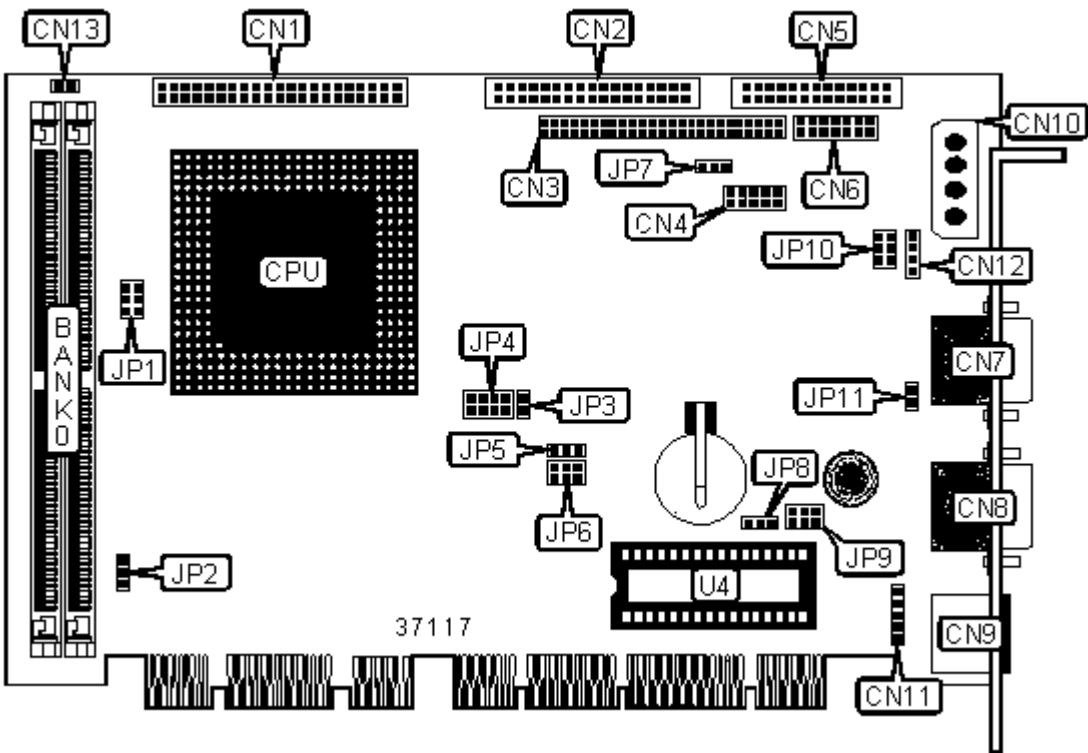


EMAC, INC.

SBC-554V, SBC-555

|                        |                                                                                                                                                                                                                                                  |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Device Type            | Single Board Computer                                                                                                                                                                                                                            |
| Processor              | CX 6X86/IBM 6X86/AM K5/AM K6/Pentium/Pentium MMX                                                                                                                                                                                                 |
| Processor Speed        | 75/90/100/120/133/150/166/180/200/225/233MHz                                                                                                                                                                                                     |
| Chip Set               | SIS                                                                                                                                                                                                                                              |
| Video Chip Set         | Chips and Technology                                                                                                                                                                                                                             |
| Maximum Onboard Memory | 128MB (EDO supported)                                                                                                                                                                                                                            |
| Maximum Video Memory   | 2MB                                                                                                                                                                                                                                              |
| Cache                  | 512KB                                                                                                                                                                                                                                            |
| BIOS                   | Award                                                                                                                                                                                                                                            |
| Dimensions             | 185mm x 122mm                                                                                                                                                                                                                                    |
| I/O Options            | Flat panel connector, Floppy drive interface, IDE interface, Inverter connector, IR connector, Parallel interface, Power connector, PS/2 mouse/AT keyboard port, Serial interface, Serial port, Solid-state disk socket, USB interface, VGA port |



| CONNECTIONS            |          |                             |          |
|------------------------|----------|-----------------------------|----------|
| Purpose                | Location | Purpose                     | Location |
| IDE interface          | CN1      | PS/2 mouse/AT keyboard port | CN9      |
| Floppy drive interface | CN2      | Power connector             | CN10     |
| Flat panel connector   | CN3      | Inverter connector          | CN11     |
| USB interface          | CN4      | IR connector (optional)     | CN12     |
| Parallel interface     | CN5      | IDE interface LED           | CN13     |
| Serial interface       | CN6      | Reset switch                | JP11     |



|             |     |                               |    |
|-------------|-----|-------------------------------|----|
| Serial port | CN7 | Solid-state disk socket (DOC) | U4 |
| VGA port    | CN8 |                               |    |

| USER CONFIGURABLE SETTINGS                                                                                                                                                            |                                                 |       |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-------|-------------------|
| Function                                                                                                                                                                              |                                                 | Label | Position          |
| »                                                                                                                                                                                     | DRAM voltage select 5V                          | JP2   | Pins 1 & 2 closed |
|                                                                                                                                                                                       | DRAM voltage select 3.3V                        | JP2   | Pins 2 & 3 closed |
| »                                                                                                                                                                                     | CPU I/O voltage select 3.3V                     | JP3   | Closed            |
|                                                                                                                                                                                       | CPU I/O voltage select 3.5V                     | JP3   | Open              |
| »                                                                                                                                                                                     | PCI clock select synchronous mode (25/30/33MHz) | JP5   | Pins 2 & 3 closed |
|                                                                                                                                                                                       | PCI clock select asynchronous mode (33MHz)      | JP5   | Pins 1 & 2 closed |
| »                                                                                                                                                                                     | Flat panel voltage select 5V                    | JP7   | Pins 1 & 2 closed |
|                                                                                                                                                                                       | Flat panel voltage select 3.3V                  | JP7   | Pins 2 & 3 closed |
| »                                                                                                                                                                                     | CMOS memory normal operation                    | JP8   | Pins 1 & 2 closed |
|                                                                                                                                                                                       | CMOS memory clear                               | JP8   | Pins 2 & 3 closed |
| Note: Synchronous PCI clock is equal to half of the CPU external clock. Asynchronous PCI clock is fixed at 33MHz.<br>Note: Pin 1 locations of JP3, JP5, JP7 and JP8 are unidentified. |                                                 |       |                   |

| SIMM CONFIGURATION               |              |
|----------------------------------|--------------|
| Size                             | Bank 0       |
| 8MB                              | (2) 1M x 32  |
| 16MB                             | (2) 2M x 32  |
| 32MB                             | (2) 4M x 32  |
| 64MB                             | (2) 8M x 32  |
| 128MB                            | (2) 16M x 32 |
| Note: Board supports EDO memory. |              |

| CPU SPEED SELECTION (CX 6X86) |             |            |                |                |                |                |                |                |
|-------------------------------|-------------|------------|----------------|----------------|----------------|----------------|----------------|----------------|
| CPU Speed                     | Clock Speed | Multiplier | JP1/<br>Pins 1 | JP1/<br>Pins 3 | JP1/<br>Pins 5 | JP6/<br>Pins 1 | JP6/<br>Pins 3 | JP6/<br>Pins 5 |



|                                                      |       |      | & 2  | & 4  | & 6    | & 2    | & 4    | & 6    |
|------------------------------------------------------|-------|------|------|------|--------|--------|--------|--------|
| 120MHz                                               | 60MHz | 2.0x | Open | Open | Closed | Open   | Closed | Closed |
| 133MHz                                               | 66MHz | 2.0x | Open | Open | Closed | Closed | Open   | Closed |
| 150MHz                                               | 60MHz | 2.0x | Open | Open | Closed | Open   | Closed | Closed |
| 166MHz                                               | 66MHz | 2.0x | Open | Open | Closed | Closed | Open   | Closed |
| Note: Pin 1 locations of JP1 & JP6 are unidentified. |       |      |      |      |        |        |        |        |

| CPU SPEED SELECTION (IBM 6X86)                       |             |            |                       |                       |                       |                       |                       |                       |
|------------------------------------------------------|-------------|------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| CPU Speed                                            | Clock Speed | Multiplier | JP1/<br>Pins 1<br>& 2 | JP1/<br>Pins 3<br>& 4 | JP1/<br>Pins 5<br>& 6 | JP6/<br>Pins 1<br>& 2 | JP6/<br>Pins 3<br>& 4 | JP6/<br>Pins 5<br>& 6 |
| 120MHz                                               | 60MHz       | 2.0x       | Open                  | Open                  | Closed                | Open                  | Closed                | Closed                |
| 133MHz                                               | 66MHz       | 2.0x       | Open                  | Open                  | Closed                | Closed                | Open                  | Closed                |
| 150MHz                                               | 60MHz       | 2.0x       | Open                  | Open                  | Closed                | Open                  | Closed                | Closed                |
| 166MHz                                               | 66MHz       | 2.0x       | Open                  | Open                  | Closed                | Closed                | Open                  | Closed                |
| Note: Pin 1 locations of JP1 & JP6 are unidentified. |             |            |                       |                       |                       |                       |                       |                       |

| CPU SPEED SELECTION (AM K5)                          |             |            |                       |                       |                       |                       |                       |                       |
|------------------------------------------------------|-------------|------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| CPU Speed                                            | Clock Speed | Multiplier | JP1/<br>Pins 1<br>& 2 | JP1/<br>Pins 3<br>& 4 | JP1/<br>Pins 5<br>& 6 | JP6/<br>Pins 1<br>& 2 | JP6/<br>Pins 3<br>& 4 | JP6/<br>Pins 5<br>& 6 |
| 75MHz                                                | 50MHz       | 1.5x       | Open                  | Open                  | Open                  | Closed                | Closed                | Closed                |
| 100MHz                                               | 66MHz       | 1.5x       | Open                  | Open                  | Open                  | Closed                | Open                  | Closed                |
| 120MHz                                               | 60MHz       | 1.5x       | Open                  | Open                  | Open                  | Open                  | Closed                | Closed                |
| 133MHz                                               | 66MHz       | 1.5x       | Open                  | Open                  | Open                  | Closed                | Open                  | Closed                |
| 150MHz                                               | 60MHz       | 2.5x       | Open                  | Closed                | Closed                | Open                  | Closed                | Closed                |
| 166MHz                                               | 66MHz       | 2.5x       | Open                  | Closed                | Closed                | Closed                | Open                  | Closed                |
| Note: Pin 1 locations of JP1 & JP6 are unidentified. |             |            |                       |                       |                       |                       |                       |                       |

| CPU SPEED SELECTION (AM K6) |             |            |                |                |                |                |                |                |
|-----------------------------|-------------|------------|----------------|----------------|----------------|----------------|----------------|----------------|
| CPU Speed                   | Clock Speed | Multiplier | JP1/<br>Pins 1 | JP1/<br>Pins 3 | JP1/<br>Pins 5 | JP6/<br>Pins 1 | JP6/<br>Pins 3 | JP6/<br>Pins 5 |



|        |       |      | & 2  | & 4    | & 6    | & 2    | & 4  | & 6    |
|--------|-------|------|------|--------|--------|--------|------|--------|
| 166MHz | 66MHz | 2.5x | Open | Closed | Closed | Closed | Open | Closed |
| 200MHz | 66MHz | 3.0x | Open | Closed | Open   | Closed | Open | Closed |
| 233MHz | 60MHz | 3.5x | Open | Open   | Open   | Closed | Open | Closed |

Note: Pin 1 locations of JP1 & JP6 are unidentified.

| CPU SPEED SELECTION (PENTIUM) |             |            |                       |                       |                       |                       |                       |                       |
|-------------------------------|-------------|------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| CPU Speed                     | Clock Speed | Multiplier | JP1/<br>Pins 1<br>& 2 | JP1/<br>Pins 3<br>& 4 | JP1/<br>Pins 5<br>& 6 | JP6/<br>Pins 1<br>& 2 | JP6/<br>Pins 3<br>& 4 | JP6/<br>Pins 5<br>& 6 |
| 75MHz                         | 50MHz       | 1.5x       | Open                  | Open                  | Open                  | Closed                | Closed                | Closed                |
| 90MHz                         | 60MHz       | 1.5x       | Open                  | Open                  | Open                  | Open                  | Closed                | Closed                |
| 100MHz                        | 66MHz       | 1.5x       | Open                  | Open                  | Open                  | Closed                | Open                  | Closed                |
| 120MHz                        | 60MHz       | 2.0x       | Open                  | Open                  | Closed                | Open                  | Closed                | Closed                |
| 133MHz                        | 66MHz       | 2.0x       | Open                  | Open                  | Closed                | Closed                | Open                  | Closed                |
| 150MHz                        | 60MHz       | 2.5x       | Open                  | Closed                | Closed                | Open                  | Closed                | Closed                |
| 166MHz                        | 66MHz       | 2.5x       | Open                  | Closed                | Closed                | Closed                | Open                  | Closed                |
| 180MHz                        | 60MHz       | 3.0x       | Open                  | Closed                | Open                  | Open                  | Closed                | Closed                |
| 200MHz                        | 66MHz       | 3.0x       | Open                  | Closed                | Open                  | Closed                | Open                  | Closed                |

Note: Pin 1 locations of JP1 & JP6 are unidentified.

| CPU SPEED SELECTION (PENTIUM MMX) |             |            |                       |                       |                       |                       |                       |                       |
|-----------------------------------|-------------|------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| CPU Speed                         | Clock Speed | Multiplier | JP1/<br>Pins 1<br>& 2 | JP1/<br>Pins 3<br>& 4 | JP1/<br>Pins 5<br>& 6 | JP6/<br>Pins 1<br>& 2 | JP6/<br>Pins 3<br>& 4 | JP6/<br>Pins 5<br>& 6 |
| 166MHz                            | 66MHz       | 2.5x       | Open                  | Closed                | Closed                | Closed                | Open                  | Closed                |
| 200MHz                            | 66MHz       | 3.0x       | Open                  | Closed                | Open                  | Closed                | Open                  | Closed                |
| 233MHz                            | 60MHz       | 3.5x       | Open                  | Open                  | Open                  | Closed                | Open                  | Closed                |

Note: Pin 1 locations of JP1 & JP6 are unidentified.

## CPU VOLTAGE SELECTION



| Voltage                                      |      | JP4/Pins 1 & 2 | JP4/Pins 3 & 4 | JP4/Pins 5 & 6 | JP4/Pins 7 & 8 |
|----------------------------------------------|------|----------------|----------------|----------------|----------------|
|                                              | 2.0V | Open           | Open           | Open           | Open           |
|                                              | 2.1V | Closed         | Open           | Open           | Open           |
|                                              | 2.2V | Open           | Closed         | Open           | Open           |
|                                              | 2.3V | Closed         | Closed         | Open           | Open           |
|                                              | 2.4V | Open           | Open           | Closed         | Open           |
|                                              | 2.5V | Closed         | Open           | Closed         | Open           |
|                                              | 2.6V | Open           | Closed         | Closed         | Open           |
|                                              | 2.7V | Closed         | Closed         | Closed         | Open           |
| »                                            | 2.8V | Open           | Open           | Open           | Closed         |
|                                              | 2.9V | Closed         | Open           | Open           | Closed         |
|                                              | 3.0V | Open           | Closed         | Open           | Closed         |
|                                              | 3.1V | Closed         | Closed         | Open           | Closed         |
|                                              | 3.2V | Open           | Open           | Closed         | Closed         |
|                                              | 3.3V | Open           | Closed         | Closed         | Closed         |
|                                              | 3.4V | Closed         | Closed         | Closed         | Closed         |
| Note: Pin 1 location of JP4 is unidentified. |      |                |                |                |                |

| SOLID-STATE DISK (DOC) ADDRESS SELECTION     |       |                |                |                |
|----------------------------------------------|-------|----------------|----------------|----------------|
| Address                                      |       | JP9/Pins 1 & 2 | JP9/Pins 3 & 4 | JP9/Pins 5 & 6 |
|                                              | CC000 | Open           | Open           | Open           |
|                                              | D0000 | Open           | Open           | Closed         |
|                                              | D4000 | Open           | Closed         | Open           |
| »                                            | D8000 | Open           | Closed         | Closed         |
|                                              | DC000 | Closed         | Open           | Open           |
| Note: Pin 1 location of JP9 is unidentified. |       |                |                |                |



### SERIAL INTERFACE 2 SELECTION

| Setting |        | JP10/Pins 1 & 2 | JP10/Pins 3 & 4 | JP10/Pins 5 & 6 |
|---------|--------|-----------------|-----------------|-----------------|
| »       | RS-232 | Closed          | Open            | Open            |
|         | RS-422 | Open            | Closed          | Open            |
|         | RS-485 | Open            | Open            | Closed          |

Note: Pin 1 location of JP10 is unidentified.

### MISCELLANEOUS TECHNICAL NOTES

The SBC-554V board utilizes a PISA bus whereas the SBC-555 board utilizes an ISA bus.

