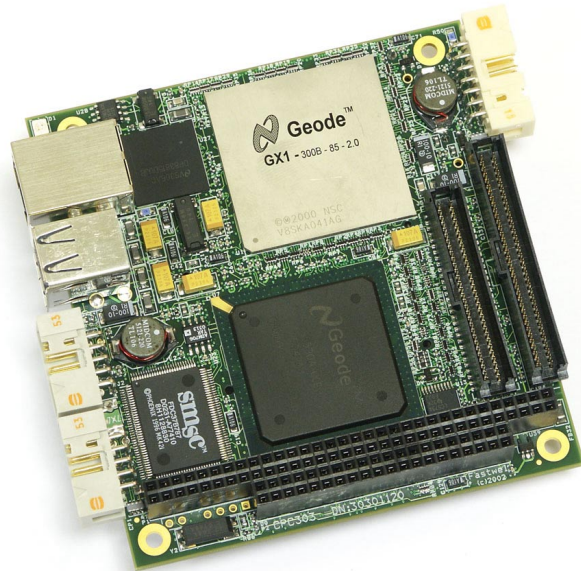


CPC303 CPU CARD

PC-104 SBC w. LAN, CAN and Pentium MMX™ performance

TECHNICAL SPECIFICATIONS

- **Processor:** Geode™ GX1 300 MHz
- **Chipset:** CS5530A I/O Companion
- **System memory:** SDRAM 32MB/128MB¹
- **VGA/LCD Controller:**
 - shared video memory up to 4 MB
 - non-interlaced CRT monitors resolutions up to 1024x768 @ 16bpp and 1280x1024 @ 256 colors
 - TFT panel resolution supports up to 1024x768 @ 18bpp
- **Solid state disk:** 16MB Built in w. true FFS
- **EIDE Interface:**
 - support up to two IDE devices
 - support PIO mode 4 and Ultra DMA/33
- **CF™- I, II & Microdrive™ up to 1GB**
- **Floppy Drive Interface:** supports one FDD
- **Ethernet Interface:** 10/100Base-T PCI Fast Ethernet Controller
- **Two USB 1.0 ports**
- **Two CAN2.0B Interface ports**
- **Serial ports:**
 - COM1: RS232
 - COM2: RS232/RS422/RS485/IR
 - 115.2 Kbps in 16450 or 16550A mode
 - up to 1.5 Mbps in extended mode
 - 15 kV ESD protection (IEC1000-4-2)
- **Parallel port:** multi-mode port (SPP/EPP/ECP)
- **Keyboard/Mouse PS/2**
- **SEEPROM:** backup copy of CMOS setup and user data
- **RTC:** Internal RTC with Li battery
- **AT-compatibility:**
 - Two 8259-equivalent interrupt controllers
 - Two 8237-equivalent DMA controllers
 - 8254-equivalent timers



- **Audio Controller:** AC'97 compliant interface
- **PC speaker**
- **Watchdog timer:** fixed time-out 1.6 sec.
- **Isolated remote RESET or IRQ**
- **Extension Bus:** ISA -16 Bit

Software Support

- **GENERAL™ Software Embedded BIOS:**
 - Console via COMx port support
 - FastBoot™ feature (1.5 sec typ.)
 - SafeBoot™ feature – backup copy & Watchdog Timer enabled during BIOS POST and DOS Boot
- **Operating system support:** Microsoft MS-DOS®, Windows® XP/2000/CE, QNX®, VxWorks®, Linux®

Power Consumption

+5V ±5% @ 0.8 A -1.2 A (f=133-300MHz)²

Environmental

- **Operating temperature:** –40°C to +85°C
- **Storage temperature:** –55°C to +95°C
- **Humidity:** up to 95%, noncondensing
- **Shock/vibration:** 20g/5g
- **Altitude:** 50,000 ft

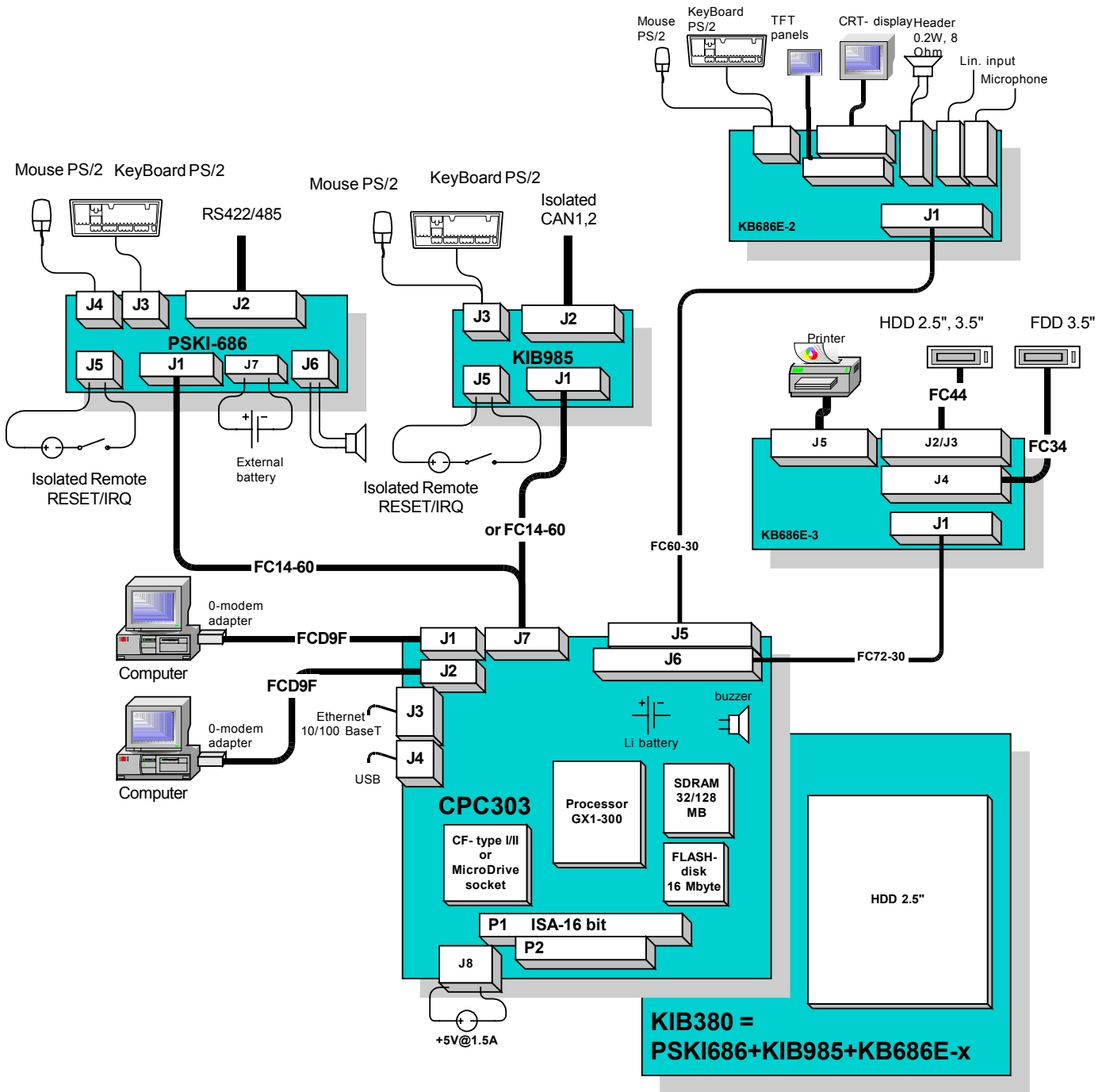
General

- **MTBF:** 12 years
- **Size:** 90,2 × 95,9 × 25,3 mm

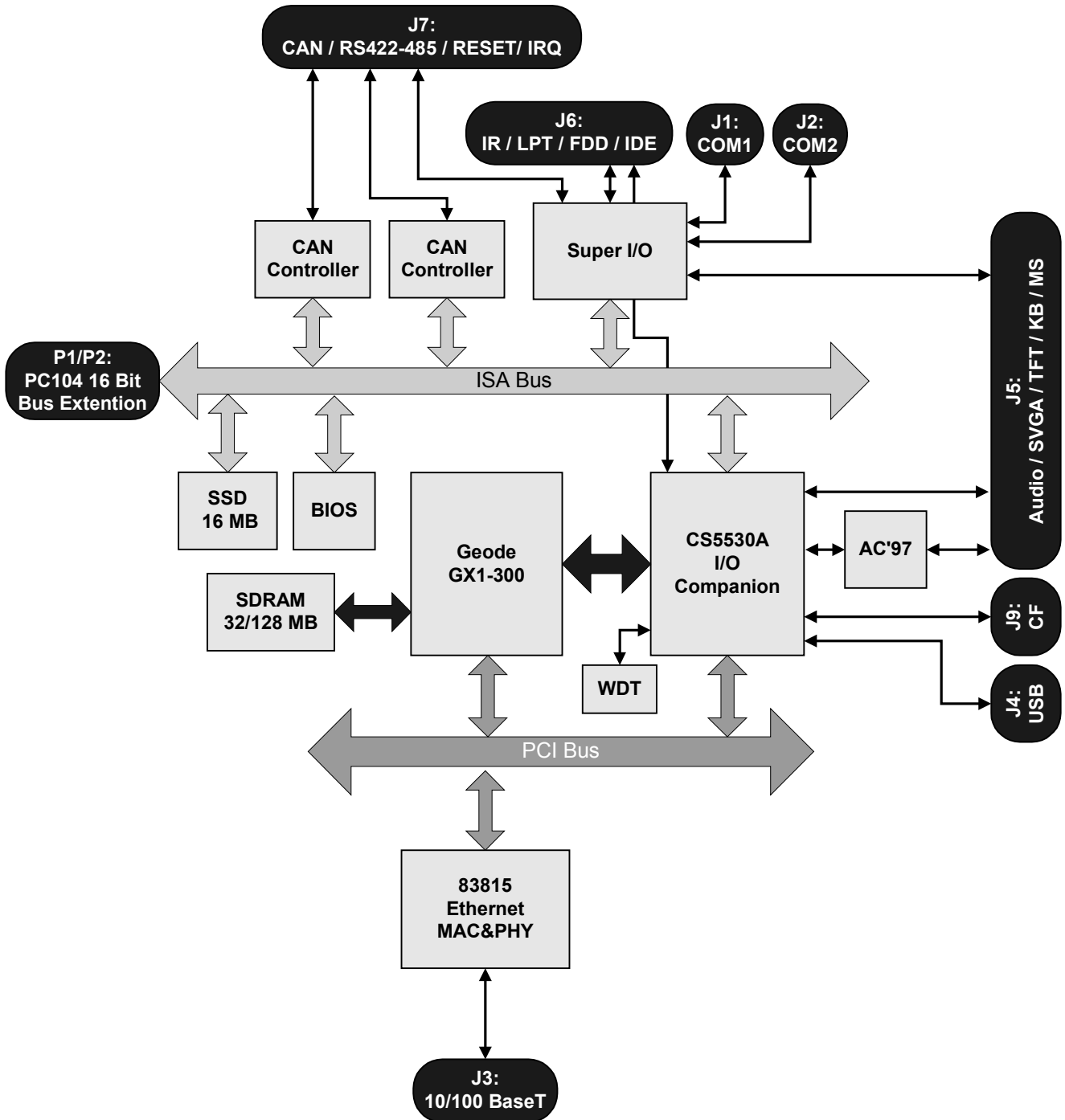
¹ CPC30302 option

² without external connection

CONNECTIONS DIAGRAM



CPC303 FUNCTIONAL BLOCK DIAGRAM



CPC303 CONNECTOR'S PINOUT

P1: PC104				P2: PC104			
Pin #	Function	Pin #	Function	Pin #	Function	Pin #	Function
				C0	<i>GND</i>	D0	<i>GND</i>
A1	<i>IOCHK#</i>	B1	<i>GND</i>	C1	<i>SBHE#</i>	D1	<i>MEMCS16#</i>
A2	<i>SD7</i>	B2	<i>RESET</i>	C2	<i>SA23</i>	D2	<i>IOCS16#</i>
A3	<i>SD6</i>	B3	<i>+5V</i>	C3	<i>SA22</i>	D3	<i>IRQ10</i>
A4	<i>SD5</i>	B4	<i>IRQ9</i>	C4	<i>SA21</i>	D4	<i>IRQ11</i>
A5	<i>SD4</i>	B5	<i>-</i>	C5	<i>SA20</i>	D5	<i>IRQ12</i>
A6	<i>SD3</i>	B6	<i>DRQ2</i>	C6	<i>SA19</i>	D6	<i>IRQ15</i>
A7	<i>SD2</i>	B7	<i>-</i>	C7	<i>SA18</i>	D7	<i>IRQ14</i>
A8	<i>SD1</i>	B8	<i>OWS#</i>	C8	<i>SA17</i>	D8	<i>DACK0#</i>
A9	<i>SD0</i>	B9	<i>-</i>	C9	<i>MEMR#</i>	D9	<i>DRQ0</i>
A10	<i>IOCHRDY</i>	B10	<i>-</i>	C10	<i>MEMW#</i>	D10	<i>DACK5#</i>
A11	<i>AEN</i>	B11	<i>SMEMW#</i>	C11	<i>SD8</i>	D11	<i>DRQ5</i>
A12	<i>SA19</i>	B12	<i>SMEMR#</i>	C12	<i>SD9</i>	D12	<i>DACK6#</i>
A13	<i>SA18</i>	B13	<i>IOW#</i>	C13	<i>SD10</i>	D13	<i>DRQ6</i>
A14	<i>SA17</i>	B14	<i>IOR#</i>	C14	<i>SD11</i>	D14	<i>DACK7#</i>
A15	<i>SA16</i>	B15	<i>DACK3#</i>	C15	<i>SD12</i>	D15	<i>DRQ7</i>
A16	<i>SA15</i>	B16	<i>DRQ3</i>	C16	<i>SD13</i>	D16	<i>+5V</i>
A17	<i>SA14</i>	B17	<i>DACK1#</i>	C17	<i>SD14</i>	D17	<i>MASTER#</i>
A18	<i>SA13</i>	B18	<i>DRQ1</i>	C18	<i>SD15</i>	D18	<i>GND</i>
A19	<i>SA12</i>	B19	<i>REFRESH#</i>	C19	<i>-</i>	D19	<i>GND</i>
A20	<i>SA11</i>	B20	<i>BCLK</i>				
A21	<i>SA10</i>	B21	<i>IRQ7</i>				
A22	<i>SA9</i>	B22	<i>IRQ6</i>				
A23	<i>SA8</i>	B23	<i>IRQ5</i>				
A24	<i>SA7</i>	B24	<i>IRQ4</i>				
A25	<i>SA6</i>	B25	<i>IRQ3</i>				
A26	<i>SA5</i>	B26	<i>DACK2#</i>				
A27	<i>SA4</i>	B27	<i>TC</i>				
A28	<i>SA3</i>	B28	<i>BALE</i>				
A29	<i>SA2</i>	B29	<i>+5V</i>				
A30	<i>SA1</i>	B30	<i>OSC</i>				
A31	<i>SA0</i>	B31	<i>GND</i>				
A32	<i>GND</i>	B32	<i>GND</i>				

J1: COM1	
Pin #	Function
1	DCD1
2	DSR1
3	RxD1
4	RTS1
5	TxD1
6	CTS1
7	DTR1
8	RI1
9	GND
10	+5VS1

J2: COM2	
Pin #	Function
1	DCD2
2	DSR2
3	RxD2
4	RTS2
5	TxD2
6	CTS2
7	DTR2
8	RI2
9	GND
10	+5VS1

J5: MS/KBD, LCD, CRT & AUDIO			
Pin #	Function	Pin #	Function
1	KB\$DAT	2	+5V
3	KB\$CLK	4	MS\$CLK
5	GND	6	MS\$DAT
7	+5V	8	+5V
9	FPD0	10	FPD1
11	FPD2	12	FPD3
13	FPD4	14	FPD5
15	GND	16	FPD6
17	FPD7	18	FPD8
19	FPD9	20	FPD10
21	FPD11	22	GND
23	FPD12	24	FPD13
25	FPD14	26	FPD15
27	FPD16	28	FPD17
29	GND	30	FPCLK
31	GND	32	FPDISPEN
33	GND	34	FPHSYNC
35	FPBLKEN	36	FPVSYNC
37	FPVDDEN	38	GND
39	OUTR	40	GND
41	OUTB	42	GND
43	OUTG	44	GND
45	DDCSDA	46	HSYNCB
47	VSYNCB	48	DDCSCL
49	GND	50	VCCAUD
51	LINOUTL	52	GNDA
53	LINOUTR	54	GNDA
55	LININL	56	GNDA
57	LININR	58	GNDA
59	MICIN	60	GNDA

J3: ETHERNET 10/100 BASE-T			
Pin #	Function	Pin #	Function
1	XMT+	5	-
2	XMT-	6	RCV-
3	RCV+	7	-
4	-	8	-

J7: Speaker, Reset, PS/2 Keyboard, Mouse, RS422/485, CAN1, CAN2			
Pin #	Function	Pin #	Function
1	Speaker	8	MS\$CLK
2	GNDS	9	Battery
3	RESET	10	GND
4	+5VS	11	+TXD2/TxDCAN0
5	KB\$DAT	12	-TXD2/TxDCAN1
6	KB\$CLK	13	+RxD2/RxDCAN0
7	MS\$DAT	14	-RxD2/RxDCAN1

J4: USB			
Pin #	Function	Pin #	Function
1	VCC1	5	VCC2
2	DATA1+	6	DATA2+
3	DATA1-	7	DATA2-
4	GND1	8	GND2

J6: RS422/485, CAN1, CAN2, LPT, FDD & HDD			
Pin #	Function	Pin #	Function
1	IR\$RxD	2	IR\$CIRRxD
3	IR\$TxD	4	+5V
5	STB*	6	AFD*
7	Data 0	8	ERR*
9	Data 1	10	INIT*
11	Data 2	12	SLIN
13	Data 3	14	GND
15	Data 4	16	Data 5
17	Data 6	18	Data 7
19	GND	20	ACK *
21	BUSY	22	PE
23	SLCT	24	GND
25	INDEX*	26	MTR0*
27	DR0*	28	DIR*
29	STEP*	30	WDATA*
31	WGATE*	32	TRK0*
33	WP*	34	RDATA*
35	HDSEL*	36	DSKCHG*
37	GND	38	RST*
39	GND	40	D7
41	D8	42	D6
43	D9	44	D5
45	D10	46	D4
47	D11	48	GND
49	D3	50	D12
51	D2	52	D13
53	D1	54	D14
55	D0	56	D15
57	GND	58	DRQ*
59	IOW*	60	GND
61	IOR*	62	GND
63	IORDY	64	ACK*
65	IRQ	66	ADR1
67	ADR0	68	ADR2
69	SLCT0	70	SLCT1
71	+5V	72	+5V

CPC303 ORDERING INFORMATION

CPC30301	GX1-300, CS5530A, SDRAM32 MB, VGA, LAN, CAN, USB, Audio
CPC30302	GX1-300, CS5530A, SDRAM128 MB, VGA, LAN, CAN, USB, Audio
KIB38001	KIB380 PC-104 Kit Board Kbd, Ms, VGA, TFT, Audio, LPT, HDD, FDD
KIB98001	PSKI686 Kit Board Kbd, Ms, 422/485
KIB98501	KIB985 Kit Board Kbd, Ms, CAN
KIB98101	KB686E-2 Kit Board Kbd, Ms, VGA, TFT, Audio
KIB98201	KB686E-3 Kit Board LPT, HDD, FDD
ACS00013	FC14-60 Cable ribbon 14 pin, 60 cm
ACS00015	FC60-30 Cable ribbon 60 pin, 30 cm
ACS00016	FC72-30 Cable ribbon 72 pin, 30 cm