

## **SBC-455 HALF-SIZE 486 CPU BOARD with VGA**

### **OVERVIEW**

The SBC-455 is an all-in-one single board 486 computer with an on-board VGA CRT/flat-panel controller. It packs all the functions of an industrial computer, and display capabilities, on a half-size card. The SBC-455 is fully PC/AT compatible, so your software will run without modifications.

The on-board VL-bus VGA CRT/flat-panel controller uses the C & T 65545 chipset, and supports resolutions up to 1024 x 768 in 16 colors, or 800 x 600 in 256 colors. Daughterboards are available for different flat-panel types.

On-board features include 2 high-speed serial ports (RS232) with 16C550 UARTs, one bi-directional parallel port, an IDE hard-drive controller, and floppy drive controller. The 15-stage watchdog timer will automatically reset the CPU or generate an interrupt for any system halt situation. The SBC-455 provides two 72-pin SIMM (Single Inline Memory Module) sockets for on-board DRAM. This gives you the flexibility to configure your system memory from 1 to 64MB using the most economical combination of SIMMs.

The SBC-455 also features power management to minimize power consumption. It uses CMOS components and complies with the 'Green Function' standard. For additional functions, add any industry standard PC-104 expansion module. Tempustech provides numerous PC-104 modules to meet your system requirements

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### **FEATURES**

- 80486SX/DX-25/33, DX2-50/66, DXL2-80 (AMD) or DX4-100MHz processor, AWARD BIOS
- Half-size ISA bus CPU card, fully 486SX/DX/DX2/DX4 compatible
- VL-bus VGA CRT/flat-panel display controller (1MB memory)
- Up to 64MB of on-board DRAM
- Built-in IDE (AT bus) hard disk interface, floppy drive controller
- Two RS232 serial ports; uses 16C550 UARTs with 16-byte FIFO
- One bi-directional parallel port
- 32 to 140oF (0 to 60oC) operating temperature
- Watchdog timer, software programmable from 2 to 30 seconds (15 steps, 2 sec./step)
- On-board keyboard connector
- Connectors for PC-104 module expansion
- Daughterboard capability for different Flat-panel display types
- 'Green' function, supports power management

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### **TECHNICAL SPECIFICATIONS**

- **PROCESSOR**
  - 80486SX/DX-25/33, DX2-50/66, DXL2-80 (AMD) or DX4-100 MHz processor
- **BUS INTERFACE**
  - ISA (PC/AT) bus
- **DATA BUS**
  - 32 bit
- **PROCESSING ABILITY**
  - 32 bit
- **CHIPSET**
  - ALI 1439

- **RAM MEMORY**  
-1MB to 64MB, two 72 pin sockets (72-pin sockets accept 1, 2, 4, 8, 16 and 32 MB SIMMs)
- **SHADOW RAM MEMORY**  
System and video BIOS of up to 256KB in 32KB blocks
- **VGA CRT/FLAT-PANEL CONTROLLER**  
-C&T 65545 chipset with 1MB DRAM, supports up to 1024 x 768 x 16 colors, or 800 x 600 x 256 colors
- **IDE HARD DISK DRIVE INTERFACE**  
-Up to two enhanced IDE (AT bus) hard disk drives. BIOS can be enabled/disabled
- **FLOPPY DISK DRIVE INTERFACE**  
-Up to two floppy disk drives, 5.25" (360KB and 1.2MB) and/or 3.5" (720KB, 1.44 and 2.88MB)
- **BI-DIRECTIONAL PARALLEL PORT**  
-SPP/EPP/ECP standards. Standard DB25 female connector provided.
- **SERIAL PORTS**  
-Two RS-232 ports, uses 16C550 UARTs with 16-byte FIFO buffer
- **BIOS**  
-Award--Stored in Flash memory for easy upgrading
- **WATCHDOG TIMER**  
-Time interval is software selectable from 2 to 30 seconds (15 steps, 2 sec. per step). Can generate a system reset.
- **PC/104**  
-104-pin connector for a 16-bit bus
- **DMA CHANNELS**  
-7
- **INTERRUPT LEVELS**  
-15
- **KEYBOARD CONNECTOR**  
-A 6-pin mini DIN keyboard connector is located on the mounting bracket for easy access. An on-board keyboard 5-pin header connector is also available. PS/2 Mouse connector-Shared with keyboard connector
- **BUS SPEED**  
-8MHz
- **SYSTEM PERFORMANCE**  
-(80486DX2-66 CPU): 223MHz, (80486DX4-100 CPU): 360MHz, Landmark V2.0
- **MAX. POWER REQUIREMENTS**  
-Plus 5V @ 2.5A
- **POWER SUPPLY VOLTAGE**  
-Plus 5V (4.75 V to 5.25V), +12V, -12V
- **OPERATING TEMPERATURE**  
-32 to 140oF (0 to 60oC)
- **BOARD SIZE**  
-7.3"(L) x 4.8"(W) (185mm x 122mm)
- **BOARD WEIGHT**  
-1.2 lbs (0.5Kg)
- **EMI**  
-Pending
- **MTBF**  
-Pending

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## **ORDERING INFORMATION**

*When ordering, please specify the following information:*

Part number is: SBC-455\* Description is: Half size 486 CPU board with VGA

*\*Specify DRAM 1MB to 64MB*

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