Errata

MSPM0L112x and MSPM0L211x Microcontroller



ABSTRACT

This document describes the known exceptions to the functional specifications (advisories).

Table of Contents

1 Functional Advisories	2
2 Preprogrammed Software Advisories	
3 Debug Only Advisories	
4 Fixed by Compiler Advisories	
5 Device Nomenclature	
5.1 Device Symbolization and Revision Identification	
6 Advisory Descriptions	
7 Revision History	

Trademarks

All trademarks are the property of their respective owners.



1 Functional Advisories

Advisories that affect the device's operation, function, or parametrics.

✓ The check mark indicates that the issue is present in the specified revision.

Errata Number	Rev B
AES_ERR_01	✓
CPU_ERR_02	✓
CPU_ERR_03	✓
FLASH_ERR_03	✓
FLASH_ERR_04	✓
FLASH_ERR_05	✓
FLASH_ERR_08	✓
KEYSTORE_ERR_01	✓
PMCU_ERR_13	✓
RST_ERR_01	✓
SYSCTL_ERR_01	✓
SYSCTL_ERR_02	✓
SYSCTL_ERR_03	✓
SYSCTL_ERR_04	✓
SYSOSC_ERR_01	✓
SYSOSC_ERR_02	✓
TIMER_ERR_04	✓
TIMER_ERR_06	✓
TIMER_ERR_07	✓
UNICOMMI2CC_ERR_01	✓
UNICOMMI2CT_ERR_01	✓
UNICOMMI2CT_ERR_02	✓
UNICOMMI2CT_ERR_03	✓
UNICOMMSPI_ERR_01	✓
UNICOMMUART_ERR_01	✓
UNICOMMUART_ERR_02	✓
UNICOMMUART_ERR_03	✓
UNICOMMUART_ERR_04	✓
UNICOMMUART_ERR_05	✓
UNICOMMUART_ERR_06	✓
UNICOMMUART_ERR_07	✓
UNICOMMUART_ERR_08	✓
UNICOMMUART_ERR_09	✓
UNICOMMUART_ERR_10	✓
UNICOMMUART_ERR_11	√

2 Preprogrammed Software Advisories

Advisories that affect factory-programmed software.

✓ The check mark indicates that the issue is present in the specified revision.

The device does not have any errata for this category.



www.ti.com Debug Only Advisories

3 Debug Only Advisories

Advisories that affect only debug operation.

✓ The check mark indicates that the issue is present in the specified revision.

The device does not have any errata for this category.

4 Fixed by Compiler Advisories

Advisories that are resolved by compiler workaround. Refer to each advisory for the IDE and compiler versions with a workaround.

✓ The check mark indicates that the issue is present in the specified revision.

5 Device Nomenclature

To designate the stages in the product development cycle, TI assigns prefixes to the part numbers of all MSP MCU devices. Each MSP MCU commercial family member has one of two prefixes: MSP or XMS. These prefixes represent evolutionary stages of product development from engineering prototypes (XMS) through fully qualified production devices (MSP).

XMS – Experimental device that is not necessarily representative of the final device's electrical specifications

MSP - Fully qualified production device

Support tool naming prefixes:

X: Development-support product that has not yet completed Texas Instruments internal qualification testing. **null**: Fully-qualified development-support product.

XMS devices and X development-support tools are shipped against the following disclaimer:

"Developmental product is intended for internal evaluation purposes."

MSP devices have been characterized fully, and the quality and reliability of the device have been demonstrated fully. Tl's standard warranty applies.

Predictions show that prototype devices (XMS) have a greater failure rate than the standard production devices. TI recommends that these devices not be used in any production system because their expected end-use failure rate still is undefined. Only qualified production devices are to be used.

TI device nomenclature also includes a suffix with the device family name. This suffix indicates the temperature range, package type, and distribution format.

5.1 Device Symbolization and Revision Identification

The package diagrams below indicate the package symbolization scheme, and Figure 5-1 defines the device revision to version ID mapping.

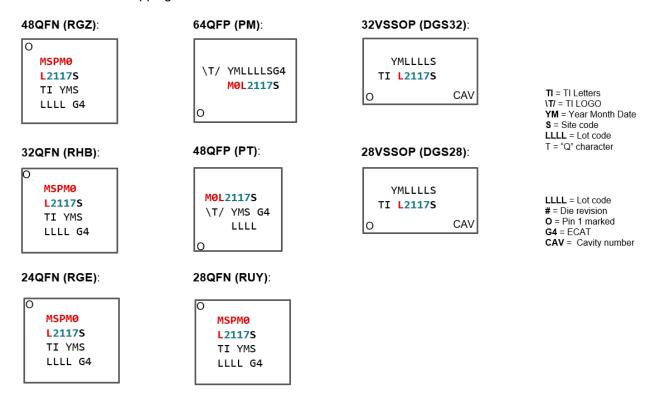


Figure 5-1. Package Symbolization

www.ti.com Device Nomenclature

Table 5-1. Die Revisions

Revision Letter	Version (in the device factory constants memory)
В	1

6 Advisory Descriptions

AES_ERR_01 AES Module

Category Functional

Function

AES Saved Context Ready interrupt is not generating as expected

DescriptionSaved Context Ready interrupt is not getting generated. The interrupt is generated if an

access (read or write) is made to any AES register.

Workaround

Use polling based mechanism to check the status bit for Saved Context Ready in CTRL

register instead of interrupt.

CPU_ERR_02 CPU Module

Category Functional

Function Limitation of disabling prefetch for CPUSS

DescriptionCPU prefetch disable will not take effect if there is a pending flash memory access.

Workaround

memory (SHUTDNSTORE) in SYSCTL, this can be done with

SYSCTL.SOCLOCK.SHUTDNSTORE0;

After the memory access completes the prefetcher will be disabled.

Disable the prefetcher, then issue a memory access to the shutdown

Example:

CPUSS.CTL.PREFETCH = 0x0; //disables prefetcher

SYSCTL.SOCLOCK.SHUTDNSTORE0; // memory access to shutdown memory

CPU_ERR_03 CPU Module

Category Functional

Description

Function Prefetcher can fetch wrong instructions when transitioning into Low power modes

When transitioning into low power modes and there is a pending prefetch, the prefetcher can erroneously fetch incorrect data (all 0's). When the device wakes up, if the prefetcher and cache do not get overwritten by ISR code, then the main code execution from flash can get corrupted. For example, if the ISR is in the SRAM, then the incorrect data that was prefetched from Flash does not get overwritten. When the ISR returns the corrupted data in the prefetcher can be fetched by the CPU resulting in incorrect instructions. A HW Event wake is another example of a process that will wake the device, but not flush the

prefetcher.

www.ti.com Advisory Descriptions

CPU ERR 03

(continued) CPU Module

Workaround

Disable prefetcher before entering low power modes.

Example:

CPUSS.CTL.PREFETCH = 0x0; // disables prefetcher

SYSCTL.SOCLOCK.SHUTDNSTORE0 // Read from SHUTDOWN Memory WFI(); // or WFE(); this function calls the transition into low power mode

CPUSS.CTL.PREFETCH = 0x1; // enables prefetcher

FLASH_ERR_03 FLASH Module

Category Functional

Function Flash access with 2 wait states followed by invalid bootcode access will cause next flash

access to also throw a violation

DescriptionDoing a Flash access followed by a access to BOOTCODE when you have 2 wait states

will cause the next flash access to also cause a violation.

Workaround

Do not attempt to access boot-code region post-boot phase. Otherwise, there will need to

be 4 clock cycles in between the bootcode violation and next correct flash access.

FLASH_ERR_04 FLASH Module

Category Functional

Function Wrong Address will get reported in the SYSCTL_DEDERRADDR if the error is in the

NONMAIN or Factory region.

DescriptionWhen a FLASHDED error appears the data will truncate the most significant byte. In the

memory limits of the device, the most significant byte does not have an impact to the return address for MAIN flash. For NONMAIN flash or Factory region the MSB should be

listed as 0x41xx.xxxx

Workaround

If the return address of the SYSCTL DEDERRADDR returns a 0x00Cxxxxx, do an OR

operation with 0x41000000 to get the proper address for the NONMAIN or Factory region return address. For example, if SYSCTL_DEDERRADDR = 0x00C4013C, the real address would be 0x41C4013C. For MAIN Flash DED, the SYSCTL_DEDERRADDR can

be used as is.

FLASH_ERR_05 FLASH Module

Category Functional

FLASH_ERR_05

(continued) FLASH Module

Function DEDERRADDR can have incorrect reset value

DescriptionThe reset value of the SYSCTL->DEDERRADDR can return a 0x00C4013C instead of

the correct 0x00000000. The location of the error is in the Factory Trim region and is not indicative of a failure, it can be properly ignored. The reset value tends to change once

NONMAIN has been programmed on the device.

Workaround

Accept 0x00C4013C as another reset value, so the default value from boot can be

0x00000000 or 0x00C4013C. The return value is outside of the range of the MAIN flash on the device so there is no potential of this return coming from an actual FLASH DED

status.

FLASH_ERR_08 FLASH Module

Category Functional

Function Hard fault isn't generated for typical invalid memory region

Description

Hard fault isn't generated while trying to access illegal memory address space as shown

below: 1. 0x010053FF - 0x20000000 2. 0x40BFFFFF - 0x41C00000 3. 0x41C007FF -

0x41C40000

Workaround No.

KEYSTORE_ERR_

01 KEYSTORE Module

Category Functional

Function STATUS.STAT value can be 0 or 1 without key access

DescriptionSTATUS.STAT has a reset value of 1 and turns to 0 under these conditions: 1. After reset,

debugger access via the register window returns 0x00. 2. After reset, the first CPU read returns 0x01, while subsequent CPU reads return 0x00. 3) After reset, first reading any

other KEYSTORE register and then reading STATUS.STAT return 0x00.

Workaround STATUS.STAT=0x0 means "No Error" . For checking if a slot is valid or not (Whether key

is present), check STATUS.VALID.

PMCU_ERR_13 PMCU Module

Category Functional

www.ti.com Advisory Descriptions

PMCU_ERR_13

(continued) PMCU Module

Function MCU may get stuck while waking up from STOP2 & STANDBY0

DescriptionIf prefetch access is pending when the device transitions to STOP2 or STANDBY, when

the device wakes up, the pending prefetch can prevent the device from resuming normal execution. The errata occurs if the WFI instruction is not word aligned, and the flash wait state is 2. In such a case, neither a DMA transfer nor a pending interrupt will be serviced.

Workaround
User should disable prefetch and issue a shutdown store memory read, which prevents a

new prefetch from issuing and allows a pending prefetch to complete.

RST_ERR_01 RST Module

Category Functional

Function

NRST release doesn't get detected when LFCLK IN is LFCLK source and LFCLK IN gets

disabled

DescriptionWhen LFCLK = LFCLK_IN and we disable the LFCLK_IN, then comes a corner scenario

where NRST pulse edge detection is missed and the device doesn't come out of reset. This issue is seen if the NRST pulse width is below 608us. NRST pulse above 608us, the

reset can appear normally.

Workaround Keep the NRST pulse width higher than 608us to avoid this issue.

SYSCTL_ERR_01 SYSCTL Module

Category Functional

FunctionSW-POR functionality is combined with HW-POR

DescriptionWhen a user writes to the LFSSRST register with the correct key to generate a software-

triggered POR, the RSTCAUSE register will display 0x2 (indicating an NRST-triggered POR) instead of the expected 0x3 (Software-Triggered POR). This occurs because the

SW-POR functionality is combined with the HW-POR path.

Workaround No

SYSCTL_ERR_02 SYSCTL Module

Category Functional

Function SYSSTATUS.FLASHSEC is non-zero after a BOOTRST



SYSCTL ERR 02

(continued) SYSCTL Module

DescriptionAfter BOOTRST/ bootcode completion SYSSTATUS.FLASHSEC is non-zero. This the

customer will see after bootcode completion.

Workaround No

SYSCTL_ERR_03 SYSCTL Module

Category Functional

Function

DEDERRADDR persists after a SYSRESET or a write to the SYSSTATUSCLR

DescriptionDEDERRADDR persists after either a SYSRESET or a write to the SYSSTATUSCLR

register. Its value is overwritten only when a new FLASHDED error occurs. This behavior contradicts the Technical Reference Manual (TRM), which specifies its initial reset value

as zero.

Workaround No

SYSCTL_ERR_04 SYSCTL Module

Category Functional

Function SYSSTATUS.FLASHSEC is not cleared after a SYSRESET

DescriptionSYSSTATUS.FLASHSEC is not cleared after a SYSRESET and is only cleared by writing

to the SYSSTATUSCLR register.

Workaround No

SYSOSC_ERR_01 SYSOSC Module

Category Functional

Function MFCLK drift when using SYSOSC FCL together with STOP1 mode

Description

IF MFCLK is enabled AND SYSOSC is using the frequency correction loop (FCL) mode

AND the STOP1 low power operating mode is used, THEN the MFCLK may drift by two cycles when SYSOSC shifts from 4MHz back to 32MHz (either upon exit from STOP1 to RUN mode or upon an asynchronous fast clock request that forces SYSOSC to 32MHz).



SYSOSC ERR 01

(continued)

SYSOSC Module

Workaround

Use STOP0 mode instead of STOP1 mode. There is no MFCLK drift when STOP0 mode is used.

OR

Do not use SYSOSC in the FCL mode (leave FCL disabled) when using STOP1.

SYSOSC_ERR_02 SYSOSC Module

Category

Functional

Function

MFCLK does not work when Async clock request is received in an LPM where SYSOSC was disabled in FCL mode

Description

MFCLK will not start to toggle in below scenario:

- 1. FCL mode is enabled and then MFCLK is enabled
- 2. Enter a low power mode where SYSOSC is disabled (SLEEP2/STOP2/STANDBY0/STANDBY1).
- 3. Async request is received from some peripherals which use MFCLK as functional clock. On receiving async request, SYSOSC gets enabled and ulpclk becomes 32MHz. But MFCLK is gated off and it does not toggle at all as the device is still set to the LPM.

Workaround

If SYSOSC is using the FCL mode - Do not enable the MFCLK for a peripheral when you're entering a LPM mode which would typically turn off the SYSOSC.

TIMER ERR 04

TIMER Module

Category

Functional

Function

TIMER re-enable may be missed if done close to zero event

Description

When using a TIMER in one shot mode, TIMER re-enable may be missed if done close to zero event. The HW update to the timer enable bit will take a single functional clock cycle. For example, if the timer's clock source is 32.768kHz and clock divider of 3, then it will take ~100us to have the enable bit set to 0 properly.

Workaround

Wait 1 functional clock cycle before re-enabling the timer OR the timer can be disabled

first before re-enabling.

Disable the counter with CTRCTL.EN = 0, then re-enable with CTRCTL.EN = 1



TIMER_ERR_06 TIMG Module

Category

Functional

Function

Writing 0 to CLKEN bit does not disable counter

Description

Writing 0 to the Counter Clock Control Register(CCLKCTL) Clock Enable bit(CLKEN)

does not stop the timer.

Workaround

Stop the timer by writing 0 to the Counter Control(CTRCTL) Enable(EN) bit.

TIMER_ERR_07

TIMG Module

Category

Functional

Function

Initial repeat counter has 1 less period than next repeats

Description

When using the timer repeat counter mode, the first repeat will have 1 less count than the subsequent repeats because the following repeat counters will include the transition between 0 and the load value. For example if the TIMx.RCLD = 0x3 then 3 observable zero events would appear on the first repeat counter and 4 observable zero events would appear on the following repeat counter sequences.

Workaround

Set the initial RCLD value to 1 more than the expected RCLD, then in the ISR for the Repeat Counter Zero Event (REPC), set the RCLD to the intended RCLD value.

For example, if intending to have 4 repeats, set the initial RCLD value to RCLD = 0x5, then in the timer ISR for the REPC interrupt, set RCLD = 0x4. Now all timer repeats will have the same number of zero/load events.

UNICOMMI2CC_E

RR 01

UNICOMMI2CC Module

Category

Functional

Function

Polling the I2C BUSY bit might not guarantee that the controller transfer has completed

Description

After setting the BUSRTRUN/FRAME_START bit to initiate an I2C controller transfer, it takes approximately 2 I2C functional clock cycles for the BUSY status to be asserted. If polling for the BUSY bit is used immediately after setting BUSRTRUN/FRAME_START to wait for transfer completion, the BUSY status might be checked before it is set. This problem is more likely to occur with high CLKDIV values (resulting in a slower I2C functional clock) or under higher compiler optimization levels.

Workaround

Add software delay before polling BUSY status. Software delay = 3 x I2C functional clock = 3 x clock_divider x (CPU_CLK / selected clock source frequency) For example, with a



UNICOMMI2CC_E

RR_01 (continued)

UNICOMMI2CC Module

clock_divider of 8, a clock source of 4 MHz(MFCLK), and CPU_CLK of 32 MHz: Software delay = 3 x 8 x (32 MHz / 4 MHz)= 192 CPU cycles

UNICOMMI2CT_ER

R_01 UNICOMMI2CT Module

Category Functional

Function I2C target will keep in IDLE when CTR is written separately

DescriptionI2C target will keep in IDLE in below scenario: 1. I2C uses MFCLK as the clock source. 2.

CLKDIV=0. 3. Set CTR.START, CTR.STOP or CTR.BLEN bits in first register write. 4. Set

CTR.FRM_START in the second register write.

Workaround

When I2C uses MFCLK as the clock source and CLKDIV=0, suggest to set CTR.START,

CTR.STOP, CTR.BLEN or CTR.FRM START bits in one register write.

UNICOMMI2CT_ER

R_02 UNICOMMI2CT Module

Category Functional

Function CPU reads RXFIFO failure when I2C clock much lower than CPU clock

DescriptionIn UNICOMMI2CT RX mode, the RXDONE interrupt flag asserts immediately after the

last bit of the received frame. However, the RXFIFO buffer content updates exhibit a 2-clock-cycle latency relative to RXDONE assertion. If the CPU initiates an RXFIFO read operation more than 2 UNICOMMI2CT clock cycles after RXDONE flag triggering, it may access stale FIFO data, leading to a data integrity violation. This will be a problem

especially when UNICOMMI2CT clock is much lower than CPU clock.

Workaround Add a fix delay before reading the RXFIFO.

UNICOMMI2CT_ER

R_03 UNICOMMI2CT Module

Category Functional

Function TSTART flag gets set before the SR.ADDRMATCH in 7 bit mode

DescriptionOn the UNICOMMI2CT bus, the RIS.TSTART flag is set three bus clock cycles before

the SR.ADDRMATCH status updates. However, if the interval between the assertion of



UNICOMMI2CT ER

R_03 (continued)

UNICOMMI2CT Module

TSTART and the CPU's read operation of ADDRMATCH exceeds two UNICOMMI2CT clock cycles, the CPU may read a stale ADDRMATCH value, potentially causing an error.

Workaround

UNICOMMSPI_ER

R_01 UNICOMMSPI Module

Category Functional

Function SPI underflow event may not generate if read/write to TXFIFO happen at the same time

Description
In UNICOMMSPI-TXFIFO, underflow event will not get generated during a critical window

when the bellow conditions happen together: 1. CPU/DMA write data into TXFIFO 2. SPI peripheral read TXFIFO to send data Not suggest to use underflow event function. User must ensure that the TXFIFO of UNICOMMSPI can never be empty when CPU/DMA

access the TXFIFO.

Workaround No.

UNICOMMUART_E

RR_01 UNICOMMUART Module

Category Functional

Function

Data integrity issues in case glitches are introduced in IrDA mode

DescriptionUNICOMM-UART supports IrDA but has limitations in noisy environments. Due to the lack

of a glitch filter, data integrity issues can occur in IrDA mode when glitches appear on the data line. Since IrDA relies on edge detection logic, these glitches are misinterpreted as valid pulses, leading to unexpected data in the FIFO and issues with LTOUT computation.

Workaround No

UNICOMMUART E

RR_02 UNICOMMUART Module

Category Functional

Function IDLE period detection issue with glitch in IDLELINE mode

DescriptionA glitch during the idle period can corrupt the receiver's idle detection, causing the Rx side

to drop the subsequent address byte. Crucially, this failure mode is timing-dependent: only



UNICOMMUART_E

RR_02 (continued) UNICOMMUART Module

glitches inserted at a specific time relative to the idle period trigger the issue. Not every

glitch within the idle period causes corruption.

Workaround

No

UNICOMMUART_E

RR_03 UNICOMMUART Module

Category

Functional

Function

Data Integrity issues with glitch in Manchester mode

Description

Glitches in the Manchester-encoded data stream corrupt the signal's precise edge timing,

leading to erroneous received data and data integrity issues.

Workaround

Nο

UNICOMMUART E

RR_04

UNICOMMUART Module

Category

Functional

Function

Data will be missed with glitches during break field and/or sync field in LIN Mode

Description

Break Field Scenario (High-Pulse Glitch): During the Break Field period, a negative edge will reset the counter to zero, cause break field detection failure and result in data loss. Sync Field Scenario: A glitch during Sync Field will trigger false LINC0/LINC1 interrupts, reset the counter on Rx-line negative edges, cause sync field validation failure and result

in data loss.

Workaround

No

UNICOMMUART E

RR_05

UNICOMMUART Module

Category

Functional

Function

Glitches lead to LTOUT/RTOUT period computation issues when the line is idle

Description

In the normal UART mode, a glitch during idle line conditions disrupt LTOUT timing by

shifting the LTOUT event 1-2 baud clocks.



UNICOMMUART_E

RR_05 (continued) UNICO

UNICOMMUART Module

Workaround

No

UNICOMMUART_E

RR_06

UNICOMMUART Module

Category

Functional

Function

Inconsistent STOP bit length causing RTOUT/LTOUT period computation issues

Description

On receiver side the function state machine is designed in such a way that the state goes from stop bit to idle at the mid of the stop bit, this causes RTOUT counter to start counting before it should actually have started. This leads to incorrect RTOUT period and RTOUT

interrupt comes earlier than expected.

Workaround

Add compensation with a half stop bit period to the RTOUT counter

UNICOMMUART_E

RR_07

UNICOMMUART Module

Category

Functional

Function

RTS line does not go HIGH if UART is disabled in RS-232 mode

Description

When UART is disabled, the RTS line fails to return to its idle state (HIGH), remaining

stuck at LOW.

Workaround

Use software to enable the internal pull-up resistor and set the RTS line IO to Hiz mode.

UNICOMMUART E

RR_08

UNICOMMUART Module

Category

Functional

Function

LTOUT Interrupt will keep on coming after every time-out expiry

Description

After one LTOUT interrupt comes, the counter restarts and keeps on counting and gives another LTOUT interrupt even without any Rx frame in between. This would lead to continuous LTOUT interrupts at every time out expiry interval. The behavior is not similar to RTOUT as RTOUT interrupt comes only once until a new Rx transaction takes place. This limitation is arising as the same counter is being used for both RTOUT and LTOUT

events.

Workaround

www.ti.com Revision History

UNICOMMUART_E

RR_09 UNICOMMUART Module

Category Functional

FunctionISO-7816 Smartcard Mode can't support 9600 baud rate with lower than 57MHz

UARTCLK

DescriptionTo achieve a 9600 baud rate in ISO-7816 Smartcard Mode, and considering the

limitations below, a UARTCLK frequency exceeding 57 MHz is required. 1. The ISO-7816 standard dictates that 1 bit requires 372 clock cycles. 2. In MSPM0 ISO-7816 mode, the oversampling rate (OVS) is fixed in the UART peripheral at 16x. Here is the minimum

UARTCLK calculation: Required UARTCLK = 9600 * 372 * 16 = 57.139 MHz

Workaround No

UNICOMMUART_E

RR_10 UNICOMMUART Module

Category Functional

Function

LIN Registers are accessible only if CLKDIV is set to /1

Description
In the UNICOMMUART (UART+LIN) variant, LIN register configurations remain valid only

when CLKDIV is set to 1. Any CLKDIV value other than 1 causes these settings to be

discarded.

Workaround No

UNICOMMUART_E

RR_11 UNICOMMUART Module

Category Functional

Function STAT.BUSY bit stays high when UNICOMMUART is disabled and data is available in txfifo

DescriptionSTAT.BUSY bit stays high when UNICOMMUART power is disabled and data is available

in txfifo.

Workaround Reset UNICOMMUART to initialize all the UNICOMMUART registers.

7 Revision History

NOTE: Page numbers for previous revisions may differ from page numbers in the current version.



Revision History www.ti.com

DATE	REVISION	NOTES
November 2025	*	Initial Release

IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, regulatory or other requirements.

These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you fully indemnify TI and its representatives against any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to TI's Terms of Sale, TI's General Quality Guidelines, or other applicable terms available either on ti.com or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products. Unless TI explicitly designates a product as custom or customer-specified, TI products are standard, catalog, general purpose devices.

TI objects to and rejects any additional or different terms you may propose.

Copyright © 2025, Texas Instruments Incorporated

Last updated 10/2025