



## HI-TECH C PRO: Denser Code, Better Performance

HI-TECH C PRO for the PIC10/12/16 MCU Family ANSI C Compiler is enabled with Omniscient Code Generation™ (OCG), a whole-program compilation technology, to facilitate more intelligent, state-of-the-art code generation and enhance product usability.

Omniscient Code Generation has been developed to read and process all C source modules in one step. Rather than relying completely on the linker to uncover errors in independently compiled modules, an OCG compiler completes the initial stages of compilation for each module separately, but defers object code generation until the point at which a view of the whole program is available. Information gathered from a global view of the program, can be used to provide better detection of potential errors in the user's code, and to better optimize the output.

**Code compiled using Omniscient Code Generation can deliver up to 2X the code density, 80% better RAM utilization and 40-60% faster interrupts than non-OCG compilers, saving you time, power and money**

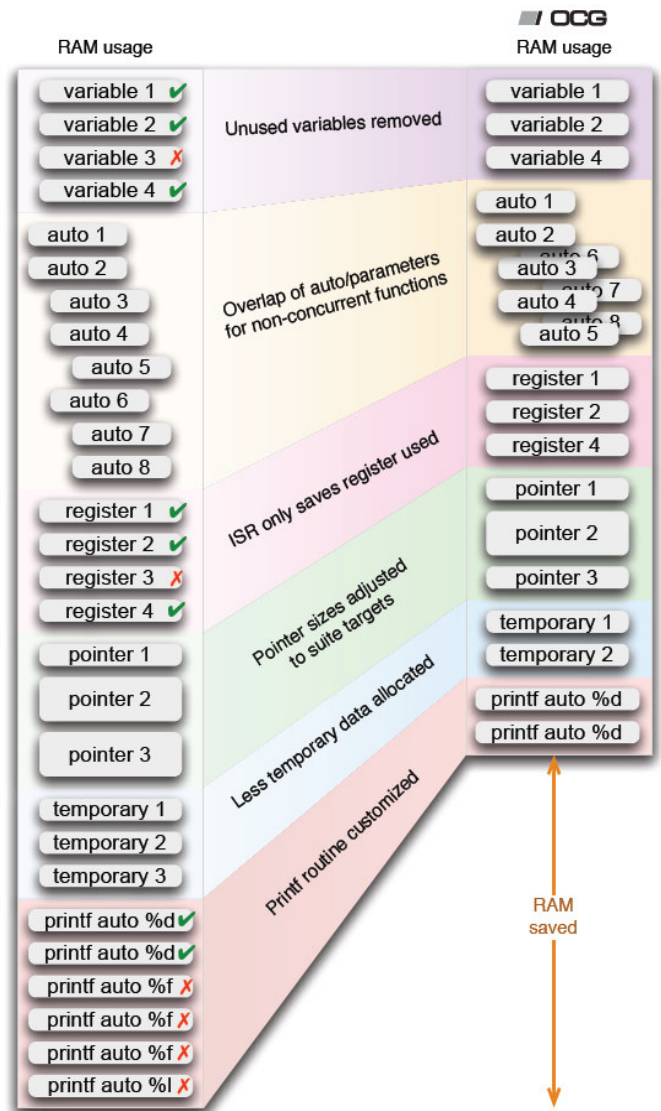
**Unused Variables.** The all-seeing nature of OCG enables the compiler to determine if a variable is being used in the program. Unused variables are removed, thus saving RAM.

**Auto Variables.** If two functions are never active at the same time, their auto variables can be overlapped. The function call graph that OCG constructs means that the exact usage of the functions is known and this technique can be effectively applied.

**Registers.** The compiler will also know exactly which registers are in both interrupt and mainline context, so it can generate code accordingly, minimizing both the code size and cycles required to switch contexts.

**Automatic Bank Management.** OCG allows automatic allocation of data into RAM banks eliminating the need for the programmer to specify the location of the variables.

**Customized printf.** OCG has the ability to generate a printf function that is customized for the program at hand. It does this by scanning the user's code and only includes those features of printf that were detected. This results in a huge saving in program memory but also saves you valuable RAM space.





## Specifications:

	HI-TECH C PRO for the PIC10/12/16 MCU Family	PICC™ STD
<b>PRICING</b>		
Single-User License Market Suggested Retail Price	\$1,495	\$995
HI-TECH Priority Access™ (12 months web access to new versions, patch level updates, and priority technical support.)	FREE	\$275
HI-TECH Satisfaction Guarantee (30 day money back guarantee)	Yes	Yes
<b>OPTIMIZATION</b>		
Omniscient Code Generation Compilation Technology	Yes	No
Overall optimization level	Very high	High
Optimizes the size of each pointer variable in your code based on its usage	Yes	No
Reduces overhead required for interrupt context switching	Yes	Limited
Removes unused functions and variables	Yes	No
<code>Printf</code> library code footprint	Compiler eliminates all unused features of <code>printf</code> for smallest footprint	Determined by <code>printf</code> feature set selected by user
<b>USABILITY / FEATURES</b>		
Support for all PIC10/12/16 MCU Family devices	Yes	Yes
Automatically handles memory banking without requiring special qualifiers	Yes	No
Warn if potential runtime stack overflow detected	Yes	No
Automatically analyzes user assembly and object code files	Yes	No
Eliminates the need for many non-standard C qualifiers and compiler options	Yes	No
<code>Printf</code> library functionality	Compiler automatically detects and implements <code>printf</code> features required by program	User selects one of three <code>printf</code> feature sets as required by program
Integrates into HI-TECH Software's IDE, HI-TIDE™ 3	Yes	Yes
Fully integrates into MPLAB® IDE and MPLAB® ICD2	Yes	Yes
Runs on all platforms: Windows (including 64-bit Vista), Linux and Mac OS X	Yes	Yes

