The i860™ Station

The 40-MHz i860™ Station is a high performance, turnkey software development platform for hardware and systems developers who are designing products using Intel’s i860 64-bit microprocessor.

The i860 Station features a robust, AT&T Certified UNIX/860 System V Release 4.0, 16-bit color graphics, and a complete set of compilers and software development tools. It is a complete environment for developers needing to write system software, such as building device drivers and operating systems extensions. The i860 Station is configured to facilitate time-to-market for hardware developers using the i860 CPU for graphics and applications accelerators, supercomputers and other multi-processor systems, and workstations.

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<th>Product Highlights</th>
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<td><strong>Powerful Computing Performance</strong></td>
<td><strong>40 MHz</strong></td>
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<tr>
<td>SPECmark</td>
<td>26.7</td>
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<td>FP SPECratio</td>
<td>32.5</td>
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<tr>
<td>MFLOPS (Peak, SP)</td>
<td>80</td>
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<td>MIPS (Dhrystone ver 2.1)</td>
<td>57.5</td>
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<td><strong>High Resolution Color Graphics</strong></td>
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<tr>
<td>—1280 x 1024, 16 bits/pixel</td>
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<tr>
<td>—4 MB frame buffer</td>
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<td><strong>A Complete Development Environment</strong></td>
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<tr>
<td>—AT&amp;T Certified UNIX/860 System V release 4.0</td>
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<tr>
<td>—X 11.4 OPEN LOOK</td>
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<tr>
<td>—C and FORTRAN optimizing compilers</td>
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<td>—NFS, TCP/IP</td>
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<td><strong>Intel Support</strong></td>
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<td>—Development tools hotline support</td>
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<td>—i860 Platform Reference Design Guide available</td>
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<td>—90-day on-site warranty</td>
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**Product Description**

The i860 Station is a highly integrated UNIX workstation based on the Intel i860 64-bit 40 MHz RISC CPU. Featuring high resolution graphics and a complete set of compilers, development tools and libraries, the i860 Station provides OEMs with a complete software development and design evaluation environment.

The i860 Station provides an excellent vehicle for evaluation and design verification of i860 microprocessor-based products. Designers of i860 microprocessor-based products can realize significantly reduced time-to-market and development costs.

In addition to certified UNIX/860 System V Release 4.0, the i860 Station includes C and FORTRAN compilers. AT&T's C compiler features global optimization, software pipelining and internal vectorization. The FORTRAN compiler includes a Green Hills ANSI F77, a Pacific Sierra Research vectorizer, and a vector library. Both compilers enable developers to take advantage of the parallel architecture of the i860 microprocessor.

Networking capability enables several users to tie their machines to the i860 Station and then remotely compile and debug their code.
System specifications

Processor
— 40 MHz i860 RISC microprocessor
— Floating point, memory management on chip
— 4 KB instruction cache, 8 KB data cache on chip
— 3D rendering unit on chip

Main Memory
— Standard 16 MB, 60 ns cycle time

Graphics
— Resolution 1280 x 1024, 16 bits per pixel
— Color 64,000 colors from a 16 million palette
— Frame buffer 4 MB single buffer
— Monitor 16" color monitor

Internal Storage
— Floppy drive 3.5 inch, 1.44 MB
— Hard drive
  Format 3.5 inch disk
  Capacity 200 MB

External Mass Storage
— Tape drive
  Format 0.25 inch streaming tape
  Capacity 150 MB

Ethernet Interface
— Media type Coaxial cable
— Data rate 10 Mb/s
— Connector 15 pin

SCSI Interface
— Connector SCSI-1

Serial I/O
— I/O ports Two serial ports (one for mouse, one unused)

Parallel I/O
— I/O Port One parallel port

Keyboard
101 key, standard AT-style keyboard

Mouse
3 button, mechanical

Software specifications

Operating System
— UNIX UNIX 860 System V Release 4.0
— X Window X 11 release 4
— GUI OPEN LOOK
— Debugger Standard UNIX debugger

Compilers
— C AT&T C compiler
  Global optimizer
  Software pipelining
  Internal vectorizer
  Math library
— FORTRAN Green Hills ANSI F77
  PSR Vectorizer
  Vector library

Communications
Ethernet, NFS, TCP/IP

i860 Station Documentation
— UNIX System V/860 Release 4 Manual Set
— i860 FORTRAN Manual Set
— Getting Started with the i860 Station

Related Documentation
— 33 MHz i860 Platform Reference Design Guide
  (order # REF860A)
— i860 64-bit Microprocessor Hardware Reference Manual
  (order # 240330)
  (order # 240329)