Application Note

RSRAM Parity Error Detection Application Note

Introduction

This document describes the parity error of Retention SRAM and how users can set and retrieve relevant flags through the corresponding interfaces.

This document is only applicable to Nsing MCU products. Currently, the supported product series include N32G45x series, N32G4FR series, N32WB452 series.

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1. Overview

Introduce the driver interface.

2. Operating Method

2.1 Function Description

Function prototype: uint8_t RSRAM_GetPERRStatus(void);

Retrieve RSRAM parity error status.

Parameter description:

Return value: 0: No parity error

1: Parity error.

Function prototype: void RSRAM_ClearPERRStatus(void);

Clear RSRAM parity error status.

Function prototype: uint8_t RSRAM_EnablePERRRst(void);

Enable RSRAM parity error reset.

Note: a reset will occur when a parity error is detected.

Parameter description:

Return value: 0: RSRAM parity error reset enable failed.

1: RSRAM parity error reset enable successful

Note: before enabling the RSRAM parity error reset, DBKP needs to be set.

Function prototype: uint8_t RSRAM_DisablePERRRst(void);

Disable RSRAM parity error reset.

Parameter description:

Return value: 1: RSRAM parity error reset enable failed.

0: RSRAM parity error reset enable successful.

Function prototype: uint8_t RSRAM_EnablePERRInt (void);

Enable RSRAM parity error interrupt.

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Note: an interrupt will occur when a parity error is detected.

Parameter description:

Return value: 0: RSRAM parity error interrupt enable failed.

1: RSRAM parity error interrupt enable successful.

Note: before enabling the RS-RAM parity error interrupt, DBKP needs to be set.

Function prototype: uint8_t RSRAM_DisablePERRInt (void);

Disable RSRAM parity error interrupt.

Parameter description:

Return value: 1: RSRAM parity error interrupt enable failed.

0: RSRAM parity error interrupt enable successful.

2.2 Application Example

Referencing the application note routine "RSRAM_DRV_DEMO," demonstrated enabling RSRAM parity error reset and enabling RSRAM parity error interrupt.

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3. Version History

Version	Date	Changes
V1.0	2022.6.10	Initial version

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