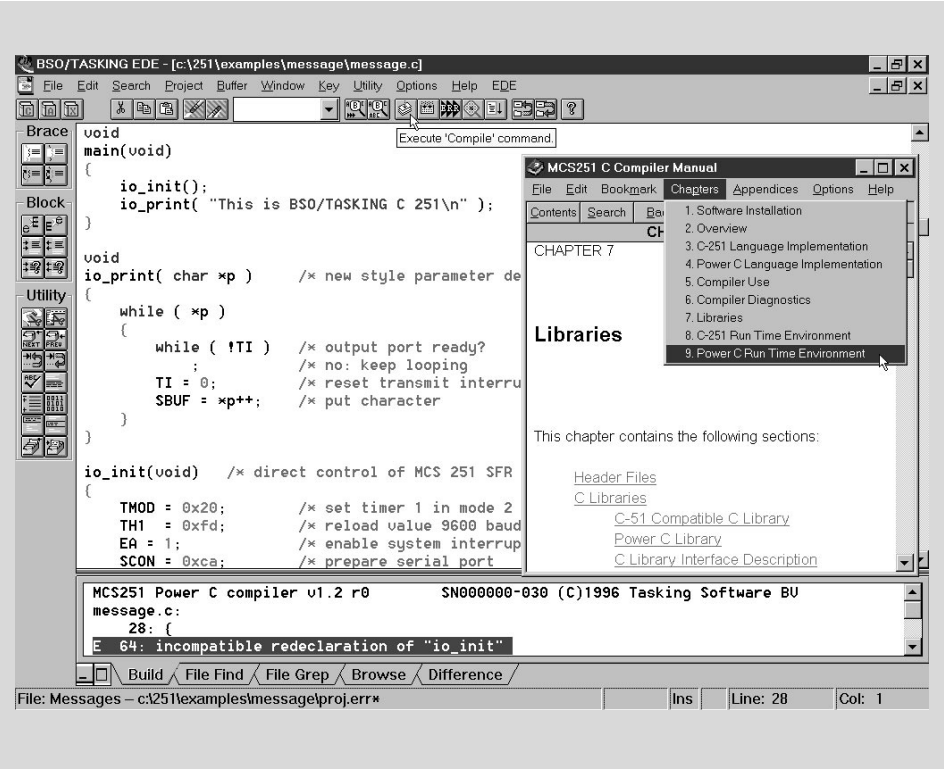
TASKING ASM251 Assembler

- Windows* Based Embedded Development Environment
- Intel Compatible Macro Preprocessor
- Generates Relocatable Object Code and Listing Files
- Optimizes Intel's MCS® 251 Microcontroller Instructions
- Intel Compatible Linker Control Files
- $MODE Control For Binary or Source Mode
- Segment Overlay at Assembly Level
- Intel Compatible Assembler Source
- Extensive Map Files and Diagnostic Messages
- Full Intel OMF-251, IEEE-695 and Intel Hex



Assembler

The assembler package consists of macro assembler, linker, locator, utilities and EDE our Windows based embedded development environment. The assembler translates Intel's MCS 251 microcontroller assembly language into relocatable object code. The assembler accepts Intel compatible assembler source programs and produces relocatable (.obj) object files. An absolute or executable load image is then obtained by using the linker/locator. It supports all members of the Intel MCS 251 microcontroller family and is compatible with high level and assembly level debuggers.

Linker/Locator

The linker/locator is an essential part of the software building process that enables you to configure the code to match your target environment. It brings together all the necessary relocatable objects, including library modules, resolves external references and then locates the modules in memory according to your specification. Features include intermodule type checking, incremental linking, automatic segment and generation of listfile including a printed function call tree of the whole application. In addition the locator supports CPU and user mapping of memory, segment allocation, reserving memory areas, the configuration bits, encryption arrays etc. The linker accepts object files and object libraries in either IEEE-695 or Intel OMF-51 format.

Utilities

The librarian lets you create a library, add object modules to a library, remove object files from a library and list the contents of a library. Make is a utility that automates the task of building or reconstructing your application. It prevents errors by ensuring that applications can be accurately rebuilt and saves time by re-assembling only modules that changed since the last build. Make can be invoked from the EDE by clicking on the Make button in the ribbon bar or from the command line.

Third-party support includes interoperability with real time kernels (such as Embedded System Products RTXC251), emulators (such as Ashling, Hitex, Metalink, Nohau) and other tools (Inform FuzzyTECH251, Intel *Ap*BUILDER).

MICROCONTROLLERS SUPPORTED:
8xC251Sx, 82930A

DEVELOPMENT PLATFORMS:
Windows 3.1, Windows 95, Windows NT, Extended DOS, Sun SPARC/SunOS, Sun SPARC/Solaris, HP9000, DEC Alpha, VAX/VMS

AVAILABILITY:
Now

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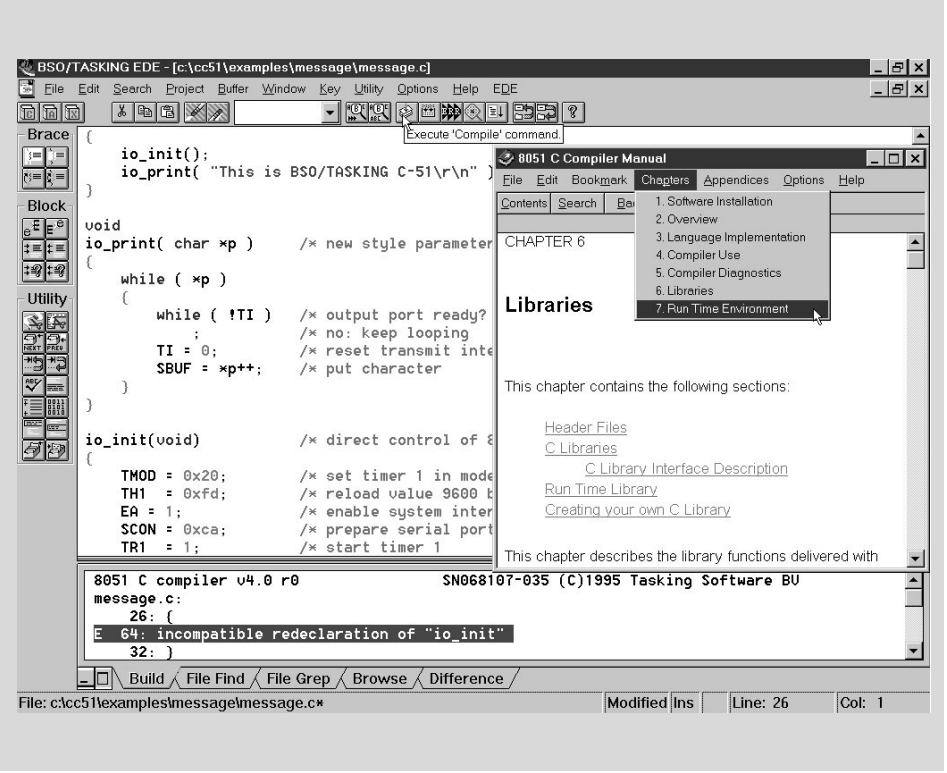
For international contacts, see Appendix B.

TASKING
Quality Development Tools Worldwide

TASKING C 51 Compiler

- Windows* Based Embedded Development Environment
- Full ANSI C to Ensure Early Error Detection
- Architecture Specific C Language Extensions
- Extensive Optimizations
- Interrupt Functions in C and In-Line Assembly
- User In-Line C Functions
- Single Precision Floating Point
- Generates Intel Compatible Assembly
- Complete ANSI-C Libraries in C Source
- Full Intel OMF-51, IEEE-695 and Intel Hex



The compiler package consists of the optimizing ANSI C compiler, macro assembler, linker/locator, libraries, CrossView 51 simulator and EDE our Windows based embedded development environment. The TASKING 8051 C compiler has been designed and built specifically for the microcontroller architecture of the Intel 8051. This means that you can access all the special features of the Intel 8051 in C, without violating the ANSI standard, such as: Multiple address spaces (with full pointer support), Bit memory, Special function registers (I/O ports), Interrupt functions using bank switching, User in-line C functions (create your own in-line functions) and much more.

You can assign each C variable explicitly to a specific memory type: _data, _bdat, _idat, _pdat, _xdat, _rom. The compiler supports 1 and 2 byte pointers and has very efficient pointer arithmetic and dereferencing. It uses extremely fast parameter passing between functions and automatic variables using the CPU registers R2-R7. It allows fast 8-bit arithmetic, including true char and _bit type variables. Powerful data overlaying by linker using the compiler's function call graph information stretches the utilization of the scarce internal RAM. The compiler supports 4 different memory models. These models can be used separately or mixed (per function) to ensure the best possible code generation.

The compiler is delivered with libraries for all memory models. The libraries include ANSI C libraries, run time libraries including I/O calls (+ printf), memory management, arithmetic functions and floating point (for both internal and external RAM). Source code is provided for most of the library routines allowing you to tailor the libraries to your specific application.

Third-party support includes interoperability with real time kernels (such as Embedded System Products RTXC51), emulators (such as Ashling, Ceibo, Checkmate, ComAp, HP, Kontron, Lauterbach, Metalink, Nohau, Orion Instruments, Philips, Signum Systems, Sophia Systems) and other tools (Inform FuzzyTECH51, ChipTools ChipView51, Intel *Ap*BUILDER, Aisys DriveWay51).

MICROCONTROLLERS SUPPORTED:
8xC3x, 8xC5x, 8xC51Fx/Kx/Rx/Gx/SLAH/SLAL, 8xC152Jx, 8x151Sx, 8xL5x, 8xL51Fx

DEVELOPMENT PLATFORMS:
Windows 3.1, Windows 95, Windows NT, Extended DOS, Sun SPARC/SunOS, Sun SPARC/Solaris, HP9000, DEC Alpha, VAX/VMS

AVAILABILITY:
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