

**NEC**

## **Customer Notification**

# **μPD789850 Subseries μPD789850A Subseries™**

**8-bit Single-Chip Microcontrollers**

**Operating Precautions**

---

**μPD789850  
μPD78F9850  
μPD789850A  
μPD78F9850A**

Document No. TPS-LE-OP-9850A-1 (2nd edition)  
Date Published March 2005

© NEC Electronics (Europe) GmbH

## **DISCLAIMER**

The related documents in this customer notification may include preliminary versions. However, preliminary versions may not have been marked as such.

The information in this customer notification is current as of its date of publication. The information is subject to change without notice. For actual design-in, refer to the latest publications of NEC's data sheets or data books, etc., for the most up-to-date specifications of NEC PRODUCT(S). Not all PRODUCT(S) and/or types are available in every country. Please check with an NEC sales representative for availability and additional information.

No part of this customer notification may be copied or reproduced in any form or by any means without prior written consent of NEC. NEC assumes no responsibility for any errors that may appear in this customer notification. NEC does not assume any liability for infringement of patents, copyrights or other intellectual property rights of third parties by or arising from the use of NEC PRODUCT(S) listed in this customer notification or any other liability arising from the use of such PRODUCT(S).

No license, express, implied or otherwise, is granted under any patents, copyrights or other intellectual property rights of NEC or others. Descriptions of circuits, software and other related information in this customer notification are provided for illustrative purposes of PRODUCT(S) operation and/or application examples only. The incorporation of these circuits, software and information in the design of customer's equipment shall be done under the full responsibility of customer. NEC assumes no responsibility for any losses incurred by customers or third parties arising from the use of these circuits, software and information.

While wherever feasible, NEC endeavors to enhance the quality, reliability and safe operation of PRODUCT(S) the customer agree and acknowledge that the possibility of defects and/or erroneous thereof cannot be eliminated entirely. To minimize risks of damage to property or injury (including death) to persons arising from defects and/or errors in PRODUCT(S) the customer must incorporate sufficient safety measures in their design, such as redundancy, fire-containment and anti-failure features.

The customer agrees to indemnify NEC against and hold NEC harmless from any and all consequences of any and all claims, suits, actions or demands asserted against NEC made by a third party for damages caused by one or more of the items listed in the enclosed table of content of this customer notification for PRODUCT(S) supplied after the date of publication.

### **Applicable Law:**

The law of the Federal Republic of Germany applies to all information provided by NEC to the Customer under this Operating Precaution document without the possibility of recourse to the Conflicts Law or the law of 5th July 1989 relating to the UN Convention on Contracts for the International Sale of Goods (the Vienna CISG agreement).

Düsseldorf is the court of jurisdiction for all legal disputes arising directly or indirectly from this information. NEC is also entitled to make a claim against the Customer at his general court of jurisdiction.

If the supplied goods/information are subject to German, European and/or North American export controls, the Customer shall comply with the relevant export control regulations in the event that the goods are exported and/or re-exported. If deliveries are exported without payment of duty at the request of the Customer, the Customer accepts liability for any subsequent customs administration claims with respect to NEC.

- Notes:**
- (1) **"NEC"** as used in this statement means NEC Corporation and also includes its direct or indirect owned or controlled subsidiaries.
  - (2) **"PRODUCT(S)"** means 'NEC semiconductor products' (*NEC semiconductor products* means any semiconductor product developed or manufactured by or for NEC) and/or 'TOOLS' (*TOOLS* means 'hardware and/or software development tools' for NEC semiconductor products' developed, manufactured and supplied by 'NEC' and/or 'hardware and/or software development tools' supplied by NEC but developed and/or manufactured by independent 3<sup>rd</sup> Party vendors worldwide as their own product or on contract from NEC)

## Table of Contents

(A)	Table of Operating Precautions.....	4
(B)	Description of Operating Precautions.....	6
(C)	Valid Specification.....	8
(D)	Revision History .....	9

**(A) Table of Operating Precautions**

No.	Outline	$\mu$ PD789850			$\mu$ PD78F9850		
		Rev.	MP		MP		
		Rank <sup>Note</sup>	all		all		
1	16-bit Timer TM0 One-shot pulse output (Specification Change)		X			X	
2	DCAN Change of DCAN Controller Control Register names (Specification Change)		X			X	
3	DCAN High speed RX Loss and manipulated TX ID (Specification Change)		X			X	
4	DCAN REDEF Function (Direction of use)		X			X	
5	Flash Programming (Specification Change)		No Flash			X	
6	DCAN RXONLY Mode (Specification Change)		X			X	
7	DCAN Extended Identifier (Direction of use)		X			X	

✓ : Not applicable  
X : applicable

**Note:** The rank is indicated by the letter appearing at the 5<sup>th</sup> position from the left in the lot number, marked on each product.

No.	Outline	$\mu$ PD789850A			$\mu$ PD78F9850A		
		Rev.	MP		MP		
		Rank <sup>Note</sup>	all		all		
1	16-bit Timer TM0 One-shot pulse output (Specification Change)		X			X	
2	DCAN Change of DCAN Controller Control Register names (Specification Change)		X			X	
4	DCAN REDEF Function (Direction of use)		X			X	
5	Flash Programming (Specification Change)		No Flash			X	
7	DCAN Extended Identifier (Specification Change)		X			X	

✓ : Not applicable  
X : applicable

**Note:** The rank is indicated by the letter appearing at the 5<sup>th</sup> position from the left in the lot number, marked on each product.

## (B) Description of Operating Precautions

No. 1	16-bit Timer TM0 One-shot pulse output (Specification Change)																																										
	<p><u>Details</u> The One-shot pulse output function of 16-bit Timer TM0 is deleted.</p>																																										
No. 2	DCAN Change of DCAN Controller Control Register names (Specification Change)																																										
	<p><u>Details</u></p> <table border="1" data-bbox="360 604 1458 1331"> <thead> <tr> <th data-bbox="360 604 724 659">Address</th> <th data-bbox="730 604 1094 659">Old name</th> <th data-bbox="1101 604 1458 659">New Name</th> </tr> </thead> <tbody> <tr> <td data-bbox="360 659 724 709">FFB1H</td> <td data-bbox="730 659 1094 709">CANC0</td> <td data-bbox="1101 659 1458 709">CANC</td> </tr> <tr> <td data-bbox="360 709 724 760">FFB2H</td> <td data-bbox="730 709 1094 760">TCR0</td> <td data-bbox="1101 709 1458 760">TCR</td> </tr> <tr> <td data-bbox="360 760 724 810">FFB3H</td> <td data-bbox="730 760 1094 810">RMES0</td> <td data-bbox="1101 760 1458 810">RMES</td> </tr> <tr> <td data-bbox="360 810 724 861">FFB4H</td> <td data-bbox="730 810 1094 861">REDEF0</td> <td data-bbox="1101 810 1458 861">REDEF</td> </tr> <tr> <td data-bbox="360 861 724 911">FFB4H.7 (bit)</td> <td data-bbox="730 861 1094 911">DEFEN</td> <td data-bbox="1101 861 1458 911">DEF</td> </tr> <tr> <td data-bbox="360 911 724 961">FFB5H</td> <td data-bbox="730 911 1094 961">CANES0</td> <td data-bbox="1101 911 1458 961">CANES</td> </tr> <tr> <td data-bbox="360 961 724 1012">FFB6H</td> <td data-bbox="730 961 1094 1012">TEC0</td> <td data-bbox="1101 961 1458 1012">TEC</td> </tr> <tr> <td data-bbox="360 1012 724 1062">FFB7H</td> <td data-bbox="730 1012 1094 1062">REC0</td> <td data-bbox="1101 1012 1458 1062">REC</td> </tr> <tr> <td data-bbox="360 1062 724 1113">FFB8H</td> <td data-bbox="730 1062 1094 1113">MCNT0</td> <td data-bbox="1101 1062 1458 1113">MCNT</td> </tr> <tr> <td data-bbox="360 1113 724 1163">FFB9H</td> <td data-bbox="730 1113 1094 1163">BRPRS0</td> <td data-bbox="1101 1113 1458 1163">BRPRS</td> </tr> <tr> <td data-bbox="360 1163 724 1213">FFBAH</td> <td data-bbox="730 1163 1094 1213">SYNC00</td> <td data-bbox="1101 1163 1458 1213">SYNC0</td> </tr> <tr> <td data-bbox="360 1213 724 1264">FFBBH</td> <td data-bbox="730 1213 1094 1264">SYNC01</td> <td data-bbox="1101 1213 1458 1264">SYNC1</td> </tr> <tr> <td data-bbox="360 1264 724 1331">FFBCH</td> <td data-bbox="730 1264 1094 1331">MASKC0</td> <td data-bbox="1101 1264 1458 1331">MASKC</td> </tr> </tbody> </table>	Address	Old name	New Name	FFB1H	CANC0	CANC	FFB2H	TCR0	TCR	FFB3H	RMES0	RMES	FFB4H	REDEF0	REDEF	FFB4H.7 (bit)	DEFEN	DEF	FFB5H	CANES0	CANES	FFB6H	TEC0	TEC	FFB7H	REC0	REC	FFB8H	MCNT0	MCNT	FFB9H	BRPRS0	BRPRS	FFBAH	SYNC00	SYNC0	FFBBH	SYNC01	SYNC1	FFBCH	MASKC0	MASKC
Address	Old name	New Name																																									
FFB1H	CANC0	CANC																																									
FFB2H	TCR0	TCR																																									
FFB3H	RMES0	RMES																																									
FFB4H	REDEF0	REDEF																																									
FFB4H.7 (bit)	DEFEN	DEF																																									
FFB5H	CANES0	CANES																																									
FFB6H	TEC0	TEC																																									
FFB7H	REC0	REC																																									
FFB8H	MCNT0	MCNT																																									
FFB9H	BRPRS0	BRPRS																																									
FFBAH	SYNC00	SYNC0																																									
FFBBH	SYNC01	SYNC1																																									
FFBCH	MASKC0	MASKC																																									
No. 3	DCAN High speed RX Loss and manipulated TX ID (Specification Change)																																										
	<p><u>Details</u> For detailed description, pls. refer to the document EACT-BR-5004-1.0.pdf or later.</p>																																										

No. 4	DCAN REDEF Function (Direction of use)
	<p><u>Details</u> Issue REDEF function only directly after 'bus idle' was detected. Use RXF and TXF bits in CAN Control Register CANC for this purpose and disable all interrupts during these operations. Alternatively the regular initialization mode can be used for re-configuration of the message buffer area or when REDEF was used to provide data consistency, this method needs to be replaced by the normal method using DN and MUC bit.</p> <p>For detailed description, pls. refer to the document EACT-BR-5006-1.0.pdf or later.</p>
No. 5	Flash Programming (Specification Change)
	<p><u>Details</u> When manipulating (erasing, writing) the flash memory of the target product using a flash programmer, the below listed communication conditions cannot longer be used.</p> <p>Communication mode: UART Communication speed: 4800Bd Operating frequency of target device fx: 8MHz</p>
No. 6	DCAN RXONLY Mode (Specification Change)
	<p><u>Details</u> The RYONLY Mode of the DCAN is deleted.</p> <p>For detailed description pls. refer to the document EACT-CN-5001-1.0.pdf or later.</p>
No. 7	DCAN Extended Identifier (Direction of use)
	<p><u>Details</u> Pls. use Extended Identifiers only, if it can be guaranteed, that there are no two Extended Identifiers available on the CAN bus, which are identical within their Standard Identifier part. Otherwise, the data-contents of messages with same Standard ID-part, but differing within the Extended ID-part, can be mixed, may be lost or wrong stored, while error frames or stuff bit errors occur on the CAN-bus within specific time-slots.</p> <p>For detailed description pls. refer to the document EACT-BR-5010-1.2 or later.</p>

**(C) Valid Specification**

Item	Date published	Document No.	Document Title
1	February 2003	U16532E or later	$\mu$ PD789850A Subseries User's Manual
2	August 2002	U14403E or later	$\mu$ PD789850 Subseries User's Manual



**(D) Revision History**

Item	Date published	Document No.	Comment
1	December 13, 2002	TPS-LE-OP-9850A	1 <sup>st</sup> Release
2	March 9, 2005	TPS-LE-OP-9850A-1	1 <sup>st</sup> Update Merging of documents TPS-LE-OP-9850-1 and TPS-LE-OP-9850A $\mu$ PD789850 Subseries: Revision of items 1 to 7 $\mu$ PD789850A Subseries: Revision of items 1 to 7