

9: Emulator Automation

To automate testing of AT commands in the AT Command Emulator using AutoHotkey, reducing manual effort and ensuring consistent validation.

Automation Flow

Step	Command Sent	Expected Response	Observed Output	Pass/Fail
1	AT	OK	OK	Pass
2	AT+CPIN?	+CPIN: READY	+CPIN: "READY"	Pass
3	AT+CSQ	+CSQ: <rss>,<ber>	+CSQ: 21,0	Pass
4	AT+COPS?	+COPS: <mode>,<format>,<oper>	ERROR	Fail

Automation Steps

- Installed AutoHotkey and created AT_Automation.ahk.
- Configured script to activate emulator window, send each AT command with delays, and display 'Automation Complete!' message.
- Ran emulator and automation script simultaneously.
- Captured command execution and responses.

Analysis

Commands were sent in the correct sequence. The emulator correctly responded to AT, AT+CPIN?, and AT+CSQ. AT+COPS? returned ERROR because no network operator was configured in the emulator.

Conclusion

Automation successfully replicates manual testing, reducing tester input and ensuring repeatable results. Further improvement: configure network operator in emulator to validate AT+COPS?.