# **Microcomputer Technical Information**

|           |                                   |                |     | CP(k                      | (), O |
|-----------|-----------------------------------|----------------|-----|---------------------------|-------|
|           |                                   | Document No.   | SB  | G-DT-03-0301              | 1/2   |
|           | DF789136                          | Date issued    | De  | cember 12, 2003           |       |
|           | 78K0S Series Device File          | Issued by      | Mic | rocomputer Group          |       |
|           |                                   |                | 2nc | Solutions Division        |       |
|           | Upgrade                           |                | Sol | utions Operations Unit    |       |
|           |                                   |                | NE  | C Electronics Corporation | n     |
| Related   | 78K0S Series Device File DF789136 | Document       |     | Usage restriction         |       |
| documents | (V1.01) User's Manual: SUD-DT-03- | classification |     | Upgrade                   |       |
|           | 0470-E                            |                |     | Document modification     | 1     |
|           |                                   |                |     | Other notification        |       |

# 1. Product types and version

| Product        | Outline                               | Old Version | New Version |
|----------------|---------------------------------------|-------------|-------------|
| μSxx13DF789136 | 78K0S Series device file DF789136     | Ver. 1.00   | Ver. 1.01   |
| Product        | Outline                               | Target      | Version     |
| μSxx17SP78K0S  | 78K0S Series software package SP78K0S | Ver.        | 1.00        |

Note xx13 indicates AB13, BB13, or 3K13. xx17 indicates AB17 or BB17.

## 2. Details of upgrade

The major revisions from DF789136 Ver. 1.00 to 1.01 are shown below. For details, refer to "78K0S Series Device File DF789136 V1.01 User's Manual (SUD-DT-03-0470-E)" supplied with the product.

(1) Addition of the following devices

μPD789106A, 789116B, 789136B

- (2) Change of type of file supplied with simulator from DLL-format file to database file
- (3) Correction of SFR functions
  - <1> Deletion of EEPROM area
    - [Affected devices: µPD78F9116, 78F9116A, 78F9116B, 78F9136, 78F9136A, 78F9136B]
  - <2> Modification of R/W attribute in the following registers
    - Bit 0 of ASIM20: Changed from R/W to read-only
    - Bit 2 of ADS0: Changed from R/W to read-only
  - <3> Addition of protect information to the following registers
    - TCL2, TMC20, TMC80, ASIM20, BRGC20, INTM0
    - OSTS [Affected devices: μPD789101, 789101A, 789102, 789102A, 789104, 789104A, 789111, 789111A, 789112, 789112A, 789114, 789114A, 789144, 789146,

789154, 789156, 78F9116, 78F9116A, 78F9116B, 78F9156]

- <4> Modification of protect information of the following registers
  - ADM0 [Affected devices: Other than µPD789106A]
  - BRGC20 [Affected devices: µPD78F9116B, 78F9156]
- **Remark** "Protect information" is information that is used to check the accessible data patterns.

#### 3. How to upgrade

#### (1) *µ*Sxx13DF789136

When CD-ROM medium is not required: Free upgrade

Download the software through ODS (online delivery service). When using this method, the supply medium will not be delivered but the upgrade is free of charge.

 Note
 Access the following URL.

 http://www.necel.com/micro/ods/eng/ (μSBB13DF789136; English version)

 http://www.necel.com/micro/ods/jpn/ (μSAB13DF789136; Japanese version)

#### • When CD-ROM medium is required: Charged upgrade

Fill in the essential items in the attachment "Application for Software Product Charged Upgrade" and submit it to a distributor or NEC Electronics sales representative. When using this method, a fee will be charged for the upgrade and the CD-ROM medium will be delivered.

The part number to be entered in the form varies depending on the purchased product. The correspondence between the purchased product and the part number after upgrade is as follows.

| Purchased Product | Part Number for Charged Upgrade |
|-------------------|---------------------------------|
| μSxx13DF789136    | μSxx13DF789136-S                |

**Note** xx indicates AB or BB. (If the purchased product is 3K, please apply upgrade as either AB or BB.)

## (2) µSxx17SP78K0S

• Free upgrade (without CD-ROM medium)

Download the upgraded software (DF789136) through ODS (online delivery service). When using this method, the CD-ROM medium will not be delivered but the upgrade is free of charge. Since this is an upgrade of only one of the components in the SP78K0S, only the relevant tool is downloaded.

Note Access the following URL.

http://www.necel.com/micro/ods/eng/ (μSBB13DF789136; English version) http://www.necel.com/micro/ods/jpn/ (μSAB13DF789136; Japanese version)

## 4. Upgrade petition period

(1) Free upgrade (without CD-ROM medium)

The upgraded product can be downloaded through ODS from December 5, 2003.

(2) Charged upgrade (with CD-ROM medium) From December 22, 2003

## Application for Software Product Charged Upgrade

Customers wishing to upgrade the product by "Charged upgrade (with CD-ROM medium)" are requested to fill out the following form and submit it to a **distributor** or **NEC Electronics sales representative**.

| Upgrade Product | Version   |
|-----------------|-----------|
| DF789136        | Ver. 1.01 |

#### Application cut-off date: March 19, 2004

| Name of distributor |  |
|---------------------|--|
| Person in charge    |  |
| Date of application |  |