




CPU686E CPU CARD

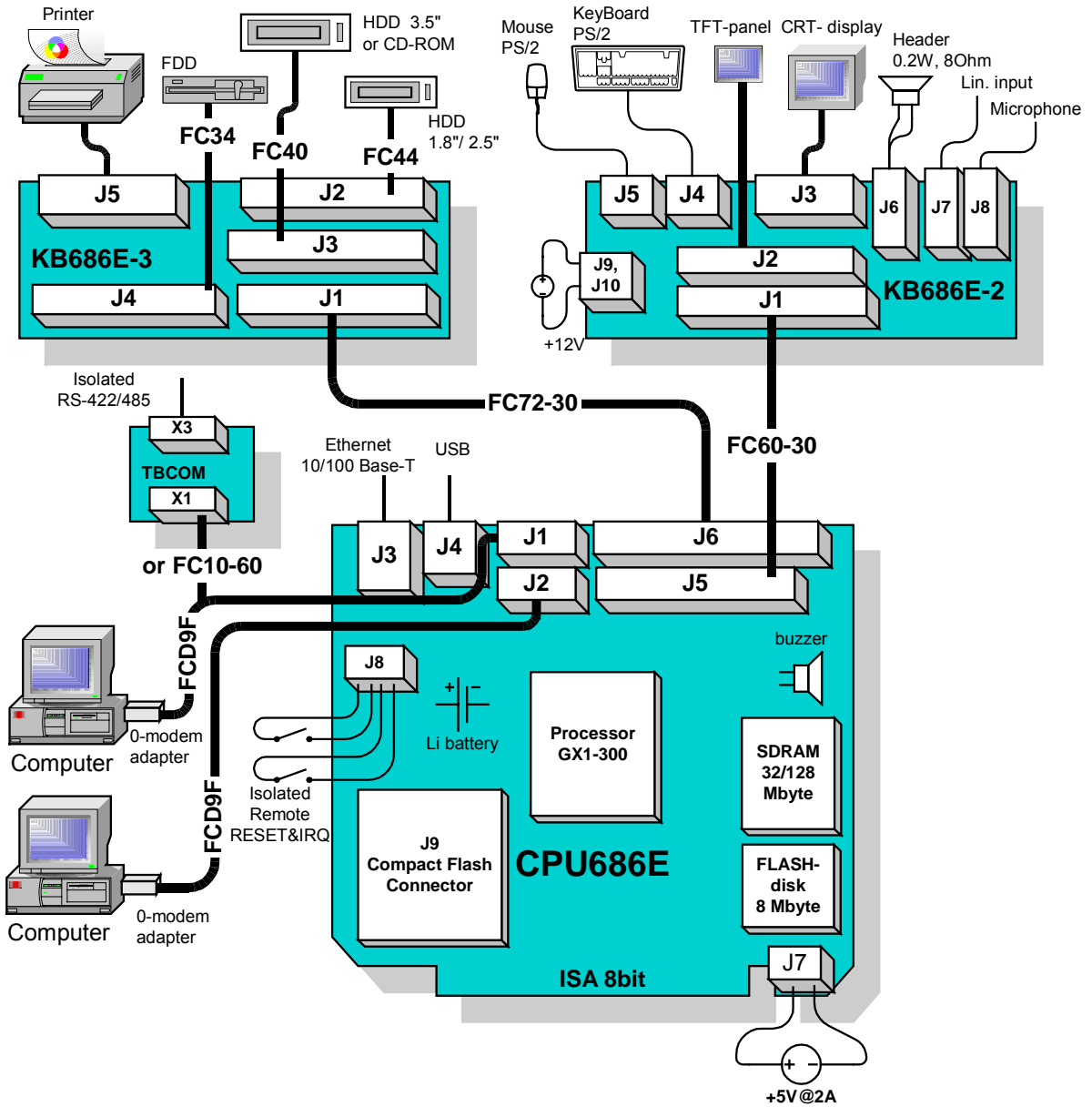
*Palm-sized SBC With Pentium
MMX™ performance*

TECHNICAL SPECIFICATIONS

- **Processor:** Geode™ GX1 300 MHz
 - **System memory:** SDRAM 32MB/128MB¹
 - **BIOS:**
 - 256 KB with backup copy
 - in -system modification
 - FastBoot™ feature – BIOS POST and DOS Boot time is less than 1.5 sec.
 - SafeBoot™ feature – Watchdog Timer enabled during BIOS POST and DOS Boot
 - **Solid state disk:**
 - 8MB Built in (with Fastwel true FFS)
 - supports one Compact Flash card
 - **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
 - **Ethernet Interface:** 10/100Base-T PCI Fast Ethernet Controller
 - **USB:** two ports
 - **IDE Interface:**
 - support up to two IDE devices
 - support PIO mode 4 and Ultra DMA/33
 - **Floppy Drive Interface:** supports one FDD
 - **Parallel port:** multi-mode port (SPP/EPP/ECP)
 - **Serial ports:** two COM-ports RS232
 - 115.2 Kbps in 16450 or 16550A mode
 - 15 kV ESD protection (IEC1000-4-2)
 - **Audio Controller:** AC'97 compliant interface
 - **IR interface:** shared with COM2
 - **Extension Bus:** 8 Bit ISA Bus
 - **Keyboard/Mouse PS/2**
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- **SEEPROM:** backup copy of CMOS setup in serial EPROM
 - **RTC:** Internal RTC with Li battery
 - **AT-compatibility:**
 - Two 8259-equivalent interrupt controllers
 - Two 8237-equivalent DMA controllers
 - 8254-equivalent timers
 - **Watchdog timer:** fixed time-out 1.6 sec.
 - **PC speaker**
 - **Isolated remote RESET and IRQ**
 - **Operating system support:**
 - Microsoft MS-DOS®, Windows® 2000, 9x, NT, CE
 - QNX®
 - Linux®
 - **Console port:**
 - COM1(2) or/and VGA
 - COM1(2) or/and Keyboard
 - **Power requirements:** +5V ±5% @ 2A
 - **Operating temperature:** -40°C to +70°C
 - **Storage temperature:** -55°C to +85°C
 - **Humidity:** 5% to 95%, noncondensing
 - **Shock/vibration:** 20g/5g
 - **MTBF:** 12 years
 - **Size:** 4.5" × 4.9" × 0.8"

¹ optional

CONNECTIONS DIAGRAM



CONNECTOR'S PINOUT

| J1: COM1 | |
|----------|----------|
| Pin # | Function |
| 1 | DCD1 |
| 2 | DCR1 |
| 3 | RxD1 |
| 4 | RTS1 |
| 5 | TxD1 |
| 6 | CTS1 |
| 7 | DTR1 |
| 8 | RI1 |
| 9 | GND |
| 10 | +5VS1 |

| J2: COM2 | |
|----------|----------|
| Pin # | Function |
| 1 | DCD2 |
| 2 | DCR2 |
| 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 | GND |
| 53 | LINOUTR | 54 | GND |
| 55 | LININL | 56 | GND |
| 57 | LININR | 58 | GND |
| 59 | MICIN | 60 | GND |

| J8: ISOLATED REMOTE RESET&IRQ | | | |
|-------------------------------|----------|-------|----------|
| Pin # | Function | Pin # | Function |
| 1 | RESET+ | 2 | RESET- |
| 3 | IRQ+ | 4 | IRQ- |

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

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

| J6: IR, LPT, FDD & HDD | | | |
|------------------------|----------|-------|----------|
| Pin # | Function | Pin # | Function |
| 1 | IRRxD | 2 | IRCIRRxD |
| 3 | IRTxD | 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 |