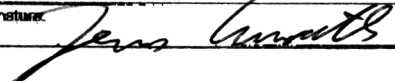


	SPECIAL MODIFICATION REQUEST		Document Version 1.0
	Ref. Document EC No.: 14516		
	product: MXS64GX/700 SMR Ericsson 1GB	part number 9-1110-6004	
	related to: MXS64GX (T6004-HCX06WB)		
by: Jens Unrath	signature: 	date: 27.01.2003	

CUSTOMER	
company: Ericsson AB; Armbrustvägen 14; 12525 Stockholm - Älvsjö	customer ID: 301685
contact: Björn Magnusson, TSP Processor Systems	
email: Bjorn.Magnusson@uab.ericsson.se	phone: +46 (0)8 727 36 22 fax: +46 (0)8 727 37 92

Modification Description
BIOS CHANGES: Original BIOS Flash: ROM: N/A Boot block: N/A ☒ see annex A CPCI-MXS64GX V1.4 6004EAG.bin FPGA version shown upon booting. Repeat boot sequence. ☒ see annex B Added standard option 'Repeat Boot Sequence'. Added option in 'Boot Sequence': NONE. Added optimised timing for FPGA programming BIOS Setup Settings see annex A. Change board revision from R11B to R11C (label on component side) Set Jumper on W1 (1-2), W3, W7 and W6 (2-4). Jumper W2 is set with wire jumper. Remove all other jumpers (see annex B).
HARDWARE CHANGES: ☐ see annex B - Remove 1 x front 4HP lexan mrp# 992-154-00. - Remove 1 x PMC shielded cover mrp# 400-352. - Add Serial COM 1 connector mrp# 250-091 at J13. - Remove 1 x front 4HP face plate mrp# 955-427-01. - Remove 1 x Front 4HP faceplate label mrp# 992-171-00. - Remove 1 x Label Lexan Logo CPCI mrp# 992-163. - Remove 1 x Label Lexan Logo CPCI mrp# 992-110-02. - Remove 6pin Jumper W1-2 mrp# 250-179 - Add 4pin Jumper W1 mrp# 250-178 - Add Wire jumper W2 mrp# 400-337 - Remove CON 120 mezzanine J19 mrp# 250-545 - Remove CON 72 mezzanine J14 mrp# 250-807 - Remove BAT Lithium B1 mrp# 100-001 - Add Faceplate 2 x nylon screws 1/4" DIA 4-40" for protective cover mrp# 400-034. - Add Faceplate 2 x nylon spacers .187" L.25" thr 4-40 for protective cover mrp# 400-406.

EC No.: 14516

Document Version 1.0

SPECIAL CONFIGURATION:☐ see annex

Part number description: MXS64GX/700 SMR Ericsson 1GB

MXS64GX : product name
 /700 : single CuMine 700MHz Pentium III
 SMR : see Hardware/BIOS changes above
 1GB : 1GB SDRAM PC100 soldered/stacked onboard (2 levels)

Base Board for this SMR version:

MXS64GX, rear access, 4HP (1 slot), dual 10/100 Base-T, PMC Slot, 1GB SDRAM soldered/stacked onboard, single PIII Coppermine Low Power Cartridge 700 MHz with passiv cooling, 16MB CompactFlash onboard, no mezzanine, protective back cover

OPTIONS:☐ see annex**GENERAL PRODUCT INFORMATION AND TERMS & CONDITIONS**

- No orders can be processed for this SMR product until this SMR request form and the customer release form are signed (approved) by the customer.
- When ordering this SMR product, please detail all options and clearly indicate product name (see below) on your purchase order.
- This product conforms to ISO 9001-1994 manufacturing standards.
- See Terms & Conditions Kontron/Ericsson General OEM Purchase Agreement.

CUSTOMER APPROVAL

Product name for the order: 9-1110-6004	Based on prototype	Notes on delivery date: non
NRE charge:		Per board surcharge:
Approved by: <i>Sören Magnusson</i>		Title: <i>Section manager</i>
Signature: <i>Ray Murray</i>		Date: <i>03-01-29</i>

	SPECIAL MODIFICATION REQUEST Ref. Document EC No.: 14516		Document Version 1.0
	product: MXS64GX/700 SMR Ericsson 1GB	part number 9-1110-6004	
	related to: MXS64GX (T6004-HCX06WB)		
by: Jens Unrath	signature:	date: 27.01.2003	

CUSTOMER			
company: Ericsson AB; Armborstvägen 14; 12525 Stockholm - Älvsjö			customer ID: 301685
contact: Björn Magnusson, TSP Processor Systems			
e-mail: Bjorn.Magnusson@uab.ericsson.se		phone: +46 (0)8 727 35 22	fax: +46-(0)8 727 37 92

Modification Description			
BIOS CHANGES: Original BIOS Flash: ROM: N/A Boot block: N/A ☒ see annex A CPCI-MXS64GX V1.4 6004EAG.bin FPGA version shown upon booting. Repeat boot sequence. ☒ see annex B Added standard option 'Repeat Boot Sequence'. Added option in 'Boot Sequence': NONE. Added optimised timing for FPGA programming BIOS Setup Settings see annex A. Change board revision from R11B to R11C (label on component side) Set Jumper on W1 (1-2), W3, W7 and W6 (2-4). Jumper W2 is set with wire jumper. Remove all other jumpers (see annex B).			
HARDWARE CHANGES: ☐ see annex B			
- Remove 1 x front 4HP lexan mrp# 992-154-00. - Remove 1 x PMC shielded cover mrp# 400-352. - Add Serial COM 1 connector mrp# 250-091 at J13. - Remove 1 x front 4HP face plate mrp# 955-427-01. - Remove 1 x Front 4HP faceplate label mrp# 992-171-00. - Remove 1 x Label Lexan Logo CPCI mrp# 992-163. - Remove 1 x Label Lexan Logo CPCI mrp# 992-110-02. - Remove 6pin Jumper W1-2 mrp# 250-179 - Add 4pin Jumper W1 mrp# 250-178 - Add Wire jumper W2 mrp# 400-337 - Remove CON 120 mezzanine J19 mrp# 250-545 - Remove CON 72 mezzanine J14 mrp# 250-607 - Remove BAT Lithium B1 mrp# 100-001 - Add Faceplate 2 x nylon screws ¼" DIA 4-40" for protective cover mrp# 400-034. - Add Faceplate 2 x nylon spacers .187" L.25" thr 4-40 for protective cover mrp# 400-406.			

SPECIAL CONFIGURATION:☐ see annex

Part number description: MXS64GX/700 SMR Ericsson 1GB

MXS64GX : product name
/700 : single CuMine 700MHz Pentium III
SMR : see **Hardware/BIOS** changes above
1GB : 1GB SDRAM PC100 soldered/stacked onboard (2 levels)

Base Board for this SMR version:

MXS64GX, rear access, 4HP (1 slot), dual 10/100 Base-T, PMC Slot, 1GB SDRAM soldered/stacked onboard, single PIII Coppermine Low Power Cartridge 700 MHz with passiv cooling, 16MB CompactFlash onboard, no mezzanine, protective back cover

OPTIONS:☐ see annex**GENERAL PRODUCT INFORMATION AND TERMS & CONDITIONS**

- No orders can be processed for this SMR product until this SMR request form and the customer release form are signed (approved) by the customer.
- When ordering this SMR product, please detail all options and clearly indicate product name (see below) on your purchase order.
- This product conforms to ISO 9001-1994 manufacturing standards.
- See Terms & Conditions Kontron/Ericsson General OEM Purchase Agreement.

CUSTOMER APPROVAL

Product name for the order: 9-1110-6004	Based on prototype	Notes on delivery date: non
NRE charge:		Per board surcharge:
Approved by:		Title:
Signature:		Date:

Appendix A

Project Ericsson / part-# 9-1110-6004
Customer required BIOS settings for MXS64GX/700 and BIOS 6004EAG

Standard CMOS Setup

Setting	Possible Settings	Required Setting
Date	N/A	N/A
Time	N/A	N/A
Primary Master	Type: Auto, User, None / Mode: Auto, Normal, Large, LBA	Auto
Primary Slave	Type: Auto, User, None / Mode: Auto, Normal, Large, LBA	Auto
Secondary Master		None
Secondary Slave		None
Drive A	None, 360K 5.25, 1.2M 5.25, 720K 3.5, 1.44M 3.5, 2.88M 3.5	None
Drive B	None, 360K 5.25, 1.2M 5.25, 720K 3.5, 1.44M 3.5, 2.88M 3.5	None
Video	EGA / VGA, CGA 40, CGA 80, Mono	EGA / VGA
Halt On	All Errors, No Errors, All but keyboard, All but diskette, All but disk / key	All but disk / key

BIOS Features Setup

Setting	Possible Settings	Required Setting
Virus Warning	Enabled, Disabled	Disabled
Quiet POST	Enabled, Disabled	Disabled
Quick Power On Self Test	Enabled, Disabled	Enabled
Full screen logo show	Enabled, Disabled	Disabled
Boot From LAN first	None, LAN 1, LAN 2, LAN 1-2, LAN 2-1	LAN 1-2
Boot From LAN condition	Always, WD Reset	Always
Raid card boot first	Enabled, Disabled	Disabled
Boot Sequence	A,C,SCSI; C,A,SCSI; C,CDROM,A; CDROM,C,A; D,A,SCSI; E,A,SCSI; F,A,SCSI; SCSI,A,C; SCSI,C,A; C only; LS/ZIP,C.; NONE	NONE
Repeat Boot Sequence	Enabled, Disabled	Enabled
Swap Floppy Drive	Enabled, Disabled	Disabled
Boot up floppy seek	Enabled, Disabled	Disabled
Drive A boot permit	Enabled, Disabled	Enabled
Floppy disk access control	R/W, Read Only	R/W
Report no FDD for Win95	Yes, No	Yes
Hard disk write protect	Enabled, Disabled	Disabled
HDD S.M.A.R.T capability	Enabled, Disabled	Enabled
Delay for HDD (Secs)	0-15	0
OS select for DRAM>64M	Non-OS2, OS2	Non-OS2
Gate A20 Option	Fast, Normal	Fast
Security Option	Setup, System	Setup
Diskette Access for	All, Supervisor	All
Boot up Numlock status	On, Off	On
Typematic rate setting	Enabled, Disabled	Enabled
Typematic Rate (Chars/s)	6-30	30
Typematic Delay (msec)	250-1000	250
Comport	1, 2	1
Speed	Auto, 2400, 9600, 19200, 38400, 57600, 115200	38400
Parity	None, Odd, Mark, Even, Space	None
Data	7, 8	8
Stop	1, 2	1

Chipset Features Setup

Setting	Possible Settings	Required Setting
CPU internal cache	Enabled, Disabled	Enabled
External cache	Enabled, Disabled	Enabled
CPU L2 cache ECC checking	Enabled, Disabled	Enabled
SDRAM RAS-to-CAS delay	2, 3	3
SDRAM RAS precharge time	2, 3	3
SDRAM CAS latency time	2, 3	3
SDRAM precharge control	Enabled, Disabled	Enabled
DRAM Data integrity mode	ECC, Non-ECC	ECC
Memory hole at 15M-16M	Enabled, Disabled	Disabled
Video BIOS cacheable	Enabled, Disabled	Enabled
Video RAM Cacheable	Enabled, Disabled	Enabled
8 bit I/O recovery time	N/A, 1-8	1
16 bit I/O recovery time	N/A, 1-4	1
PCI/VGA palette snoop	Enabled, Disabled	Disabled
Passive release	Enabled, Disabled	Enabled
Delayed transaction	Enabled, Disabled	Disabled
Supervisor I/O base addr.	190h, 290h, 390h	190h
Power-supply type	AT, ATX	AT
AGP Apperture size (MB)	4-256	64
Video BIOS shadow	Enabled, Disabled	Enabled
C8000-CBFFF Shadow	Auto, Disabled	Auto
CC000-CFFFF Shadow	Auto, Disabled	Auto
D0000-D3FFF Shadow	Auto, Disabled	Auto
D4000-D7FFF Shadow	Auto, Disabled	Auto
D8000-DBFFF Shadow	Auto, Disabled	Auto
DC000-DFFFF Shadow	Auto, Disabled	Auto

Power Management Setup

Setting	Possible Settings	Required Setting
ACPI Function	Enabled, Disabled	Disabled
Power Management	User Define, Min Saving, Max Saving	User Define
PM Control by APM	Yes, No	YES
Video Off Method	Blank Screen, V/H Sync + Blank, DPMS	V/H sync+blank
Video Off After	N/A, Suspend, Standby, Doze	N/A
Doze Mode	Disabled, 1-60 mins	Disabled
Standby Mode	Disabled, 1-60 mins	Disabled
Suspend Mode	Disabled, 1-60 mins	Disabled
HDD power down	Disabled, 1-15 mins	Disabled
HDD down when suspend	Enabled, Disabled	Enabled
Throttle Duty cycle	12.5-75%	75%
PCI/VGA Act-Monitor	Enabled, Disabled	Disabled
Soft-off by PWR-BTTN	Instant-off, Delay 4 sec.	Instant-off
Resume by ring	Enabled, Disabled	Enabled
IRQ 8 break suspend	Enabled, Disabled	Enabled
Resume by alarm	Enabled, Disabled	Disabled
IRQ [3-7,9-15], NMI	Enabled, Disabled	Enabled
Primary IDE 0	Enabled, Disabled	Enabled
Primary IDE 1	Enabled, Disabled	Enabled
Secondary IDE 0	Enabled, Disabled	Enabled
Secondary IDE 1	Enabled, Disabled	Enabled
Floppy Disk	Enabled, Disabled	Enabled
Serial Port	Enabled, Disabled	Enabled
Parallel Port	Enabled, Disabled	Enabled

PnP/PCI Configuration

Setting	Possible Settings	Required Setting
PNP OS installed	Yes, No	No
Resources controlled by	Manual, Auto	Manual
Reset configuration data	Enabled, Disabled	Disabled
IRQ-3 assigned to	PCI/ISA PnP, Legacy ISA	PCI/ISA PnP
IRQ-4 assigned to	PCI/ISA PnP, Legacy ISA	PCI/ISA PnP
IRQ-5 assigned to	PCI/ISA PnP, Legacy ISA	PCI/ISA PnP
IRQ-7 assigned to	PCI/ISA PnP, Legacy ISA	PCI/ISA PnP
IRQ-9 assigned to	PCI/ISA PnP, Legacy ISA	PCI/ISA PnP
IRQ-10 assigned to	PCI/ISA PnP, Legacy ISA	PCI/ISA PnP
IRQ-11 assigned to	PCI/ISA PnP, Legacy ISA	PCI/ISA PnP
IRQ-12 assigned to	PCI/ISA PnP, Legacy ISA	PCI/ISA PnP
IRQ-14 assigned to	PCI/ISA PnP, Legacy ISA	PCI/ISA PnP
IRQ-15 assigned to	PCI/ISA PnP, Legacy ISA	PCI/ISA PnP
DMA-0 assigned to	PCI/ISA PnP, Legacy ISA	PCI/ISA PnP
DMA-1 assigned to	PCI/ISA PnP, Legacy ISA	PCI/ISA PnP
DMA-3 assigned to	PCI/ISA PnP, Legacy ISA	PCI/ISA PnP
DMA-5 assigned to	PCI/ISA PnP, Legacy ISA	PCI/ISA PnP
DMA-6 assigned to	PCI/ISA PnP, Legacy ISA	PCI/ISA PnP
DMA-7 assigned to	PCI/ISA PnP, Legacy ISA	PCI/ISA PnP
Init display first	PCI Slot, On-board, AGP	On-Board
Assign IRQ for VGA	Enabled, Disabled	Disabled
Assign IRQ for USB	Enabled, Disabled	Enabled
PCI Latency timer	0-255	32
BackPlane Routing	HA, Non-HA	Non-HA
Bridge init. Delay	150, 300, 600, 1200ms	150ms
Bridge Cache Size	0, 2, 8, 16	16
Hot Swap Full Int.	Enabled, Disabled	Disabled
Used MEM base addr.	N/A, C800, CC00, D000, D400, D800	N/A

CPU/Board Features Setup

Setting	Possible Settings	Required Setting
Current processor(s) speed	Detected – Depends on CPU option	N/A
Front side bus speed	Detected – Depends on CPU option	N/A
Thermal management	Enabled, Disabled	Disabled
Save CMOS in flash	Enabled, Disabled	Enabled
Watchdog Timer	Enabled, Disabled	Disabled
Current CPU FAN1 speed	Detected – 0 RPM for passive cooling	N/A
Current V _{cpp1} (V)	Detected – Depends on CPU option	N/A
Current V _{cpp2} (V)	Detected – Depends on CPU option	N/A
Current V _{in12} (V)	Detected – Typ. 12V +/- 5%	N/A
Current V _{in5} (V)	Detected – Typ. 5V +/- 5%	N/A
Current V _{in3.3} (V)	Detected – Typ. 3.3V +/- 5%	N/A
Current V _{in2.5} (V)	Detected – Typ. 2.5V +/- 5%	N/A

Integrated Peripherals

Setting	Possible Settings	Required Setting
On-chip primary PCI IDE	Enabled, Disabled	Enabled
IDE primary master PIO	Auto, Mode 0-4	Auto
IDE primary slave PIO	Auto, Mode 0-4	Auto
IDE primary master UDMA	Auto, Disabled	Auto
IDE primary slave UDMA	Auto, Disabled	Auto
On-chip secondary PCI IDE	Enabled, Disabled	Disabled
IDE HDD block mode	Enabled, Disabled	Enabled
Onboard PCI SCSI BIOS	Enabled, Disabled	Disabled
Onboard PCI SCSI Chip	Enabled, Disabled	Disabled
Ethernet Controller - 1	Enabled, Disabled	Enabled
Ethernet Controller – 2	Enabled, Disabled	Enabled
USB Keyboard Support	BIOS, OS	OS
PS2 Mouse control	Auto, Disabled	Auto
Onboard FDC Controller	Enabled, Disabled	Enabled
Onboard serial port 1	Disabled, 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, Auto	3F8/IRQ4
Onboard serial port 2	Disabled, 3F8, 2F8, 3E8, 2E8	2F8
IRQ Line	3,4,5,7	3
Onboard Serial Port 3	Disabled, 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3	Disabled
Serial Port 3 Mode	RS-232 RS-422 RS-485	RS-232
Onboard Serial Port 4	Disabled, 3F8,2F8, 3E8, 2E8	Disabled
Onboard parallel port	Disabled, 3BC/IRQ7, 378/IRQ7, 278/IRQ5	378/IRQ7
Parallel port mode	SPP, EPP1.9+SPP, ECP, ECP+EPP1.9, Normal, EPP1.7+SPP, ECP+EPP1.7	ECP+EPP1.9
ECP mode use DMA	1, 3	3

Annex B**Project Ericsson / part-# 9-1110-6004
Customer required jumper settings for MXS64GX/700**

Jumper – Function	Possible Settings	Required Setting
W1 – VT100	1-2: Enabled VT100 mode 3-4: Reserved	ON 1-2
W2 – Board configuration	ON: Rear Access (wire jumper) OFF: Front Access	ON
W3 – CompactFlash	ON: Master OFF: Slave	ON
W4 – Battery	ON: Connected OFF: Disconnected	OFF
W5 – Remote reset	ON 1-2: Com1 ON 3-4: Com2 OFF: Disabled	OFF
W6 – SCSI termination	ON 1-3: SW controlled ON 2-4: HW controlled OFF: disabled	ON 2-4
W7 – Video enabled	ON: Disabled OFF: Enabled	ON
W8, W9 – COM terminations for RS422/485	Both ON: With termination Both OFF: Without termination	OFF