

Product Advisory (PA)

Subject: Product Advisory for part numbers 8T49N285/6/7-996, -998,-999

Publication Date: 6/22/2023

Effective Date: 6/22/2023

Revision Description:

Revision 1

Description of Change:

This revised notice is to update note 2 to include steps to determine if APLL1 started correctly and the write sequence to be followed depending on whether the configuration is loaded through I²C or the EEPROM.

1. The existing 8T49N285/6/7-996,-998 and-999 have 0xF8h as the default I²C address. The 0xF8h address is reserved by the I²C Specification for future use. In order to avoid a conflict with future uses of this address, we recommend using the replacement dash codes listed on page 3.
2. The 8T49N285/6/7-996 and -998 are setup for APLL0 power-up only. In use cases where APLL1 is used, the write-sequence shown below would need to be applied. To determine if APLL1 did not start correctly, read back register 0x21D. If the value is 0x2f and the expected frequency for APLL1 is not correct, this is an indication that it did not initialize correctly. The sequences below should be used, depending on whether the configuration is loaded through I²C or the EEPROM. In order to eliminate the need for this I²C sequence, we recommend using the replacement dash codes listed on page 3.

If the configuration is programmed though I²C, use the following sequence:

- a. Write the DSM_INT1 value of 0x50 to register 0x65
- b. Write 0x00 to register 0xB6. (This enables PLL1)
- c. Write 0x02 to register 0xB8. (Disable DPLL1).
- d. Write 0x00 to register 0xB8. (This restarts the calibration and Enable DPLL1/2).
- e. Load the complete register configuration.

If the configuration was loaded through an EEPROM, PLL1 and DPLL1 will be enabled by the configuration in the EEPROM, so use the following sequence:

- a. Write a value of 0x01 to register 0xB6. (This disables PLL1).
- b. Write a value of 0x0A to register 0xB8. This disables DPLL1).
- c. Write a value of 0x00 to register 0xB6. (This enables PLL1).
- d. Write a value of 0x00 to register 0xB8. (This enables DPLL1).

In both sequences above, wait 1ms after steps a. to d. in order to give the device time to settle.

The new dash codes 8T49N285A/6A/7A-991,-993 and -994 are provided with a new I²C default address of 0xD8h. They also enable APLL1 at power-up by setting the integer feedback divider DSM_INT1 to default value 45 (or 0x2Dh).

For future generic orders, the customer should order 8T49N285A/6A/7A-991,-993,-994. Please see table reference below for more details.

Existing Dash Code	UFT Base Address	EEPROM Base Address		New Dash Code	UFT Base Address	EEPROM Base Address	NOTES
-996	0b11111100 I ² C	0b1010000 2-Byte	====>>	-991	0b11011100 I ² C	0b1010000 2-Byte	EEPROM 2-Byte addressing
-998	0b11111100 I ² C	0b1010000 1-Byte	====>>	-993	0b11011100 I ² C	0b1010000 1-Byte	EEPROM 1-Byte addressing
-999	0b11111100 I ² C	0b1010000 1-Byte	====>>	-994	0b11011100 I ² C	0b1010000 1-Byte	OTP

Note that EOL notice, PLC220001, was issued for the following parts in this product advisory in January 2022: 8T49N285-996, 8T49N285-998, 8T49N285-999, 8T49N286-998, 8T49N286-999, 8T49N287-998NLGI, 8T49N287-999NLGI.

Reason for Change:

The existing 8T49N285/6/7-996,-998 and-999 have 0xF8h as the default I²C address. The 0xF8h will be reserved for future I²C purposes. In addition, the 8T49N285/6/7-996 and -998 are setup for APLL0 power-up only. In some cases where the customer would want to power up APLL1, it would require specific register writes. We recommend that the customer use the replacement dash code instead.

Impact on Fit, Form, Function, Quality & Reliability:

No change to existing products, there is no impact on fit, form, function, quality and reliability of the products.

Product Identification:

Not Applicable. No change to existing products.

Qualification Status: Not Applicable

Sample Availability Date: 6/22/2023

Device Material Declaration: Available upon request

Questions or requests pertaining to this change notice, including additional data or samples, must be sent to Renesas within 30 days of the publication date.

For additional information regarding this notice, please contact idt-pcn@lm.renesas.com

Affected Product List:

Orderable Part	Replacement Part
8T49N285-996NLGI	8T49N285A-991NLGI
8T49N285-996NLGI8	8T49N285A-991NLGI8
8T49N285-998NLGI	8T49N285A-993NLGI
8T49N285-998NLGI8	8T49N285A-993NLGI8
8T49N285-999NLGI	8T49N285A-994NLGI
8T49N285-999NLGI8	8T49N285A-994NLGI8
8T49N285A-996NLGI	8T49N285A-991NLGI
8T49N285A-996NLGI8	8T49N285A-991NLGI8
8T49N285A-998NLGI	8T49N285A-993NLGI
8T49N285A-998NLGI8	8T49N285A-993NLGI8
8T49N285A-999NLGI	8T49N285A-994NLGI
8T49N285A-999NLGI8	8T49N285A-994NLGI8
8T49N286-998NLGI	8T49N286A-993NLGI
8T49N286-998NLGI#	8T49N286A-993NLGI#
8T49N286-998NLGI8	8T49N286A-993NLGI8
8T49N286-999NLGI	8T49N286A-994NLGI
8T49N286-999NLGI8	8T49N286A-994NLGI8
8T49N286A-998NLGI	8T49N286A-993NLGI
8T49N286A-998NLGI#	8T49N286A-993NLGI#
8T49N286A-998NLGI8	8T49N286A-993NLGI8
8T49N286A-999NLGI	8T49N286A-994NLGI
8T49N286A-999NLGI8	8T49N286A-994NLGI8

Orderable Part	Replacement Part
8T49N287-996NLGI	8T49N287A-991NLGI
8T49N287-996NLGI8	8T49N287A-991NLGI8
8T49N287-998NLGI	8T49N287A-993NLGI
8T49N287-998NLGI#	8T49N287A-993NLGI#
8T49N287-998NLGI8	8T49N287A-993NLGI8
8T49N287-999NLGI	8T49N287A-994NLGI
8T49N287-999NLGI#	8T49N287A-994NLGI#
8T49N287-999NLGI8	8T49N287A-994NLGI8
8T49N287A-996NLGI	8T49N287A-991NLGI
8T49N287A-996NLGI8	8T49N287A-991NLGI8
8T49N287A-998NLGI	8T49N287A-993NLGI
8T49N287A-998NLGI#	8T49N287A-993NLGI#
8T49N287A-998NLGI8	8T49N287A-993NLGI8
8T49N287A-999NLGI	8T49N287A-994NLGI
8T49N287A-999NLGI#	8T49N287A-994NLGI#
8T49N287A-999NLGI8	8T49N287A-994NLGI8