CP2108 Errata

This document contains information on the errata of CP2108. The latest available revision of this device is revision B02. The B03 revision will be available in 1H of 2017.

For errata on older revisions, please refer to the errata history section for the device. The device revision is typically the first letter on the line immediately under the part number on the package marking. This is typically the second or third line.

Errata effective date: February 15th, 2017.

1. Active Errata Summary

These tables lists all known errata for the CP2108 and all unresolved errata in revision B02 of the CP2108.

Table 1.1. Errata History Overview

Designator	Title/Problem	Exists on Revision:		
		B01	B02	B03
CP2108_E101	GET_LINE_CTRL/SET_LINE_CTRL Commands Can Cause Stalls	X	X	—
CP2108_E102	Clock Output with Divider of 0x01	X	X	—
CP2108_E103	Disabling Hardware Flow Control Does Not Work	—	X	—
CP2108_E104	RS485 DE Signal Not Constantly Asserted	X	X	—
CP2108_E105	CTS Embedded Events Not Sent Immediately	X	X	—
CP2108_E106	Device Stops Responding	X	—	—

Table 1.2. Active Errata Status Summary

Errata #	Designator	Title/Problem	Workaround Exists	Affected Revision	Resolution
1	CP2108_E101	GET_LINE_CTRL/SET_LINE_CTRL Commands Can Cause Stalls	No	B02	B03
2	CP2108_E102	Clock Output with Divider of 0x01	No	B02	B03
3	CP2108_E103	Disabling Hardware Flow Control Does Not Work	No	B02	B03
4	CP2108_E104	RS485 DE Signal Not Constantly Asserted	No	B02	B03
5	CP2108_E105	CTS Embedded Events Not Sent Immediately	No	B02	B03

2. Detailed Errata Descriptions

2.1 CP2108_E101 – GET_LINE_CTRL/SET_LINE_CTRL Commands Can Cause Stalls

Description of Errata
Using the GET_LINE_CTRL and SET_LINE_CTRL commands to change the COM port settings (number of stop bits, parity, and word length) can cause the device to stall due to an invalid command. The driver automatically repeats the command upon receipt of the stall until the device returns the expected data or accepts the updated COM port settings.
Affected Conditions / Impacts
A device may stall the GET_LINE_CTRL and SET_LINE_CTRL commands, but this should not affect normal operation of the device.
Workaround
There is no workaround for this issue.
Resolution
This issue is resolved in revision B03 devices.

2.2 CP2108_E102 – Clock Output with Divider of 0x01

Description of Errata
The formula for calculating GPIO Clock Outputs on B01 and B02 devices is documented as: Clock Frequency Output = $\frac{40\ \text{MHz}}{2 \times \text{ClockDivider}}$ The valid range of the divider is 0 to 255. When a value of 0 is used as the divider, this results in an actual divider of 256. Attempting to use 0x01 as the clock divider value should result in a 20 MHz output waveform. However, it instead creates a ~25 ns positive pulse at ~157 kHz. All other values of the divider operate correctly (0x02 correctly outputs 10 MHz, etc.). On B03 revision devices, the GPIO Clock Output equation updates to: Clock Frequency Output = $\frac{40\ \text{MHz}}{\text{ClockDivider}}$ The valid range of the divider is 0 and 2-255. A value of 1 is invalid, and a value of 0 gives an output frequency of ~158 kHz.
Affected Conditions / Impacts
Systems attempting to set the clock output to 20 MHz will be unable to do so.
Workaround
There is no workaround for this issue.
Resolution
This issue is resolved in revision B03 devices.

2.3 CP2108_E103 – Disabling Hardware Flow Control Does Not Work

Description of Errata
The issue occurs after the following series of events: 1. Set a COM port to use hardware flow control. 2. Send data to that that port. 3. Disable hardware flow control for that COM port. 4. Set CTS high (not clear to send). After these events, the CP2108 will not transmit any data until it is reset.
Affected Conditions / Impacts
Systems enabling and disabling hardware flow control may not see proper data transmission.
Workaround
Resetting the device after it enters this state will enable proper communication.
Resolution
This issue is resolved in revision B03 devices.

2.4 CP2108_E104 – RS485 DE Signal Not Constantly Asserted

Description of Errata
When using COM port 0 and COM port 1 or COM port 2 and COM port 3 both in RS485 mode, the second COM port's (1 or 3) DE signal will be deasserted or asserted at the same time as the main COM port's (0 or 2) DE signal.
Affected Conditions / Impacts
Systems wanting to use multiple channels in RS485 mode will see the COM1 or COM3 DE signal change at the same time as COM0 and COM2, respectively.
Workaround
There is no workaround for this issue.
Resolution
This issue is resolved in revision B03 devices.

2.5 CP2108_E105 – CTS Embedded Events Not Sent Immediately

Description of Errata
The embedded events for CTS status changes are not sent immediately when they occur, unlike other events that occur like parity error or line break). Instead, they are queued and transmitted when the end device sends data to the host.
Affected Conditions / Impacts
Systems expecting CTS status change events to be immediately sent will not receive them until the end device sends data to the host.
Workaround
There is no workaround for this issue.
Resolution
This issue is resolved in revision B03 devices.

3. Errata History

This section contains the errata history for CP2108 devices. The B03 revision will be available in 1H of 2017.

For errata on latest revision, please refer to the beginning of this document. The device data sheet explains how to identify chip revision, either from package marking or electronically.

3.1 Errata History Summary

This tables lists all resolved errata for the CP2108.

Table 3.1. Errata History Status Summary

Errata #	Designator	Title/Problem	Workaround Exists	Affected Revision	Resolution
1	CP2108_E106	Device Stops Responding	No	B01	B02

3.2 Detailed Errata Descriptions

3.2.1 CP2108_E106 – Device Stops Responding

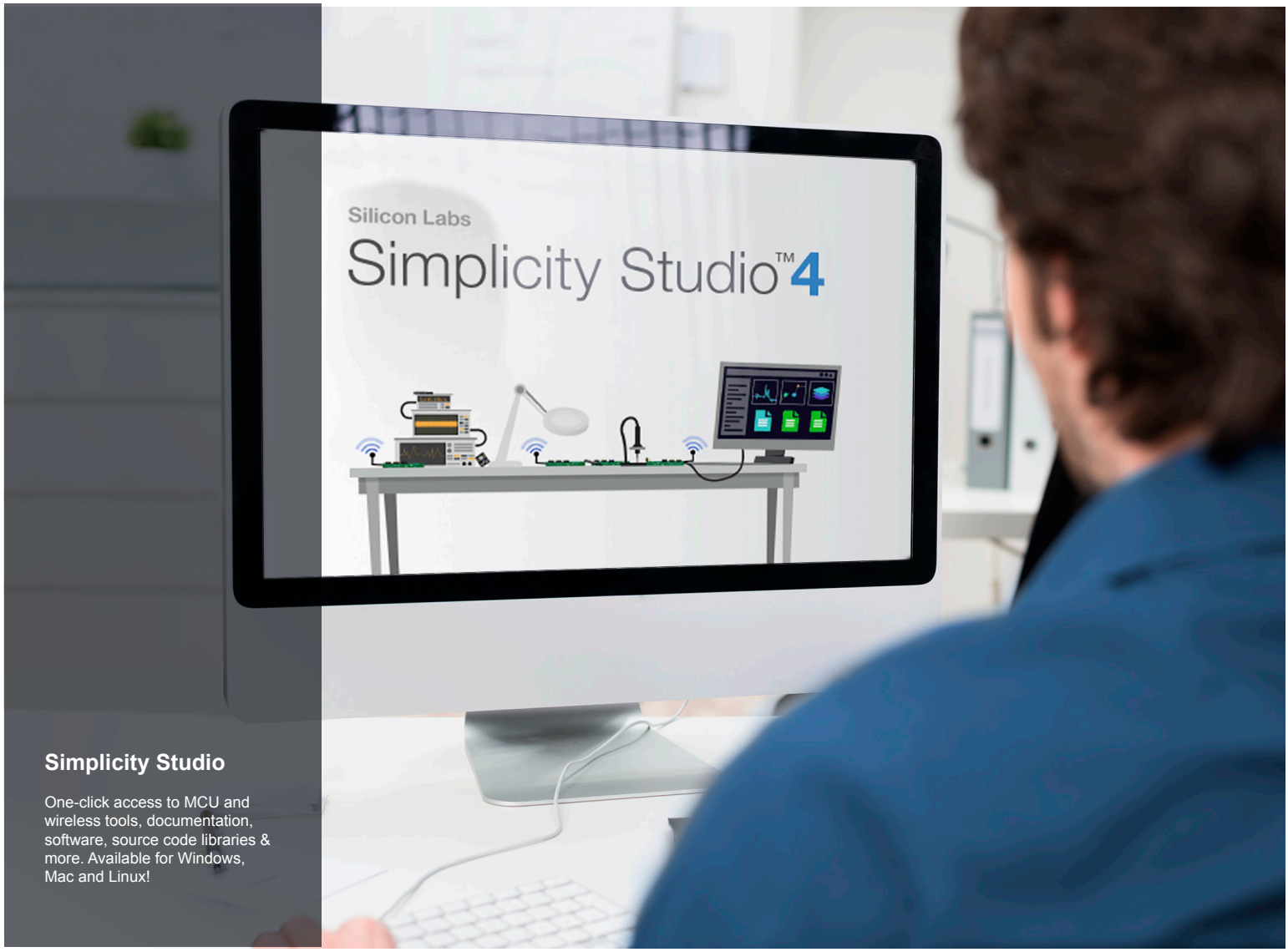
Description of Errata
The B01 revision devices have a potential issue if data is in the Transmit FIFO and the host-side application closes and reopens the handle to the device. When the application reopens the handle, the device may no longer respond to USB commands and UART communication may not proceed. The device is recoverable with a power-on reset, after which the device behaves normally. The B02 revision fixes the issue described above and this ordering part number is recommended for all new designs.
Affected Conditions / Impacts
Systems opening and closing the handle to the device may periodically fail to respond.
Workaround
There is no workaround for this issue.
Resolution
This issue is resolved in revision B02 devices.

4. Revision History

4.1 Revision 0.1

February 15th, 2017

Initial release.



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