
Compatibility between Tasking PL/M51 and Intel PL/M51

Tasking PL/M51 compiler will accept all sources written for use with the original INTEL PL/M51 compiler. However, some differences are found between the tools with respect to the tool behavior, tool limitations and generated output.

- The Tasking PL/M51 compiler produces assembly files, and not object files directly.
- Improved error detection of the Tasking PL/M51 compiler.
- Generated error strings of both PL/M51 compilers differ.
- The Tasking PL/M51 compiler does not accept nested \$IF control statements.
- Invocation controls of the compilers are different.
- \$TITLE compiler control is not supported by the Tasking compiler.
- A Tasking generated assembly file is accepted by the Tasking assembler, but not by the INTEL assembler. Assembly written for use by the INTEL assembler, is accepted by the Tasking assembler.
- The Tasking toolchain provides a separate macro preprocessor. The assembler does not preprocess sources.
- For Cross-Reference symbol tables, Tasking supplies a separate tool.
- Labels to variables and functions at assembly level differ.
- Object files generated with the Tasking compiler can be linked with existing object files generated with the INTEL tools. Automatic name matching is done by the linker.
- The Tasking compiler has fewer compiler limitations compared with the INTEL compiler. E.g., limitation in block nesting, input line length, and others.
- The Tasking compiler does handle less GOTO statements jumping forward. Jumping backwards is no problem.

Variable and function labels:

The Tasking PL/M51 compiler uses a different low level label definition compared with the INTEL PL/M51 compiler. When interfacing to sources written in assembly, entry labels of the source and calling labels to PL/M51 have to be changed. INTEL uses the '?' character within the generated label names, while the Tasking compiler uses the '_' character. Also, the labels will be prefixed with a '_'. This difference in behavior produces a mismatch in label referencing, which has to be solved manually.

The Tasking linker can link Intel object files (OMF-51) with Tasking object files (a.out) even though the labels in each file are different. The linker contains an intelligent label matching mechanism to match labels in Tasking a.out objects to symbols in INTEL OMF-51 labels and vice versa.