Z02215

SINGLE-CHIP MODEM ERRATA

UP002402-1001

INTRODUCTION

This Product Update provides errata information for the Z02215 Single-Chip Modem.

- Problem #1 - Autobaud Detection
- Problem #2 - Parallel Phone Off-Hook and Parallel Phone Pick-Up Detection
- Problem #3 - Ring Indicator (RI)
- Problem #4 - Parallel Phone Pick-Up Detection

Z02215 FIRMWARE RELEASES

The following table lists the firmware versions identified in this errata.

Firmware Version	ROM Code
1.2, ox50	4508
2.0b, 0x51	50A5

IDENTIFIED Z02215 PROBLEMS

Note: Initial test vector coverage did not include UART testing. The testing has been fixed and die after date code 0136 SL UART has been fully tested.

Problem #1 - Autobaud Detection

Versions: Z02215 ROM Code 4508

Updated: July 17, 2000

Problem: Some character sequences other than AT can cause the automatic detection of speed and parity of characters from the terminal to fail, preventing modem command input from the terminal. This is expected to be a very rare occurrence in embedded environments where the communication between the Z02215 and its host processor are carefully controlled.

Solution: If the Z02215 fails to respond to a modem AT command, reset the Z02215.

Problem #2 - Parallel Phone Off-Hook and Parallel Phone Pick-Up Detection

Versions: Z02215 ROM Code 4508

Updated: July 17, 2000

Problem: Off-hook and Pick-up detection do not work properly.

Solution: None

Problem #3 - Ring Indicator (RI)

Versions: Z02215 ROM Code 50A5

Updated: July 17, 2000

Problem: After reset, the Z02215 $\overline{RI}$ is set to 0V (active). This is incorrect. This may cause a host processor monitoring the $\overline{RI}$ to not detect the first RING signal.

Solution: The state of the $\overline{RI}$ signal is corrected by the Z02215 when the telephone is placed on-hook after a data connection, or after the first RING is received from the telephone line. To detect a RING using the $\overline{RI}$ signal, detect the rising edge (that is, detect the end of the RING when $\overline{RI}$ switches from active to inactive).

Problem #4 - Parallel Phone Pick-Up Detection

Versions: Z02215 ROM Code 50A5

Updated: July 17, 2000

Problem: When pick-up detection is enabled, the Z02215 will detect itself taking the telephone off-hook to dial or answer a call as a parallel extension being taken off-hook. This results in the Z02215 immediately placing the telephone line back on-hook.

Solution: A software solution for outgoing calls is to dial:

ATH1, DT1234567

“H1” takes the telephone off-hook, “,” causes the Z02215 to wait the time in S-Register S8 (default 2 seconds), and “DT1234567” causes the Z02215 to tone dial the number 1234567. Use S-Register S8 to increase or decrease the delay before dialing.

Similarly, to answer the telephone, use

ATH1,A

Alternatively, design a pick-up detection circuit that does not respond for a sufficient period of time after the Z02215 has taken the telephone off-hook.

Problem #5 - Unformatted Caller ID

Versions: Z02215 ROM Codes 4508 & 50A5

Updated: October 03, 2001

Problem: When unformatted caller ID option is used (AT#CID=0), the final octet of the caller ID packet (the checksum octet) is not sent to the host.

Solution: No solution is possible. All data octets are passed onto the host as received but without the checksum octet it is not possible to ensure the accuracy of the data packet. Use the formatted option if possible.

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