We have upgraded the M3T-NC30WA C-compiler (with an assembler and integrated development environment) for the M16C/60, M16C/30, M16C/Tiny, M16C/20, M16C/10, and R8C/Tiny series MCUs from V.5.20 Release 1 to V.5.30 Release 1.

1. **Descriptions of Upgrade**

   1.1 Functions Introduced

   (1) The following eight command options have been added:

   * `-fno_switch_table (-NST)`—Suppresses generation of code using a table jump for a switch statement

   * `-fmake_vector_table (-fMVT)`—Generates variable vector tables automatically.

   * `-fmake_special_table (-fMST)`—Generates special page tables automatically.

   * `-Oforward_function_to_inline (-OFFTI)`—Performs inline expansion for all the inline functions.

   * `-Wno_used_function (-WNUF)`—Outputs a warning message when a function not yet used in the application program is detected.

   * `-Wstop_at_link (-WSAL)`—Suppresses creation of absolute module files when a warning message is output at linking.

   * `-Wundefined_macro (-WUM)`—Outputs a warning message when a symbol not yet defined as a macro is used in a `#if` statement.

   * `-Oglb_jmp (-OGJ)`—Selects the most appropriate `jump` instruction according to the jump distance at linking.

   (2) Option `/E`, which enables multiple interrupts, has been added to expanded function `#pragma INTHANDLER (#pragma HANDLER)`.

   1.2 Problems Fixed
The following known problems have been fixed:

(1) On using the link option "-U"
For details, see RENESAS TOOL NEWS "A Note on Using C Compilers M3T-NC308WA and M3T-NC30WA" issued on September 16, 2003.

(2) On using the standard library function "strcpy"
For details, see RENESAS TOOL NEWS "A Note on Using C Compiler M3T-NC30WA V.5.20 Release 1" issued on October 1, 2003.

(3) On the division and remainder operations between constants
For details, see RENESAS TOOL NEWS "A Note on Using C Compilers M3T-NC308WA and M3T-NC30WA" issued on October 16, 2003.

(4) On using the enhancing patch tool of the Scan All Dependencies function

(5) On using the Options dialog box
For details of (4) and (5), see RENESAS TOOL NEWS "Notes on Using C Compiler M3T-NC30WA V.5.20 Release 1" issued on October 16, 2003.

(6) On linking relocatable module files with no sections
For details, see RENESAS TOOL NEWS "A Note on Using C compilers M3T-NC308WA, M3T-NC30WA, and M3T-NC79WA; and Assemblers AS308, AS30, and AS79 --On Linking Relocatable Files--" issued on November 16, 2003.

(7) On declaring parameters in function definitions
For details, see RENESAS TOOL NEWS "A Note on Using C compilers M3T-NC308WA and M3T-NC30WA --On Declaring Parameters in Function Definitions--" issued on November 16, 2003.

(8) On function calls using the indirection operator
For details, see RENESAS TOOL NEWS "A Note on Using C compilers M3T-NC308WA and M3T-NC30WA --On Function Calls Using the Indirection Operator--" issued on November 16, 2003.

(9) On defining array-type variables
For details, see RENESAS TOOL NEWS "A Note on Using C Compilers M3T-NC308WA and M3T-NC30WA" issued on January 16, 2004.

(10) On referencing members in a union
For details, see RENESAS TOOL NEWS "A Note on Using C Compilers M3T-NC308WA and M3T-NC30WA --On Referencing Members in a Union--" issued on March 1, 2004.

(11) On using standard library function "strcpy"

(12) On an OR operation between a variable and a constant
2. **How to Upgrade the Current Product and Order the Upgraded One**

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   - **Version No.**: V.5.30
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   - **Host OS**: Windows XP, Windows Me, Windows 98, Windows 2000, or Windows NT 4.0

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