To our customers,

# Old Company Name in Catalogs and Other Documents

On April 1st, 2010, NEC Electronics Corporation merged with Renesas Technology Corporation, and Renesas Electronics Corporation took over all the business of both companies. Therefore, although the old company name remains in this document, it is a valid Renesas Electronics document. We appreciate your understanding.

Renesas Electronics website: http://www.renesas.com

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (http://www.renesas.com)

Send any inquiries to http://www.renesas.com/inquiry.

REJ19B0723-0100

| Mask ROM number | |
|---|---|

# 740 FAMILY MASK ROM CONFIRMATION FORM
# SINGLE-CHIP MICROCOMPUTER M38747M4T-XXXGP
# RENESAS TECHNOLOGY

| Receipt | Date: | |
|---|---|---|
| | Section head signature | Supervisor signature |
| | | |

Note : Please fill in all items marked ✵.

| | | | | | | |
|---|---|---|---|---|---|---|
| ✵ Customer | Company name | TEL ( ) | Issuance signature | Submitted by | Supervisor |
| | Date issued | Date: | | | |

✵ 1. Confirmation

Three EPROMs are required for each pattern if this order is performed by EPROMs.
One floppy disk is required for each pattern if this order is performed by a floppy disk.

☐ Ordering by EPROMs

If at least two of the three sets of EPROMs submitted contain identical data, we will produce masks based on this data. We shall assume the responsibility for errors only if the mask ROM data on the products we produce differs from this data. Thus, extreme care must be taken to verify the data in the submitted EPROMs.

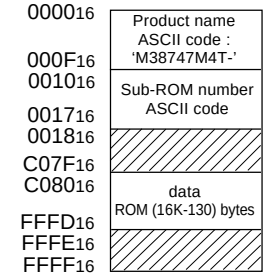
Checksum code for entire EPROM | | | | | (hexadecimal notation)

Sub-ROM number for data link layer communication control circuit | | | | | | | | |

EPROM type (indicate the type used)

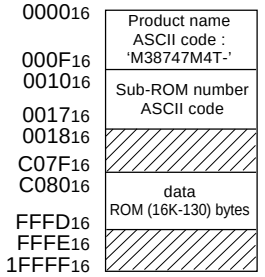
☐ **27512**

EPROM address




☐ **27101**

EPROM address




(1) Set the data in the unused area (the shaded area of the diagram) to "FF16".
(2) The ASCII codes of the product name "M38747M4T–" must be entered in addresses 0000₁₆ to 0009₁₆. And set the data "FF16" in addresses 000A₁₆ to 000F₁₆.
The ASCII codes and addresses are listed to the right in hexadecimal notation.
(3) The ASCII codes of sub-ROM number for the data link layer communication control circuit used when submitted ROM is developed must be entered in addresses 0010₁₆ to 0017₁₆ of EPROM.
The ASCII codes are listed to the right.
(4) Set the data "FF16" in addresses 0018₁₆ to 001F₁₆ of EPROM.

In the address space of the microcomputer, the internal ROM area is from address C080₁₆ to FFFD₁₆. The reset vector is stored in addresses FFFC₁₆ and FFFD₁₆.

| Address | |
|---|---|
| 0000₁₆ | 'M' = 4D₁₆ |
| 0001₁₆ | '3' = 33₁₆ |
| 0002₁₆ | '8' = 38₁₆ |
| 0003₁₆ | '7' = 37₁₆ |
| 0004₁₆ | '4' = 34₁₆ |
| 0005₁₆ | '7' = 37₁₆ |
| 0006₁₆ | 'M' = 4D₁₆ |
| 0007₁₆ | '4' = 34₁₆ |

| Address | |
|---|---|
| 0008₁₆ | 'T' = 54₁₆ |
| 0009₁₆ | '–' = 2D₁₆ |
| 000A₁₆ | FF₁₆ |
| 000B₁₆ | FF₁₆ |
| 000C₁₆ | FF₁₆ |
| 000D₁₆ | FF₁₆ |
| 000E₁₆ | FF₁₆ |
| 000F₁₆ | FF₁₆ |

ASCII codes

| | | | | |
|---|---|---|---|---|
| '0' = 30₁₆ | '8' = 38₁₆ | 'G' = 47₁₆ | 'R' = 52₁₆ | 'Z' = 5A₁₆ |
| '1' = 31₁₆ | '9' = 39₁₆ | 'H' = 48₁₆ | 'S' = 53₁₆ | |
| '2' = 32₁₆ | 'A' = 41₁₆ | 'K' = 4B₁₆ | 'T' = 54₁₆ | |
| '3' = 33₁₆ | 'B' = 42₁₆ | 'L' = 4C₁₆ | 'U' = 55₁₆ | |
| '4' = 34₁₆ | 'C' = 43₁₆ | 'M' = 4D₁₆ | 'V' = 56₁₆ | |
| '5' = 35₁₆ | 'D' = 44₁₆ | 'N' = 4E₁₆ | 'W' = 57₁₆ | |
| '6' = 36₁₆ | 'E' = 45₁₆ | 'P' = 50₁₆ | 'X' = 58₁₆ | |
| '7' = 37₁₆ | 'F' = 46₁₆ | 'Q' = 51₁₆ | 'Y' = 59₁₆ | |



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| Mask ROM number | |
|---|---|

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We recommend the use of the following pseudo-command to set the start address of the assembler source program because ASCII codes of the product name are written to addresses $0000_{16}$ to $0009_{16}$ of EPROM.
We also recommend the use of the following pseudo-command to set the start address of the assembler source program because ASCII codes of the sub-ROM number are written to addresses $0010_{16}$ to $0017_{16}$ of EPROM.

| EPROM type | 27512 | 27101 |
|---|---|---|
| The pseudo-command | *=△ $0000<br>.BYTE △'M38747M4T–' | *=△ $0000<br>.BYTE △'M38747M4T–' |

Note : In the following cases, the ROM will not be processed.
· If the name of the product written to the EPROMs does not match the name of the mask ROM confirmation form.
· If the specified sub-ROM number is not released.

☐ Ordering by floppy disk

We will produce masks based on the mask files generated by the mask file generating utility. We shall assume the responsibility for errors only if the mask ROM data on the products we produce differs from this mask file. Thus, extreme care must be taken to verify the mask file in the submitted floppy disk.

• Precautions when using the mask file generating utility

Sub-ROM number for the data link layer communication control circuit is input as option information in this product. Input sub-ROM number eight characters by ASCII codes as follows.
However, in the following cases, the ROM will not be processed.
· If the input sub-ROM number does not match the number of the mask ROM confirmation form.
· If the specified sub-ROM number is not released.

| Address | |
|---|---|
| $10_{16}$ | The 1st character of sub-ROM number |
| $11_{16}$ | The 2nd character of sub-ROM number |
| $12_{16}$ | The 3rd character of sub-ROM number |
| $13_{16}$ | The 4th character of sub-ROM number |
| $14_{16}$ | The 5th character of sub-ROM number |
| $15_{16}$ | The 6th character of sub-ROM number |
| $16_{16}$ | The 7th character of sub-ROM number |
| $17_{16}$ | The 8th character of sub-ROM number |

ASCII codes
'0' = $30_{16}$
'1' = $31_{16}$
'2' = $32_{16}$
'3' = $33_{16}$
'4' = $34_{16}$
'5' = $35_{16}$
'6' = $36_{16}$
'7' = $37_{16}$
'8' = $38_{16}$
'9' = $39_{16}$

The submitted floppy disk must be 3.5-inch 2HD type and DOS/V format. And the number of the mask files must be 1 in one floppy disk.

File code ☐☐☐☐☐☐☐☐ (hexadecimal notation)

Mask file name ☐☐☐☐☐☐☐☐ .MSK (Alphanumeric characters eight digits)

Sub-ROM number for data link layer communication control circuit ☐☐☐☐☐☐☐☐ (Alphanumeric characters eight digits)

Note : Do not put data in the product name area when ordering by the floppy disk.

✺ 2. Mark specification (Floppy disk and EPROM commonness)

Mark specification must be submitted using the correct form for the package being ordered. Fill out the 80P6S mark specification form and attach it to the mask ROM confirmation form.

| Mask ROM number | |
|---|---|

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✵ 3. Usage conditions (Floppy disk and EPROM commonness)

Please answer the following questions about usage for use in our product inspection :

(1) How will you use the XIN-XOUT oscillator?

☐ Ceramic resonator ☐ Quartz crystal

☐ External clock input ☐ Other ( )

At what frequency? f(XIN) = ☐ MHz

(2) How will you use the XCIN-XCOUT oscillator?

☐ Ceramic resonator ☐ Quartz crystal

☐ External clock input ☐ Other ( )

☐ No use (when using as P40 and P41)

At what frequency? f(XCIN) = ☐ Hz

(3) Which the internal clock division ratio will you use? (Plural answers are possible.)

☐ ϕ=XIN (double-speed mode) ☐ ϕ=XIN/2 (high-speed mode)

☐ ϕ=XIN/8 (middle-speed mode) ☐ ϕ=XCIN/2 (low-speed mode)

(4) Will you use the data link layer communication control circuit ?

☐ Yes ☐ No

✵ 4. Comments