## ADVANTECH CO., LTD.

PCA-6154

**Device Type** Single Board Computer

Processor CX 6X86L/CX 686MX/AM K5/AM K6/IDT C6/Pentium/Pentium MMX

**Processor Speed** 100/120/133/150/166/180/200/233/266/300MHz

Chip SetSISVideo Chip SetSIS

Maximum Onboard Memory 128MB (EDO supported), Unified Memory Architecture (UMA)

Cache 512KB (located on the CPU)

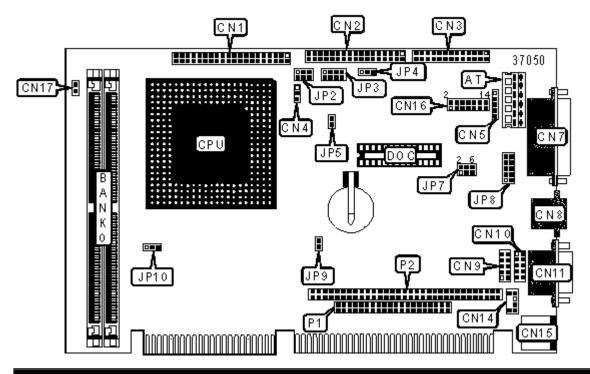
**BIOS** Award

**Dimensions** 185mm x 122mm

I/O Options Ethernet connector, floppy drive interface, IDE interface, parallel port, PS/2

mouse/keyboard interface, serial interface, serial port, VGA port, USB interface, IR connector, AT power connector, PC/104 connectors (16-bit)

Data Bus 16-bit ISA



| CONNECTIONS            |          |                               |                    |  |  |
|------------------------|----------|-------------------------------|--------------------|--|--|
| Purpose                | Location | Purpose                       | Location           |  |  |
| AT power connector     | AT       | Serial port                   | CN11               |  |  |
| IDE interface          | CN1      | Keyboard interface            | CN14               |  |  |
| Floppy drive interface | CN2      | PS/2 mouse/keyboard interface | CN15               |  |  |
| Parallel port          | CN3      | Power interface LED           | CN16/Pins 2, 4 & 6 |  |  |
| CPU Fan power          | CN4      | Buzzer                        | CN16/Pins 5 & 7    |  |  |
| IR connector           | CN5      | Reset switch                  | CN16/Pins 11 & 12  |  |  |
| VGA port               | CN7      | IDE interface LED             | CN17               |  |  |

| Ethernet connector | CN8  | Disk-on-Chip socket       | DOC |
|--------------------|------|---------------------------|-----|
| USB interface      | CN9  | PC/104 connector (8-bit)  | P1  |
| Serial interface   | CN10 | PC/104 connector (16-bit) | P2  |

|          | USER CONFIGURABLE SETTINGS        |       |                   |  |  |  |  |
|----------|-----------------------------------|-------|-------------------|--|--|--|--|
|          | Function                          | Label | Position          |  |  |  |  |
| <b>»</b> | Factory configured - do not alter | JP4   | Pins 2 & 3 closed |  |  |  |  |
| <b>»</b> | CMOS memory normal operation      | JP5   | Open              |  |  |  |  |
|          | CMOS memory clear                 | JP5   | Closed            |  |  |  |  |
| <b>»</b> | CPU clock optimization enabled    | JP10  | Pins 2 & 3 closed |  |  |  |  |
|          | CPU clock optimization disabled   | JP10  | Pins 1 & 2 closed |  |  |  |  |

|           | CPU SPEED SELECTION (CX 6X86L) |            |                   |                   |                |                |  |
|-----------|--------------------------------|------------|-------------------|-------------------|----------------|----------------|--|
| CPU speed | Clock<br>speed                 | Multiplier | JP2/Pins 1 &<br>2 | JP2/Pins 3 &<br>4 | JP2/Pins 5 & 6 | JP9/Pins 1 & 2 |  |
| 133MHz    | 66MHz                          | 2x         | Closed            | Open              | Open           | Open           |  |
| 150MHz    | 75MHz                          | 2x         | Closed            | Open              | Open           | Closed         |  |

| CPU SPEED SELECTION (CX 6X86MX) |                |            |                   |                   |                |                |
|---------------------------------|----------------|------------|-------------------|-------------------|----------------|----------------|
| CPU speed                       | Clock<br>speed | Multiplier | JP2/Pins 1 &<br>2 | JP2/Pins 3 &<br>4 | JP2/Pins 5 & 6 | JP9/Pins 1 & 2 |
| 166MHz                          | 66MHz          | 2.5x       | Closed            | Closed            | Open           | Open           |

|           | CPU SPEED SELECTION (AM K5) |            |                   |                   |                |                |
|-----------|-----------------------------|------------|-------------------|-------------------|----------------|----------------|
| CPU speed | Clock<br>speed              | Multiplier | JP2/Pins 1 &<br>2 | JP2/Pins 3 &<br>4 | JP2/Pins 5 & 6 | JP9/Pins 1 & 2 |
| 100MHz    | 66MHz                       | 1.5x       | Open              | Open              | Open           | Open           |
| 133MHz    | 66MHz                       | 2x         | Closed            | Open              | Open           | Open           |
| 166MHz    | 66MHz                       | 2.5x       | Closed            | Closed            | Open           | Open           |

| CPU speed | Clock<br>speed | Multiplier | JP2/Pins 1 &<br>2 | JP2/Pins 3 &<br>4 | JP2/Pins 5 & 6 | JP9/Pins 1 & 2 |
|-----------|----------------|------------|-------------------|-------------------|----------------|----------------|
| 166MHz    | 66MHz          | 2.5x       | Closed            | Closed            | Open           | Open           |
| 200MHz    | 66MHz          | 3x         | Open              | Closed            | Open           | Open           |
| 233MHz    | 66MHz          | 3.5x       | Open              | Open              | Open           | Open           |

| CPU SPEED SELECTION (IDT C6) |                |            |                   |                   |                |                |
|------------------------------|----------------|------------|-------------------|-------------------|----------------|----------------|
| CPU speed                    | Clock<br>speed | Multiplier | JP2/Pins 1 &<br>2 | JP2/Pins 3 &<br>4 | JP2/Pins 5 & 6 | JP9/Pins 1 & 2 |
| 200MHz                       | 66MHz          | 3x         | Open              | Closed            | Open           | Open           |

|           | CPU SPEED SELECTION (PENTIUM) |            |                   |                   |                |                |
|-----------|-------------------------------|------------|-------------------|-------------------|----------------|----------------|
| CPU speed | Clock<br>speed                | Multiplier | JP2/Pins 1 &<br>2 | JP2/Pins 3 &<br>4 | JP2/Pins 5 & 6 | JP9/Pins 1 & 2 |
| 100MHz    | 66MHz                         | 1.5x       | Open              | Open              | Open           | Open           |
| 133MHz    | 66MHz                         | 2x         | Closed            | Open              | Open           | Open           |
| 166MHz    | 66MHz                         | 2.5x       | Closed            | Closed            | Open           | Open           |
| 200MHz    | 66MHz                         | 3x         | Open              | Closed            | Open           | Open           |

| CPU SPEED SELECTION (PENTIUM MMX) |                |            |                   |                   |                |                |
|-----------------------------------|----------------|------------|-------------------|-------------------|----------------|----------------|
| CPU speed                         | Clock<br>speed | Multiplier | JP2/Pins 1 &<br>2 | JP2/Pins 3 &<br>4 | JP2/Pins 5 & 6 | JP9/Pins 1 & 2 |
| 166MHz                            | 66MHz          | 2.5x       | Closed            | Closed            | Open           | Open           |
| 200MHz                            | 66MHz          | 3x         | Open              | Closed            | Open           | Open           |
| 233MHz                            | 66MHz          | 3.5x       | Open              | Open              | Open           | Open           |

| DOC ADDRESS SELECTION |                          |  |  |  |  |
|-----------------------|--------------------------|--|--|--|--|
| Address               | JP7                      |  |  |  |  |
| Off                   | Open                     |  |  |  |  |
| CC00 - CDFF           | Pins 3 & 4, 5 & 6 closed |  |  |  |  |
| D000 - D1FF           | Pins 1 & 2, 5 & 6 closed |  |  |  |  |

| D400 - D5FF | Pins 5 & 6 closed        |
|-------------|--------------------------|
| D800 - D9FF | Pins 1 & 2, 3 & 4 closed |
| DC00 - DDFF | Pins 3 & 4 closed        |
| E000 - E1FF | Pins 1 & 2 closed        |

| SERIAL PROTOCOL SETTING |        |                                                     |  |  |  |  |
|-------------------------|--------|-----------------------------------------------------|--|--|--|--|
| Protocol                |        | JP8/Pins 1 & 2                                      |  |  |  |  |
| <b>»</b>                | RS-232 | Pins 1 & 2, 7 & 9, 11 & 12, 13 & 15, 17 & 18 closed |  |  |  |  |
|                         | RS-422 | Pins 3 & 4, 7 & 8, 10 & 12, 13 & 14, 16 & 18 closed |  |  |  |  |
|                         | RS-485 | Pins 5 & 6, 7 & 8, 10 & 12 closed                   |  |  |  |  |

| CPU VOLTAGE SELECTION |                |                |                |                |  |  |  |
|-----------------------|----------------|----------------|----------------|----------------|--|--|--|
| Voltage               | JP3/Pins 1 & 2 | JP3/Pins 3 & 4 | JP3/Pins 5 & 6 | JP3/Pins 7 & 8 |  |  |  |
| 1.9v                  | Open           | Open           | Open           | Open           |  |  |  |
| 2v                    | 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         |  |  |  |
| 3v                    | Open           | Closed         | Open           | Closed         |  |  |  |
| 3.1v                  | Closed         | Closed         | Open           | Closed         |  |  |  |
| 3.2v                  | Open           | Open           | Closed         | Closed         |  |  |  |
| 3.27v                 | Closed         | Open           | Closed         | Closed         |  |  |  |

| » | 3.3v  | Open   | Closed | Closed | Closed |
|---|-------|--------|--------|--------|--------|
|   | 3.45v | Closed | Closed | Closed | Closed |