
How to avoid 5V-tolerant pin being maintained at middle level?

Questions:

How to avoid FT (5V tolerant) pin being maintained at middle level during floating input so as to derive correct input logic value?

Answer:

In floating mode, the 5V tolerant pin still has a pull-up current capability of less than 10 μ A so that the pin may maintain about 2.0V, causing it to be regarded as high level by the pin input logic.

Solutions: the user can add a pull-down resistor outside the pin to avoid the 5V-tolerant pin to maintain middle level. The pull-down resistor values are recommended as follows:

Part number	Recommended
AT32F403	200 k Ω or less
AT32F413	200 k Ω or less
AT32F415	150 k Ω or less

Type: MCU

Applicable products: AT32F403, AT32F413, AT32F415

Main function: GPIO

Minor function: None

Document revision history

Date	Revision	Changes
2022.2.16	2.0.0	Initial release

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