# Declaration of GPS week rollover issue

Dear customer,
Thank you very much for choosing SIMCom modules

**We:**
**Shanghai SIMCom Wireless Solutions Ltd.**

Declare that there is no GPS week rollover issue (refer to **Appendix**) on the modules listed below until the date marked.

| Module No | FW | When the week rollover issue would occur |
|---|---|---|
| SIM5320 Series | All FW versions | 2019/11/3 |
| SIM5360 Series | All FW versions | |
| SIM7100 Series | All FW versions | |
| SIM68R | B03V00SIM68R11,B03V10SIM68R11 | 2022/10/29 |
| | B03V11SIM68R_11/96 ~ B03V23SIM68R_11/96 | |
| SIM68RB | B03V60SIM68RB 11/96,B03V61SIM68RB96 | |
| SIM68V | B03V00SIM68V_11, B03V10SIM68V_11,B03V21SIM68V_38 | |
| | B03V11SIM68V_11/96 ~ B03V23SIM68V_11/96 | |
| SIM68VB | B03V60SIM68VB11/96,B03V61SIM68VB11 | |
| SIM968 | B03V11SIM968_11,B03V20SIM968_11 | |
| SIM33ELA | B03V20SIM33ELA1/9 ~ B05V83SIM33ELA1/9 | 2025/8/16 |
| SIM33EAU | B05V82SIM33EAU1/9 | |
| SIM68E | B03V60SIM68E_96 ~ B05V84SIM68E_96 | |
| | B04V62SIM68E_11 ~ B05V84SIM68E_11 | |
| | B04V64SIM68E3D9 ~ B05V81SIM68E3D9 | |
| SIM68M | B03V20SIM68M_11/96 ~ B05V81SIM68M_11/96 | |
| SIM68MB | B03V62SIM68MB11/96 ~ B05V80SIM68MB11/96 | |
| SIM68R | B03V24SIM68R_11/96 ~ B05V80SIM68R_11/96 | |
| SIM68RB | B03V62SIM68RB1A/9A | |
| | B03V62SIM68RB11/96 ~ B04V61SIM68RB11/96 | |
| SIM68V | B04V64SIM68V48P | |
| | B04V62SIM68V_11/96 ~ B05V85SIM68V_11/96 | |
| SIM68VB | B03V62SIM68VB_11/96 ~ B04V60SIM68VB_11/96 | |
| | B04V61SIM68VBD9 ~ B05V81SIM68VBD9 | |
| | B05V82SIM68VB9B | |

| | | |
|---|---|---|
| SIM968 | B03V21SIM968_96,B04V60SIM968_11/96,<br>B05V20SIM968_J1,B05V81SIM968_11 | |
| | B04V60SIM968B11/96 ~ B04V61SIM968B11/96 | |
| SIM808 | All FW versions | 2030/8/10 |
| SIM28ML | All FW versions | |
| SIM28ML-H | All FW versions | |
| SIM28M | All FW versions | |
| SIM28 | All FW versions | |
| SIM928A | All FW versions | |
| SIM39EAR | All FW versions | |
| SIM39EAU | All FW versions | |
| SIM39EA | B02V32SIM39EA48,B02V60SIM39EA11/96/19 | |
| | B02V50SIM39EA19 ~ B02V51SIM39EA19 | |
| | B02V31SIM39EA11 ~ B02V32SIM39EA11 | |
| | B02V10SIM39EA96 ~ B02V51SIM39EA96 | |
| SIM7500 Series | All FW versions | 2032/12/12 |
| SIM7600 Series | All FW versions | |
| SIM7800 Series | All FW versions | |
| SIM7000 Series | All FW versions | |
| SIM868 | All FW versions | 2034/8/12 |
| SIM868E | All FW versions | |
| SIM68E | B06V11SIM68E_11/96 ~ B06V14SIM68E_11/96 | |
| SIM68M | B05V83SIM68M_11 | |
| | B06V11SIM68M_11/96 ~ B06V14SIM68M_11/96 | |
| SIM68MB | B06V10SIM68MB11/96 ~ B06V11SIM68MB11/96 | |
| SIM68R | B06V10SIM68R_11/96 ~ B06V11SIM68R_11/96 | |
| SIM68RB | B05V10SIM68RB11/96 ~ B06V11SIM68RB11/96 | |
| SIM68V | B06V10SIM68V_11/96 ~ B06V11SIM68V_11/96 | |
| SIM68VB | B06V10SIM68VB11/96 ~ B06V11SIM68VB11/96 | |
| SIM33ELA | B06V10SIM33ELA1/9 ~ B06V11SIM33ELA1/9 | |
| SIM33EAU | B06V10SIM33EAU1/9 ~ B06V11SIM33EAU1/9 | |
| SIM39EA | B02V60SIM39EA11/96/19 | 2035/9/8 |

# Appendix

What is GPS week rollover issue?

The Week Rollover Problem is a known issue caused by the way that GPS used to handle the week element of the data that forms an essential part of the navigation signal. GPS used a 10 bit field to encode the week number in each GPS time message, which means that a maximum of 1,024 weeks (19.7 years), could be handled. Each of these periods is known in GPS terms as an “epoch”.

At the end of each epoch of 1,024 weeks, the receiver resets the week number to zero and starts counting again.

What will happen after GPS week rolls over?

It won't affect the receiver's ability to navigate and/or calculate precise time from the day level down to the microsecond level. But it will create week, month and year timestamps that are wildly wrong, which could seriously impact any systems and applications that rely on GPS data at that level.

Solutions for GPS week rolls over.

It is no need to do further actions for the customers who do not use the timestamp from GPS.

For the customers who use the timestamp from GPS. The following solutions are recommended:

1. Time Synchronization via CLTS/NITZ (Network Identity and Time Zone).
2. Time Synchronization via NTP Server.
3. Update to the new firmware (But, for SIM5320/SIM5360/SIM7100, the new FW version is still under developing)