MODULAR INDUSTRIAL SOLUTIONS

SBC-9543 SINGLE BOARD COMPUTER

Full Length 64-Bit PICMG, Socket 370 with ISA High Bus Drive

- Supports Two Pentium-III™ (Tualatin) Processors up to 1.56$_{GHz}$
- Available with up to Two On-Board Ethernet Ports
- Supports 64-Bit PCI Host Interface Cards
- Available with Flat Panel Interface
- ISA64 High Bus Drive Capability

PCI INDUSTRIAL PICMG COMPUTERS

ISA64 High Bus Drive

Backplanes consisting of eight or more ISA slots have presented design challenges from the perspective of single board computers. Although terminating techniques improved signal flow in backplanes exceeding eight ISA slots, this was not, however, the complete solution for densely populated systems. Demanding applications requiring up to 20 ISA cards per system needed an improved approach to ensure adequate signal flow to all ISA cards. This resulted in the advent of the ISA64 specification. Unlike earlier designs, ISA64 utilizes TTL buffering which offers 64$_{mA}$ of signal for driving up to 20-ISA cards.

Processor Support

The SBC-9543 is capable of supporting the latest generation of Pentium III™ processors (Tualatin FcPGA2) along with Coppermine class CPU's (FcPGA). This new breed of Pentium III™ CPU supersedes the performance characteristics of its predecessor (Coppermiine FcPGA) offering current speeds up to 1.56$_{GHz}$ with faster versions scheduled for early release. Although the SBC-9543 shares the same socket type (socket 370) with SBC's that only support Coppermine class processors, it will accept Intel's® CPU's offered in the FcPGA2 package. The SBC-9543 is a good choice for applications demanding fast processor speeds, or applications desiring single board computers with upgradeable processors, thus protecting your investment.

Flash Memory Support

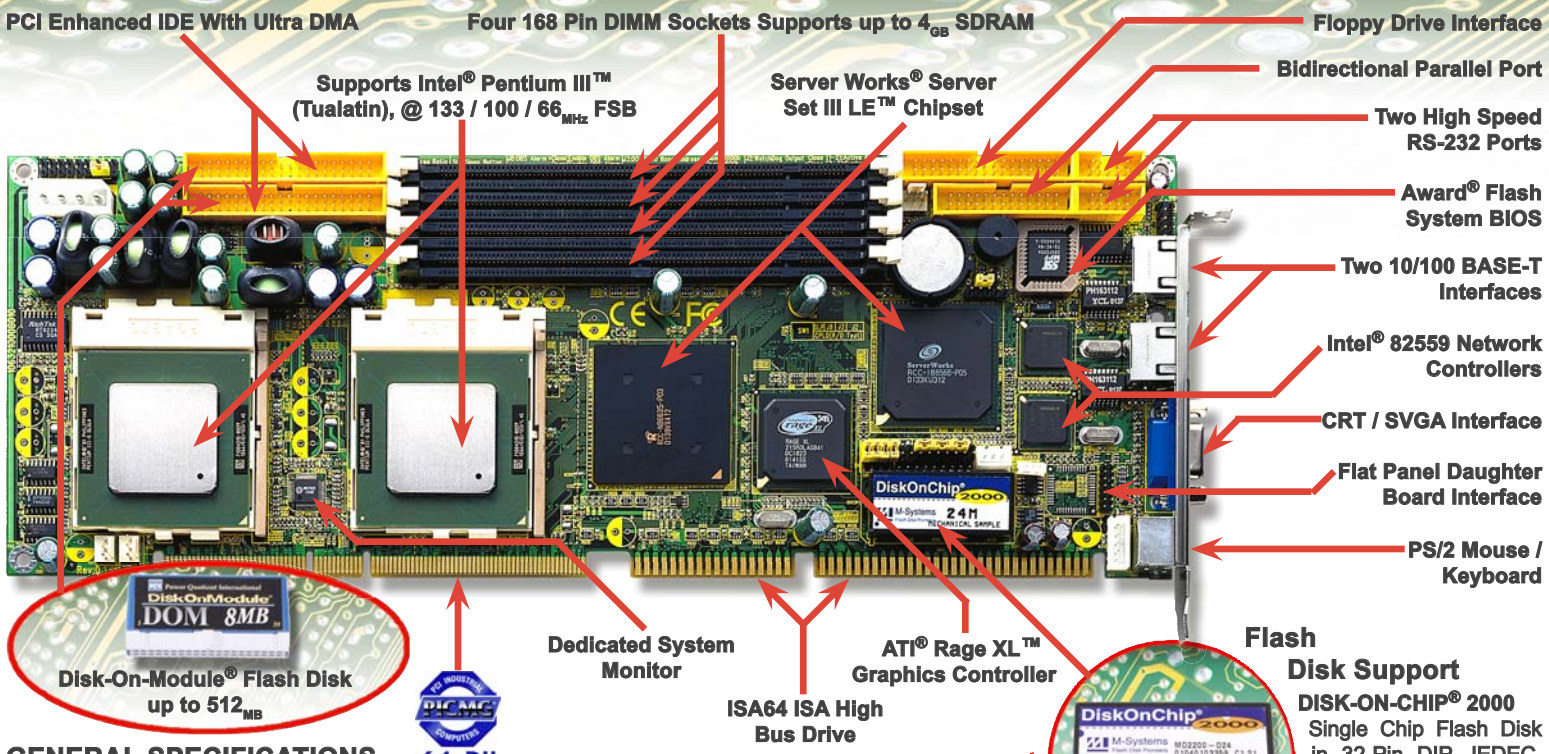
The SBC-9543 supports two types of flash memory: Disk-On-Chip® and Disk-On-Module®.

Disk-On-Chip® 2000 is a high performance flash disk (shown in picture above, lower center location) in a 32-pin DIP package suitable for harsh environments and/or space limiting embedded applications. Standard on the SBC-9543 is a JEDEC socket specifically for interfacing Disk-On-Chip® 2000 flash memory. Currently we offer Disk-On-Chip® from 16 to 576$_{MB}$.

Disk-On-Module® (shown in bottom left corner) is an alternative approach to flash memory. What makes Disk-On-Module® unique is that it plugs directly in to the 40-pin EIDE box header on the single board computer and is available in either a horizontal (module on left side) or vertical (module on right side) orientation. Furthermore Disk-On-Module® requires no special flash utilities making it very simple to setup. The BIOS recognizes the Disk-On-Module® as a 10,000$_{RPM}$ EIDE hard drive when auto detect mode is enabled. In addition, Disk-On-Module® is available up to 512$_{MB}$, and depending on capacity costs 11 to 37% less per Mega-Byte.

Test and Configuration

Whether you are an OEM or an end-user you will find that MIS thoroughly tests every computer board, populated or unpopulated (without memory or processor). If you are an OEM who feels that an unpopulated board is the most cost effective solution, we invite you to compare the price of MIS providing you a board with CPU and memory of your choosing versus the expenditure of adding a CPU and/or memory at your facility. After receiving a populated computer board from MIS the first thing you will notice is the low profile CPU fan housed on top of a solid copper core heat sink. After a comprehensive search we have selected the best CPU fan/heat sink's available today. The heat sinks are made from copper, utilizing a cold forge process minimizing tiny air pockets ensuring the best temperature conductance. In addition, with every computer board you will find a detailed test report indicating the results after an exhausting 48-hour burn-in period. Furthermore we will test and configure your board per your specification with the operating system of your choosing.



Flash Disk Support

DISK-ON-CHIP® 2000
Single Chip Flash Disk in 32-Pin DIP JEDEC, up to 576_{MB}

DISK-ON-MODULE®
Up to Two modules via EIDE 40-Pin Box Header, up to 512_{MB} per Module.

GENERAL SPECIFICATIONS

64-Bit

PROCESSOR SUPPORT
Dual Socket 370: Supports Pentium III™ (Tualatin) FcPGA2 up to 1.56_{GHz}, Pentium III™ (Coppermine) FcPGA, Celeron FcPGA, up to 1_{GHz} with FSB @ 133_{MHz} / 100_{MHz} / 66_{MHz}

CHIPSET
Server Works® ServerSet III LE™

BIOS
AWARD® Flash BIOS: $6.0_{version}$ Green & Soft Off Function, LS120, Multiple Boot, FWH @ 4_{MB}

ENERGY STAR FUNCTION
Modes Supported in BIOS: Doze / Standby / Suspend, ACPI & APM

L-2 CACHE
Integrated via CPU

DRAM MEMORY
Up to 4_{GB} of SDRAM (ECC & Non ECC) in Four 168-Pin DIMM Sockets (supports PC-133 / PC-100 / PC-66)

HOST BUS INTERFACE
64-Bit PCI @ 66_{MHz} / 33_{MHz}, 32-Bit PCI @ 33_{MHz}, 16-Bit ISA @ 8.3_{MHz}

EIDE
PCI Enhanced EIDE with Ultra DMA 133: Supports Two Ports and up to Four ATAPI Devices. One Port Ultra DMA Transfer Rates @ 133_{MB} / 100_{MB} / 66_{MB} per 1_{Second} (via HighPoint HPT-371 IDE Controller), Port Two @ 33_{MB} per 1_{Second} (Two 40-Pin Box Headers)

WATCHDOG TIMER
128-Level Timer Hardware Configurable for Rebooting from Reset or Invoking an NMI

REAL TIME CLOCK
Incorporated in Chipset with 10_{years} of CMOS Backup via Lithium Battery. Backup Includes BIOS Setup and BIOS Default.

ISA64 HIGH BUS DRIVE

ISA TTL BUFFERED
64_{mA} High Bus Drive TTL Buffer Supporting up to 20-ISA Host Bus Interface Cards.

HIGH SPEED MULTI I/O

CHIPSET
SMSC® FDC 37B787

SERIAL PORTS
Two Internal High Speed RS-232C Ports COM 1 & COM 2 via Two 10-Pin Box Header. Supported by 16C550 UART and 16_{KB} FIFO

USB
One On-Board USB port $1.0_{version}$ (Internal 5-Pin Header)

FLOPPY DISK DRIVE INTERFACE
Supports $5¼_{inch}$ 1.2_{MB} / 360_{KB} and $3½_{inch}$ 2.88_{MB} / 1.44_{MB} / 720_{KB} Floppy Disk Drives (34-Pin Box Header)

BIDIRECTIONAL PARALLEL PORT
Supports SPP, EPP and ECP Modes (26-Pin Box Header)

KEYBOARD / MOUSE INTERFACE
External PS/2 keyboard / Mouse Port (Two-In-One Mini DIN), On-Board Keyboard Port (5-Pin Box Header)

DISPLAY CONTROLLER

CHIPSET
ATI® RAGE™ Graphics Controller Supports 8_{MB} SDRAM

DISPLAY TYPE
CRT: SXGA, XGA, SVGA, VGA (DB-15)

Flat Panel: DB-C301 TMDS Daughter Board (DVI Port) Included

NETWORK CONTROLLER

CHIPSET
Two Intel® 82559 10_{Mbps} / 100_{Mbps}, Auto-Switching

CONNECTOR
Two External RJ-45 via SBC I/O plate

SYSTEM MONITORING / ALARMING

CHIPSET
Windbond® W83782D

MONITORING
CPU Temperature and Voltage

POWER REQUIREMENT ENVIRONMENTAL

POWER REQUIREMENT
$+5_{VDC}$ @ 10.3_{A} nominal, $+12_{VDC}$ @ 0.44_{A} nominal, -12_{VDC} @ 0.08_{A} nominal (Tested with two Pentium III™ FcPGA2 (Tualatin) @ 1.26_{GHz} @ 133_{FSB}, with 2_{GB} SDRAM (PC-133)

BOARD DIMENSIONS
338_{mm} x 122_{mm} (13.31_{inch} x 4.8_{inch})

BOARD WEIGHT
0.6_{Kg} (1.32_{lbs})

OPERATING TEMPERATURE
0° to $55°_{C}$ (32° to $131°_{F}$)

SBC-9543 ORDERING GUIDE

MODEL		DESCRIPTION
PICMG 64-Bit	SBC-9543-N	ISA64 / ATA-33 / DOC / 2 Serial / PP / 2 USB / FD / SIR / CRT / FP / LAN
	SBC-9543-N2	ISA64 / ATA-33 / DOC / 2 Serial / PP / 2 USB / FD / SIR / CRT / FP / 2 LAN

For More Information Contact Your Local Sales Representative

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R-LIT-S-PSC-DTS-SBC-9543-020305-V2.1-AR/GK