3B	X	X		
GEN	-	102	NEW WINCHESTER DISK DRIVE UNIT WDW18	X	X		
GEN	-	101	AS7-V VERSION 4B	X	X		
GEN	-	100	PSCG5 INTERCHANGEABILITY C	X	X		
GEN	-	099	PCU JUMPER SETTINGS		X		
GEN	-	098	NEW WINCHESTER DISK DRIVE UNIT WDW18	X	X		
GEN	-	097	SCSI CABLE CJE AND CJF VERSION 02	X	X		
GEN	-	096	PSC4-S VERSION 2B	X	X		
GEN	-	095	DAT12G VERSION 2	X	X		
GEN	-	094	MINIMUM CPU AND MEMORY REQUIREMENTS FOR BSC S10 SW RELEASE			X	
ETSI	-	093	PCU VERSION 1A		X		
GEN	-	092	AS7-V VERSION 4B	X			
GEN	-	091	WDAD-S VERSION 1A	X	X		
ANSI	-	090	TR12-T INTERCHANGEABILITY C	X	X		
ETSI	-	089	TR16-S INTERCHANGEABILITY D	X	X		
ETSI	-	088	PCU INTERCHANGEABILITY B AND C		X		
GEN	-	087	AVAILABILITY OF NOKIA BSC2E AND BSC2A EQUIPMENTS	X	X		
GEN	-	086	SD3C-S VERSION 1A	X	X		
GEN	-	085	HDAD2-A VERSION 03	X	X		
GEN		084	ET5C INTERCHANGEABILITY B	X	X		
GEN	-	083	CP6LX VERSION 2A	X	X		
GEN	-	082	AS7-V INTERCHANGEABILITY D	X	X		
GEN	-	081	TC1C VERSION 02	X	X		
GEN	4/00	080	DAT12G RETROFIT	X	X		
ETSI	3/00	079	ADDITIONAL INFORMATION TO BSC GPRS HW		X		
ETSI	3/00	078	SWSPS VERSION 3B				
ANSI	3/00	077	TR12-T VERSION 2B	X	X		
ETSI	3/00	076	TR16-S VERSION 2B	X	X		
GEN	3/00	075	TRCO VERSION 3A	X	X		
GEN	3/00	074	SCSIT-S VERSION 3A	X	X		
GEN	2/00	073	AS7-V RETROFIT, INTERCHANGEABILITY CHANGE FROM B TO C	X	X		
GEN	2/00	072	CP6LX RETROFIT, INTERCHANGEABILITY F AND VERSION 02	X	X		

GEN	1/00	071	NEW PLUG-IN UNIT VERSIONS	X	X		
GEN	7/99	070	INCORRECT AS7-V JUMPER SETTING	X	X		
ETSI	7/99	069	CORRECTION TO TR16-S VERSION 02	X	X	X	
ANSI	7/99	068	NEW ADAPTER FOR CCS#7; AS7-VA			X	
ETSI	7/99	067	NEW PLUG-IN UNITS FOR BSC S9 DELIVERIES			X	
ETSI	7/99	066	BSC GPRS HW			X	
GEN	6/99	065	PSC4-S MODIFICATION	X	X	X	
ANSI	5/99	064	TR12-T VERSION 02	X	X	X	
ETSI	5/99	063	TR16-S VERSION 02	X	X	X	
GEN	5/99	062	MINIMUM CPU REQUIREMENTS FOR BSC S9 SW RELEASE			X	
GEN	5/99	061	NEW DISPLAY CONTROLLER, VT525	X	X	X	
GEN	4/99	060	BSC SW S8 FIELD INSTALLATION STATUS		X		
GEN	1/99	052	MEMORY MODULE MM32M-S USAGE WITH CP4HX	X	X	X	
GEN	1/99	051	DAT12G MICROCODE CHANGE	X	X	X	
GEN	1/99	050	DAT12G MICROCODE CHANGE	X	X	X	
GEN	6/98	049	SCSIT-S VERSION 2A	X	X	X	
GEN	6/98	048	NEW PRINTER LPT38-S	X	X	X	
GEN	6/98	047	HWAT VERSION 3A	X	X	X	
GEN	6/98	046	FDD-S VERSION 5A	X	X	X	
GEN	6/98	045	MEMORY UPGRADING INSTRUCTIONS, CP4HX	X	X	X	
GEN	6/98	044	MINIMUM HW REQUIREMENTS FOR BSC SW RELEASE S8		X	X	
GEN	6/98	043	CPU EQUIPPING RECOMMENDATION	X	X	X	
GEN	5/98	042	FAULTY GAL COMPONENTS	X	X	X	
GEN	4/98	041	ET5C VERSION CHANGE	X	X	X	
GEN	4/98	040	NEW 4 GB WINCHESTER, WDW4	X	X	X	
GEN	4/98	039	NEW CARTRIDGE POWER SUPPLY, PSC1-S	X	X	X	
GEN	4/98	038	NEW CPU, CP4HL	X	X	X	
GEN	4/98	037	NEW DIGITAL AUDIO TAPE 12GB	X	X	X	
GEN	3/98	036	FAULTY GAL COMPONENTS ON SEVERAL PIUS	X	X	X	
GEN	3/98	035	BSC & TCSM HW CHANGES DUE TO S7	X			
GEN	3/98	033	CP4HX PARITY ERRORS AND TYPE OF DRAM MODULES	X	X	X	
GEN	2/98	032	KEYBOARD 108UK EOL	X	X	X	
GEN	2/98	031	CP4HX VERSION CHANGE	X	X	X	
GEN	2/98	030	DAT 12GB MICROCODE CHANGE	X	X	X	
GEN	2/98	029	POWER SUPPLY VERSION CHANGES	X	X	X	
GEN	1/98	028	WD3C4G HARD DISK DRIVE STRAPPING INSTRUCTION	X	X	X	
GEN	1/98	027	VDUEV STUCK	X	X	X	
GEN	7/97	026	SWCOP-S INTERCHANGEABILITY CHANGE	X	X	X	
GEN	7/97	024	FAULTY COMPONENTS IN THE SCSIF PLUG-IN UNIT	X	X	X	
GEN	7/97	023	NEW RACK VERSIONS	X	X	X	
GEN	7/97	022	TIMING RETROFIT	X	X	X	
GEN	6/97	021	INSTALLATION ERROR IN SCSIT-S TERMINATORS	X			
GEN	6/97	019	WDDC CARTRIDGE IMPROVEMENT AND SCSI-BUS DISTURBANCE	X	X	X	
GEN	6/97	018	DAT12G, DIGITAL AUDIO TAPE 12GB	X	X	X	
GEN	5/97	017	WINCHESTER, WINCHESTER ADAPTER CHANGES	X	X	X	
GEN	5/97	016	ADDITIONAL INFORMATION TO GEN012 "INSTALLATION ERROR IN SCSIT-S TERMINATORS"				Replaced by 021
GEN	4/97	015	TRACKING PROBLEMS IN DAT2GB	X	X	X	
GEN	4/97	014	VERSION CHANGE IN FDD-S	X	X	X	
GEN	3/97	013	RACK MECHANICS VARIANTS	X	X	X	

GEN	3/97	012	INSTALLATION ERROR IN SCSIT-S TERMINATORS				
GEN	3/97	011	MBIF-T, MESSAGE BUS INTERFACE UNIT	X	X	X	
GEN	2/97	010	NEW VDUEV UNIT	X	X	X	
GEN	2/97	008	CLAB INTERCHANGEABILITY CHANGE	X	X	X	
GEN	1/97	006	CONNECTOR CABLES	X	X	X	
GEN	1/97	005	DAT12G, DIGITAL AUDIO TAPE 12GB				
GEN	1/97	004	FDD-S, FLOPPY DISK DRIVE	X	X	X	
GEN	1/97	003	MBIF-T, MESSAGE BUS INTERFACE UNIT	X	X	X	
GEN	1/97	002	WD3C4G, WINCHESTER DISK DRIVE UNIT 4 GB	X	X	X	
GEN	1/97	001	CHANGES IN BSC HW ISSUES				
GSM	2/99	013	BSCi, HIGH CAPACITY BSC HW		X	X	
GSM	1/99	012	BSC S8 HW CHANGES AND BSC HIGH CAPACITY HW		X	X	
GSM	1/98	011	ET1E AND ET1E-C JUMPER SETTINGS	X	X	X	
GSM	1/98	010	ET1E AND ET1E-C CHANGES	X	X	X	
GSM	4/97	009	VERSION CHANGES IN ET1E UNITS	X	X	X	
GSM	4/97	008	VERSION CHANGE IN AS7-U	X	X	X	
GSM	3/97	007	MISMATCH BETWEEN FRAME ALIGNMENT MODE	X	X	X	
GSM	3/97	006	AS7-U RETROFIT	X	X	X	
GSM	2/97	004	MISMATCH BETWEEN FRAME ALIGNMENT MODE				
GSM	2/97	003	SYNCHRONIZING SIGNAL DISTURBANCE IN TR16-S	X			
GSM	1/97	002	AS7-U INTERCHANGEABILITY CHANGE				
DCS	2/99	013	BSCi, HIGH CAPACITY BSC HW		X	X	
DCS	1/99	012	BSC S8 HW CHANGES AND BSC HIGH CAPACITY HW		X	X	
DCS	1/98	011	ET1E AND ET1E-C JUMPER SETTINGS	X	X	X	
GSM	2/97	004	MISMATCH BETWEEN FRAME ALIGNMENT MODE				
GSM	2/97	003	SYNCHRONIZING SIGNAL DISTURBANCE IN TR16-S	X			
GSM	1/97	002	AS7-U INTERCHANGEABILITY CHANGE				
DCS	2/99	013	BSCi, HIGH CAPACITY BSC HW		X	X	
DCS	1/99	012	BSC S8 HW CHANGES AND BSC HIGH CAPACITY HW		X	X	
DCS	1/98	011	ET1E AND ET1E-C JUMPER SETTINGS	X	X	X	
DCS	1/98	010	ET1E AND ET1E-C CHANGES	X	X	X	
DCS	4/97	009	VERSION CHANGES IN ET1E UNITS	X	X	X	
DCS	4/97	008	VERSION CHANGE IN AS7-U	X	X	X	
DCS	3/97	007	MISMATCH BETWEEN FRAME ALIGNMENT MODE	X	X	X	
DCS	3/97	006	AS7-U RETROFIT	X	X	X	
DCS	2/97	004	MISMATCH BETWEEN FRAME ALIGNMENT MODE				
DCS	2/97	003	SYNCHRONIZING SIGNAL DISTURBANCE IN TR16-S	X			
DCS	1/97	002	AS7-U INTERCHANGEABILITY CHANGE				
PCS	1/99	005	METAL DUST OF ET2A WITH ET5C/ET1TC	X	X	X	
PCS	1/99	004	BSC S8 HW CHANGES AND BSC HIGH CAPACITY HW		X	X	
PCS	3/97	003	VERSION CHANGE IN AS7-US	X	X	X	
PCS	2/97	002	SYNCHRONIZING SIGNAL DISTURBANCE IN TR12-T	X			
PCS	1/97	001	NEW PLUG-IN UNIT AS7-US	X	X	X	