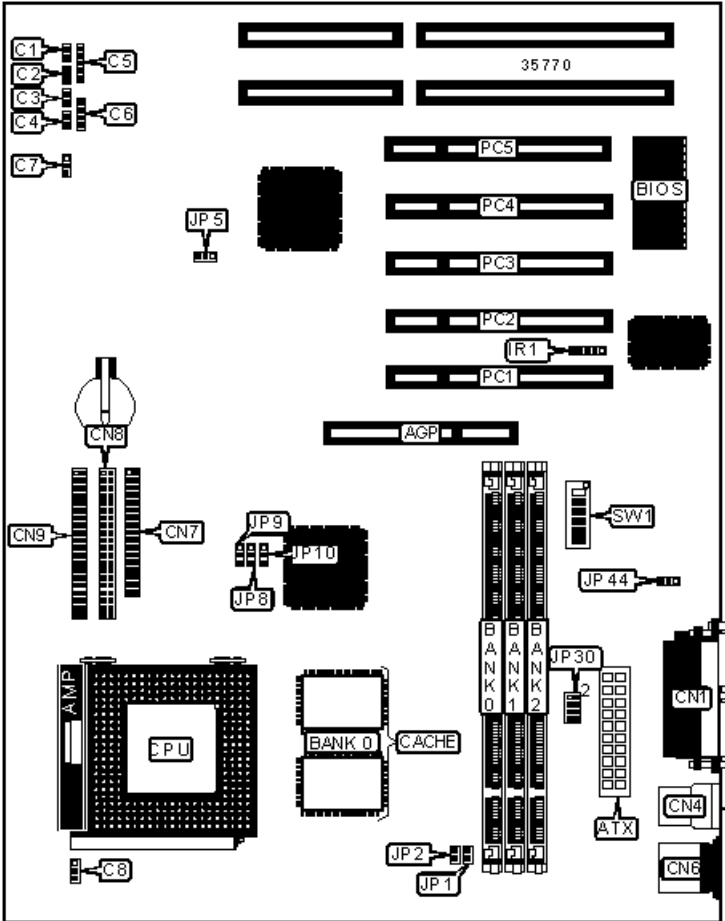


SOYO COMPUTER CO., LTD.

SY-5EMA+

| | |
|-------------------------------|--|
| Device Type | Mainboard |
| Processor | CX 6X86/CX 686MX/CX MIII/AM K5/AM K6/AM K6-2/Pentium/ Pentium MMX |
| Processor Speed | 100/133/166/200/233/266/300/333/350MHz |
| Chip Set | ETEQ |
| Maximum Onboard Memory | 768MB (EDO & SDRAM supported) |
| Cache | 512/1024KB |
| BIOS | Award |
| Dimensions | 305mm x 244mm |
| I/O Options | 32-bit PCI slots (5), floppy drive interface, IDE interfaces (2), parallel port, PS/2 mouse port, serial ports (2), IR connector, USB connectors (2), ATX power connector, AGP slot, wake on LAN connector |



CONNECTIONS

| Purpose | Location | Purpose | Location |
|---------------------|----------|---------------|----------|
| AGP slot | AGP | Serial port 2 | CN2 |
| ATX power connector | ATX | Serial port 1 | CN3 |

| | | | |
|-----------------------|-----|------------------------|--------------|
| Reset switch | C1 | USB connector 1 | CN4 |
| Soft off power supply | C2 | USB connector 2 | CN5 |
| Turbo LED | C3 | PS/2 mouse port | CN6 |
| IDE interface LED | C4 | Floppy drive interface | CN7 |
| Power LED & keylock | C5 | IDE interface 2 | CN8 |
| Speaker | C6 | IDE interface 1 | CN9 |
| Chassis fan power | C7 | IR connector | IR1 |
| CPU fan power | C8 | Wake on LAN connector | JP44 |
| Parallel port | CN1 | 32-bit PCI slots | PC1 – PC5 |

USER CONFIGURABLE SETTINGS

| Function | | Label | Position |
|----------|------------------------------|-------|-------------------|
| » | CMOS memory normal operation | JP5 | Pins 1 & 2 closed |
| | CMOS memory clear | JP5 | Pins 2 & 3 closed |

DIMM CONFIGURATION

| Size | Bank 0 | Bank 1 | Bank 2 |
|------|-------------|-------------|-------------|
| 8MB | (1) 1M x 64 | None | None |
| 16MB | (1) 1M x 64 | (1) 1M x 64 | None |
| 16MB | (1) 2M x 64 | None | None |
| 24MB | (1) 1M x 64 | (1) 1M x 64 | (1) 1M x 64 |
| 32MB | (1) 2M x 64 | (1) 2M x 64 | None |
| 32MB | (1) 4M x 64 | None | None |
| 48MB | (1) 2M x 64 | (1) 2M x 64 | (1) 2M x 64 |
| 64MB | (1) 4M x 64 | (1) 4M x 64 | None |

| | | | |
|-------|--------------|-------------|-------------|
| 64MB | (1) 8M x 64 | None | None |
| 96MB | (1) 4M x 64 | (1) 4M x 64 | (1) 4M x 64 |
| 128MB | (1) 8M x 64 | (1) 8M x 64 | None |
| 128MB | (1) 16M x 64 | None | None |
| 164MB | (1) 16M x 64 | (1) 1M x 64 | None |
| 144MB | (1) 16M x 64 | (1) 1M x 64 | (1) 1M x 64 |
| 144MB | (1) 16M x 64 | (1) 2M x 64 | None |

DIMM CONFIGURATION (CON'T)

| Size | Bank 0 | Bank 1 | Bank 2 |
|-------------|---------------|---------------|---------------|
| 160MB | (1) 16M x 64 | (1) 2M x 64 | (1) 2M x 64 |
| 160MB | (1) 16M x 64 | (1) 4M x 64 | None |
| 192MB | (1) 16M x 64 | (1) 4M x 64 | (1) 4M x 64 |
| 192MB | (1) 16M x 64 | (1) 8M x 64 | None |
| 192MB | (1) 8M x 64 | (1) 8M x 64 | (1) 8M x 64 |
| 256MB | (1) 16M x 64 | (1) 8M x 64 | (1) 8M x 64 |
| 256MB | (1) 16M x 64 | (1) 16M x 64 | None |
| 256MB | (1) 32M x 64 | None | None |
| 272MB | (1) 32M x 64 | (1) 2M x 64 | None |
| 288MB | (1) 32M x 64 | (1) 2M x 64 | (1) 2M x 64 |
| 288MB | (1) 32M x 64 | (1) 4M x 64 | None |
| 320MB | (1) 32M x 64 | (1) 4M x 64 | (1) 4M x 64 |
| 320MB | (1) 32M x 64 | (1) 8M x 64 | None |
| 384MB | (1) 32M x 64 | (1) 8M x 64 | (1) 8M x 64 |
| 384MB | (1) 32M x 64 | (1) 16M x 64 | None |

| | | | |
|---|--------------|--------------|--------------|
| 384MB | (1) 16M x 64 | (1) 16M x 64 | (1) 16M x 64 |
| 512MB | (1) 32M x 64 | (1) 16M x 64 | (1) 16M x 64 |
| 512MB | (1) 32M x 64 | (1) 32M x 64 | None |
| 768MB | (1) 32M x 64 | (1) 32M x 64 | (1) 32M x 64 |
| Note: Board accepts EDO & SDRAM memory. | | | |

| DIMM FREQUENCY CONFIGURATION | | | | | |
|---|---------------|-------------|-------|-------|-------|
| CPU bus clock | AGP bus clock | SDRAM clock | JP8 | JP9 | JP10 |
| 66MHz | 66MHz | 66MHz | 2 & 3 | 2 & 3 | 1 & 2 |
| 75MHz | 75MHz | 75MHz | 2 & 3 | 2 & 3 | 1 & 2 |
| 83MHz | 55MHz | 55MHz | 1 & 2 | 1 & 2 | 2 & 3 |
| 83MHz | 55MHz | 83MHz | 1 & 2 | 2 & 3 | 1 & 2 |
| 95MHz | 63MHz | 63MHz | 1 & 2 | 1 & 2 | 2 & 3 |
| 95MHz | 63MHz | 95MHz | 1 & 2 | 2 & 3 | 1 & 2 |
| 100MHz | 66MHz | 66MHz | 1 & 2 | 1 & 2 | 2 & 3 |
| 100MHz | 66MHz | 100MHz | 1 & 2 | 2 & 3 | 1 & 2 |
| 112MHz | 75MHz | 75MHz | 1 & 2 | 1 & 2 | 2 & 3 |
| 112MHz | 75MHz | 112MHz | 1 & 2 | 2 & 3 | 1 & 2 |
| 124MHz | 82MHz | 82MHz | 1 & 2 | 1 & 2 | 2 & 3 |
| 124MHz | 82MHz | 124MHz | 1 & 2 | 2 & 3 | 1 & 2 |
| Note: Pins designated should be in the closed position. | | | | | |

| CACHE CONFIGURATION | |
|---------------------|--------------|
| Size | Bank 0 |
| 512KB | (2) 64K x 32 |

1MB

(2) 128K x 32

CPU SPEED SELECTION (CX 6X86)

| CPU speed | Clock speed | Multiplier | SW1/1 | SW1/2 | SW1/3 | SW1/4 | SW1/5 | SW1/6 |
|-----------|-------------|------------|-------|-------|-------|-------|-------|-------|
| 166MHz | 66MHz | 2x | On | Off | Off | Off | Off | Off |
| 200MHz | 75MHz | 2x | On | Off | Off | Off | On | Off |

CPU SPEED SELECTION (CX 6X86MX)

| CPU speed | Clock speed | Multiplier | SW1/1 | SW1/2 | SW1/3 | SW1/4 | SW1/5 | SW1/6 |
|-----------|-------------|------------|-------|-------|-------|-------|-------|-------|
| 166MHz | 66MHz | 2x | On | Off | Off | Off | Off | Off |
| 200MHz | 66MHz | 2.5x | On | On | Off | Off | Off | Off |
| 200MHz | 75MHz | 2x | On | Off | Off | Off | On | Off |
| 233MHz | 75MHz | 2.5x | On | On | Off | Off | On | Off |
| 266MHz | 83MHz | 2.5x | On | On | Off | On | On | Off |

CPU SPEED SELECTION (CX MII)

| CPU speed | Clock speed | Multiplier | SW1/1 | SW1/2 | SW1/3 | SW1/4 | SW1/5 | SW1/6 |
|-----------|-------------|------------|-------|-------|-------|-------|-------|-------|
| 300MHz | 66MHz | 3.5x | Off | Off | Off | Off | Off | Off |
| 300MHz | 75MHz | 3x | Off | On | Off | Off | On | Off |
| 333MHz | 66MHz | 4x | On | Off | On | Off | Off | Off |
| 333MHz | 75MHz | 3.5x | Off | Off | Off | Off | On | Off |
| 333MHz | 83MHz | 3x | Off | On | Off | On | On | Off |
| 333MHz | 100MHz | 2.5x | On | On | Off | Off | Off | On |
| 350MHz | 100MHz | 3x | Off | On | Off | Off | Off | On |

CPU SPEED SELECTION (AM K5)

| CPU speed | Clock speed | Multiplier | SW1/1 | SW1/2 | SW1/3 | SW1/4 | SW1/5 | SW1/6 |
|-----------|-------------|------------|-------|-------|-------|-------|-------|-------|
|-----------|-------------|------------|-------|-------|-------|-------|-------|-------|

| | | | | | | | | |
|--------|-------|------|-----|-----|-----|-----|-----|-----|
| 100MHz | 66MHz | 1.5x | Off | Off | Off | Off | Off | Off |
| 133MHz | 66MHz | 2x | On | Off | Off | Off | Off | Off |
| 166MHz | 66MHz | 2.5x | On | On | Off | Off | Off | Off |

CPU SPEED SELECTION (AM K6)

| CPU speed | Clock speed | Multiplier | SW1/1 | SW1/2 | SW1/3 | SW1/4 | SW1/5 | SW1/6 |
|-----------|-------------|------------|-------|-------|-------|-------|-------|-------|
| 166MHz | 66MHz | 2.5x | On | On | Off | Off | Off | Off |
| 200MHz | 66MHz | 3x | Off | On | Off | Off | Off | Off |
| 233MHz | 66MHz | 3.5x | Off | Off | Off | Off | Off | Off |
| 266MHz | 66MHz | 4x | On | Off | On | Off | Off | Off |
| 300MHz | 66MHz | 4.5x | On | On | On | Off | Off | Off |

CPU SPEED SELECTION (AM K6-2)

| CPU speed | Clock speed | Multiplier | SW1/1 | SW1/2 | SW1/3 | SW1/4 | SW1/5 | SW1/6 |
|-----------|-------------|------------|-------|-------|-------|-------|-------|-------|
| 266MHz | 66MHz | 4x | On | Off | On | Off | Off | Off |
| 300MHz | 100MHz | 3x | Off | On | Off | Off | Off | On |
| 333MHz | 95MHz | 3.5x | Off | Off | Off | On | Off | On |
| 350MHz | 100MHz | 3.5x | Off | Off | Off | Off | Off | On |

CPU SPEED SELECTION (INTEL)

| CPU speed | Clock speed | Multiplier | SW1/1 | SW1/2 | SW1/3 | SW1/4 | SW1/5 | SW1/6 |
|-----------|-------------|------------|-------|-------|-------|-------|-------|-------|
| 100MHz | 66MHz | 1.5x | Off | Off | Off | Off | Off | Off |
| 133MHz | 66MHz | 2x | On | Off | Off | Off | Off | Off |
| 166MHz | 66MHz | 2.5x | On | On | Off | Off | Off | Off |
| 200MHz | 66MHz | 3x | Off | On | Off | Off | Off | Off |

CPU SPEED SELECTION (INTEL MMX)

| CPU speed | Clock speed | Multiplier | SW1/1 | SW1/2 | SW1/3 | SW1/4 | SW1/5 | SW1/6 |
|-----------|-------------|------------|-------|-------|-------|-------|-------|-------|
| 166MHz | 66MHz | 2.5x | On | On | Off | Off | Off | Off |
| 200MHz | 66MHz | 3x | Off | On | Off | Off | Off | Off |
| 233MHz | 66MHz | 3.5x | Off | Off | Off | Off | Off | Off |

| CPU VOLTAGE SELECTION | | |
|-----------------------|--------|--------|
| Setting | JP1 | JP2 |
| Single | Closed | Open |
| Dual | Open | Closed |

| CPU VOLTAGE SELECTION | | | | |
|-----------------------|-----------------|-----------------|-----------------|-----------------|
| Voltage | JP30/pins 1 & 2 | JP30/pins 3 & 4 | JP30/pins 5 & 6 | JP30/pins 7 & 8 |
| 2.0 | Open | Open | Open | Open |
| 2.1 | Closed | Open | Open | Open |
| 2.2 | Open | Closed | Open | Open |
| 2.3 | Closed | Closed | Open | Open |
| 2.4 | Open | Open | Closed | Open |
| 2.5 | Closed | Open | Closed | Open |
| 2.6 | Open | Closed | Closed | Open |
| 2.7 | Closed | Closed | Closed | Open |
| 2.8 | Open | Open | Open | Closed |
| 2.9 | Closed | Open | Open | Closed |
| 3.0 | Open | Closed | Open | Closed |
| 3.1 | Closed | Closed | Open | Closed |
| 3.2 | Open | Open | Closed | Closed |
| 3.3 | Closed | Open | Closed | Closed |

| | | | | |
|-----|--------|--------|--------|--------|
| 3.4 | Open | Closed | Closed | Closed |
| 3.5 | Closed | Closed | Closed | Closed |