

# RENESAS TECHNICAL UPDATE

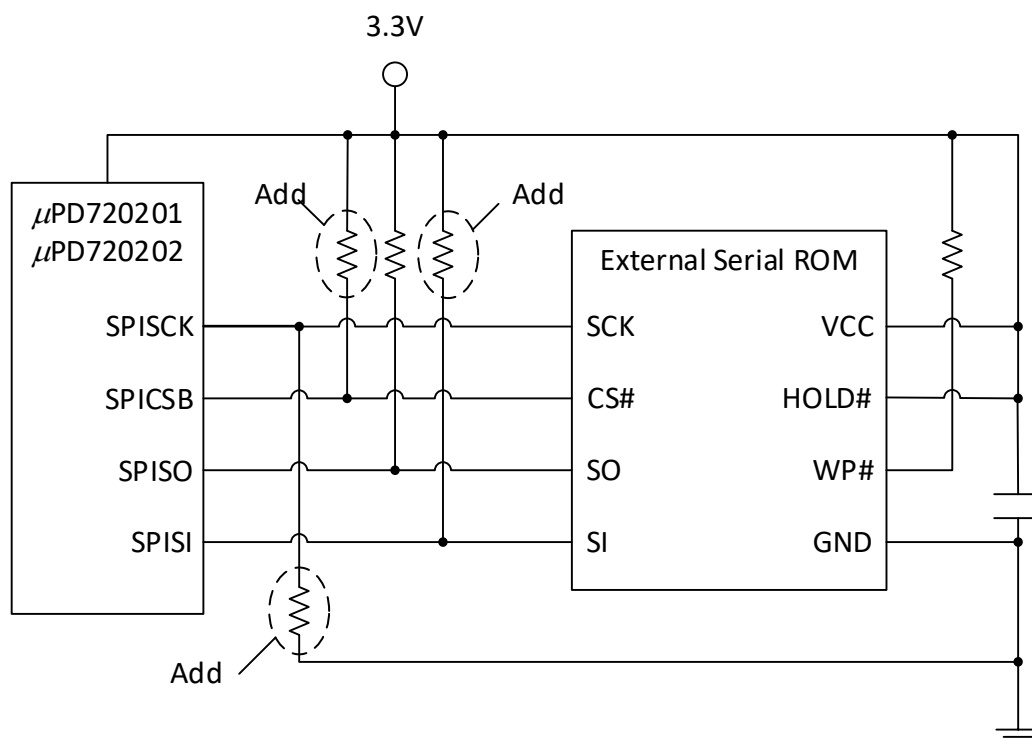
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Product Category	System LSI		Document No.	TN-USB-A0006A/E	Rev.	1.00
Title	μPD720201 External Serial ROM Connection circuit update		Information Category	Technical Notification		
Applicable Product	μPD720201K8-701-BAC-A μPD720201K8-701-BAC-M1-A	Lot No.	Reference Document	μPD720201/μPD720202 Data Sheet (R19DS0047) μPD720201/μPD720202 User's Manual: Hardware (R19UH0078)		

This documentation describes the notification to revise the recommended circuit with an external serial ROM in μPD720201/μPD720202 User's Manual: Hardware (Doc# R19UH0078, revision 8.03 or earlier revision). Renesas will revise the recommended circuit with an external serial ROM.

## 1. New recommended circuit

The new recommended circuit is as the following figure.



- A. Adds the pulldown resistor on SPISCK
- B. Adds the pullup resistor on SPICSB
- C. Adds the pullup resistor on SPISI

## 2. Background of new recommended circuit

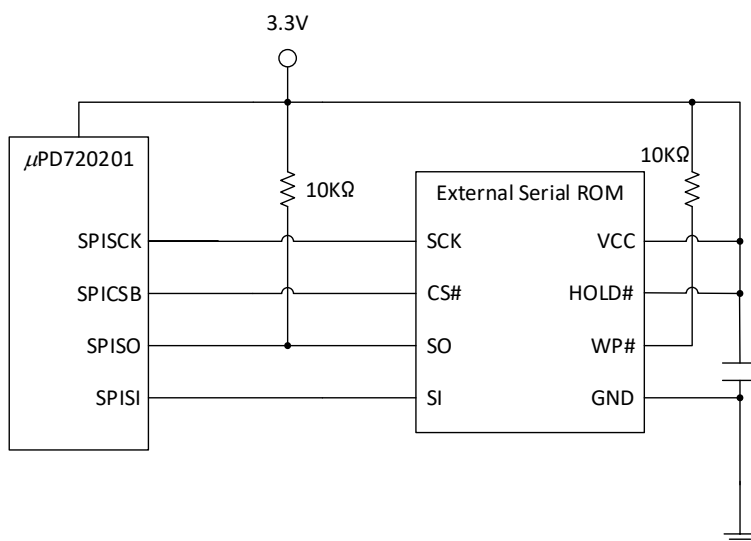
Renesas was informed that μPD720201 SPICSB behavior does not meet the external serial ROM datasheet specification with the following Figure 1 when μPD720201 and external serial ROM are powered.

According to some of external serial ROM datasheet, CS# pin basically needs to be ramped up/(down<sup>Note1</sup>) with VCC

at the same time. On the other hand,  $\mu$ PD720201/ $\mu$ PD720202 SPICSB drives low to high when PERSTB pin is deasserted (i.e. PERSTB=high) i.e. SPICSB=Low during external serial ROM VCC power up.

Note1: Macronix and Winbond obviously require CS# needs to track VCC voltage for both VCC power up and down.

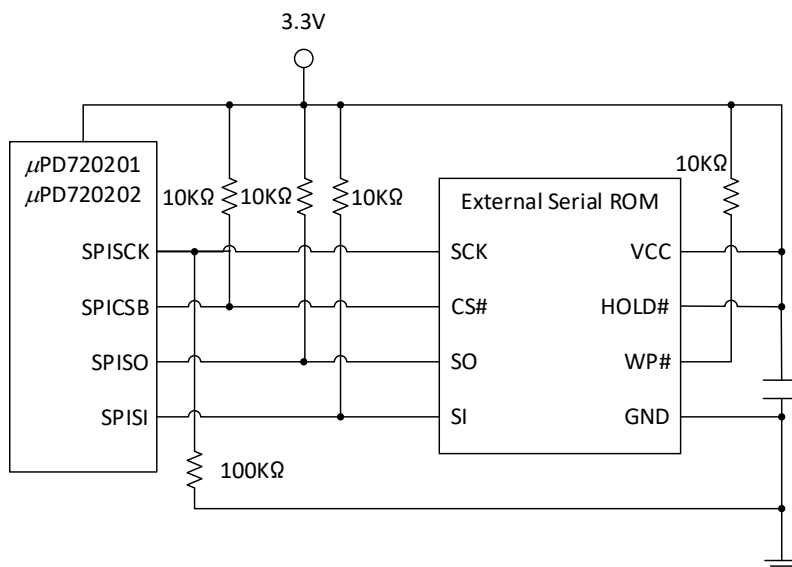
Figure 1. original  $\mu$ PD720201 external serial ROM connection circuit



### 3. ECN in $\mu$ PD720201/ $\mu$ PD720202 User's Manual: Hardware (R19UH0078)

Will update the external serial ROM connection figures in  $\mu$ PD720201/ $\mu$ PD720202 User's Manual: Hardware (R19UH0078) as the following Figure 2 which is same as [TN-USB-A0004A/E](#) in order to meet serial ROM datasheet spec.

Figure 2. new  $\mu$ PD720201 external serial ROM connection circuit



**Note:** The 3.3 V that pulls SPICSB/SPISO/SPISI must be the same as the 3.3 V supplied to the  $\mu$ PD720201/ $\mu$ PD720202