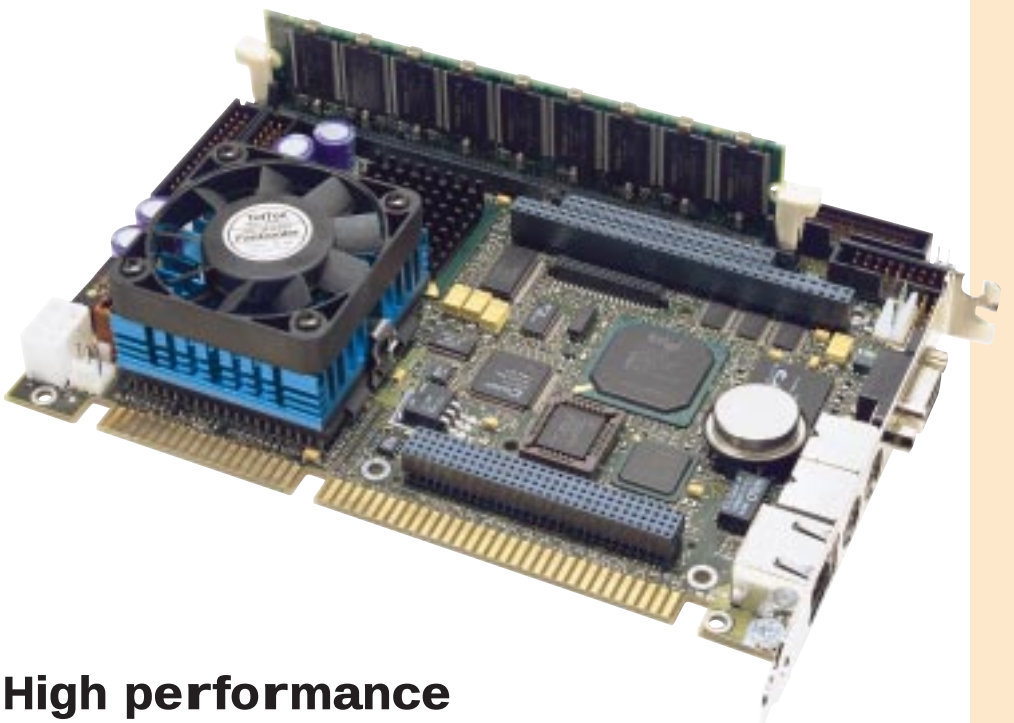
VIPer830

Maximum performance Minimal size



The most powerful in the VIPer family, Teknor's high performance VIPer830 SBC combines Intel Celeron™ processor capabilities with full-featured functionality onto a half-size board format to enable use of all slots on standard PICMG compliant passive backplanes.

Features include:

- **Celeron™ processor 300A, 366, 433 MHz in PPGA370 Package with 128 KB L2 Cache**
- **Intel 440BX AGPset with 66/100 MHz FSB**
- **Up to 256 MB SDRAM/RSDRAM**
- **Ultra DMA/33 IDE (Dual) & CompactFlash™ Disk Support**
- **10/100Base-TX Ethernet**
- **64-bit AGP CRT and Flat Panel Video with 2 MB SDRAM**
- **PC/104-*Plus*, ISA Passive Backplane or Stand-Alone Operation**

High performance full-featured SBC

The VIPer830 half-size SBC features a 64-bit Intel Celeron™ processor with on-die 128 KB L2 pipelined burst cache (full CPU core speed, ECC capable). It supports up to 256 MB memory, high performance PCI Ultra DMA/33 IDE and CompactFlash™.

It also comes with a 64-bit AGP SVGA CRT and Flat Panel controller with 2 MB of SDRAM.

Onboard support for Universal Serial Bus (USB) ports, serial/parallel ports, and a floppy interface is standard. The PC/104-*Plus* expansion header provides access to ISA and PCI bus PC/104 peripheral modules such as LAN and video controllers.

The VIPer830 also offers an optional 10Base-T/100Base-TX Ethernet controller.

VIPer830 - Technical Specifications

CPU
- Intel® Celeron™processor 300A, 366, 433 MHz in PPGA370 Package and higher as technology becomes available
- Intel 82440BX AGPset
- 66/100 MHz system/memory bus

Bus Interface
- PC/AT ISA bus or stand-alone operation
- 100% IBM PC/AT compatible
- PC/104-*Plus* VIPci compatible
- Front Side Bus (66/100 MHz); AGP bus; PCI Bus (33 MHz); ISA Bus (8.33 MHz)
- PCI Bus Rev. 2.1

Cache
- 16/16 KB Instruction / Data Level 1
- 128 KB internal 64-bit wide SPB non-blocking ECC Level 2 running at full CPU core speed

Memory
- One 168-pin latching DIMM socket, 64/72-bit
- Up to 256 MB with 1, 2, 4, 8, 16 or 32M x 64/72, 66/100 MHz Synchronous DRAM / Registered SDRAM non ECC / ECC mode (single bit error correction, double bit detection via Intel 82440BX chip set); all 256 MB cacheable

Data Path
- 64-bit on CPU and video memory bus; 32-bit on PCI bus (PC/104-Plus); 16-bit on ISA bus

Interrupts
- 11 edge sensitive and configurable
- 4 PCI level sensitive, configurable to any interrupt vector for PnP compatibility
- All ISA onboard interrupts are PnP compliant

DMA Channels (ISA)
- Four 8-bit, three 16-bit
- Supports scatter / gather, Fast Type-F DMA

Flash Memory
- 2 Mb (256 KB) Boot Block for BIOS field upgrade
- 4 KB Serial EEPROM for user configuration

I/O
I/O: SMC FDC37C672 Super I/O

USB Ports: Two

Serial Ports: Two RS-232 (16C550) with 16 byte FIFO as COM1-4 with BIOS selectable IRQs and addressing, serial port 2 BIOS configurable RS-422/485

Parallel Port: One bi-directional with all IEEE 1284 protocols supported and BIOS selectable IRQs and addressing

Floppy Disk: Support for two drives (360 KB to 1.44 MB)

PCI EIDE: Ultra DMA/33, support for two EIDE drives (master/slave) configuration; PIO Mode 4, Bus Master IDE or synchronous DMA mode transfers up to 33 MB/s CompactFlash™ Module: Optional bootable CompactFlash™ module interfaces to secondary IDE channel, user upgradable Ethernet: PCI 10Base-T/100Base-TX (Intel 82559)

Video
- Integrated Frame Accelerated Graphics Port (AGP) 64-bit CRT/Flat Panel controller with 2 MB 83 MHz SDRAM memory (C&T 69000)
- Supports monochrome & color Plasma, EL, DSTN, SSTN, TFT/CRT panels with resolution up to 800 x 600, 16.8M colors; 1024 x 768, 64K colors; or 1280 x 1024, 256 colors, non-interlaced
- Compatible with CGA, EGA, Hercules, MDA, VGA, SVGA, XGA, and SXGA

Clock / Calendar
- Real-time clock with 256 byte battery backup CMOS RAM

Connectors
Rear I/O Bracket: CRT (female DB-15 slim); Ethernet (RJ-45 with link/activity indicators); PS/2 mouse and keyboard (two 6-pin mini-DIN)

Headers: USB (10-pin shrouded); serial ports (two 10-pin shrouded); parallel port (26-pin shrouded); floppy (34-pin shrouded); EIDE (one 40-pin shrouded); PS/2 mouse (4-pin locking); flat panel display (50-pin and 20-pin high density shrouded); CompactFlash™ Module header; CPU fan (2-pin locking); PC/104 header (104-pin); PC/104-*Plus* expansion header (120-pin); external power source (6-pin locking); power-down corrector (2-pin locking); external battery (3-pin locking); AT keyboard, speaker, and EIDE activity LED (16-pin shrouded)

BIOS
- Award Elite BIOS in Boot Block Flash with recovery code; save CMOS in Flash option, and boot from LAN capability
- Auto configuration, extended setup
- CC00-E000 address blocking; PnP tables
- Setup console redirection to serial port (VT100 mode) with CMOS setup access
- Software enable/disable of onboard Ethernet
- Diskless, keyboardless, and videoless operation extensions
- System, video and LAN BIOS shadowing
- Programmable bus and I/O speeds, and memory wait states
- Advanced security feature for floppy and HDD; DMI and HDD S.M.A.R.T support
- Advanced Configuration and Power Interface (ACPI 1.0), Advanced Power Management (APM 1.2), advanced thermal management (resume, overheat alarm and auto slow down), and Green support

Supervisory
- Two-stage software programmable watchdog timer drives NMI on 1st stage, system reset on 2nd stage
- CPU temperature monitor/alarm; power failure/low battery detector

OS Compatibility
- PC and MS-DOS™; Windows® 3.X; Windows® 95; Windows® 98; Windows® CE; Windows® NT 4.0/5.0; QNX™; LINUX; NOVELL, NETWARE

Mechanical
- 181 x 122 x 36 mm at CPU / fan (7.125 x 4.80 x 1.40 in. at CPU / fan)
- Conforms to IEEE P996 PC/AT bus, PCI Rev. 2.1, & PC/104-*Plus* Rev. 1.0 specifications

Power Requirements
Supply Voltage Vcc = +5V -5%

CPU:	**433**	**366**	**300**
ICC typ.* +5V	4.39A	4.04A	3.69A
ICC Susp.* +5V	1.70A	1.65A	1.64A

** Measured with 32 MB SDRAM, PCI 10/100Base-TX Ethernet, keyboard, floppy and hard disk installed.*

Environmental

	Operating	**Storage and Transit**
Temperature:	0° to 60°C/32° to 140°F (w/airflow)	-40° to +85°C/-40° to 185°F
Humidity (RNC):	5% to 95% @ 40°C/104°F non-condensing	5% to 95% @ 40°/104°F non-condensing
Altitude:	4,572 m / 15,000 ft	15,240 m / 50,000 ft
Shock:	5 G, each axis	
Vibration:	1.5 G, each axis	

Reliability
- MTBF: >75,000 hours @ 20°C / 68°F (MIL-HDBK-217F)
- USB and mouse / keyboard voltage protected by self-resetting fuses
- Unique silicon serial number accessible via software
- 2 year limited warranty

Designed to meet or exceed:
Safety: UL 1950; CSA C22.2 No 950; EN 60950; IEC950
EMI/EMC: FCC 47 CFR Part 15/CISPR22; CE Mark to EN55022 / EN50082

VIPer830.1_11/99

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