

Hello

Our records show that you have ordered one or more Trimble modules or system level products. With this, we want to bring to your attention an upcoming event that could affect the performance of your GPS devices.

The Problem

On April 6, 2019 there will be a GPS rollover that could affect all GPS / Timing units in the world, regardless of manufacturer.

The Background

In addition to providing an accurate location information, the Global Positioning System provides accurate timing information to many critical systems – power grid, communications, financial markets, emergency services, and industrial control to name a few. It also includes the ability to transmit the proper date and time to a receiver by supplying the receiver with the current week and the current number of seconds into the week. This allows the receiver to translate the date and time into a more typical format – day, month, year, and time of day.

However, the field from the Satellite system that contains the week number is a 10-bit binary number. This limits the range of the week number to 0 – 1023, or 1024 total weeks.

GPS week zero started January 6, 1980. The 1024 weeks counter ran out and rolled over on August 21, 1999. The week counter then reset to zero, and it has been recounting ever since. The next time the counter will reach week 1023 and rollover to zero is on April 6, 2019.

April 6, 2019 is the 1024th week and unless a GPS module or application has already accounted for this, the **date may not report accurately**. If the application does not use the date or if there are other sources for the date outside of the GPS module, you may not be affected.

Which GPS Units are affected?

Below is a partial list of Trimble GPS modules with part numbers and names. The units that have the potential to be affected by the April 6 WNRO Event have a star (*) beside it. Not all products will have the same WNRO date. Even if your product is not affected by the imminent WNRO Event, all products have a WNRO date. Please use the below links to review the bulletin of your particular product for full information.

Note: Position data (lat, lon), velocity and PPS will continue as normal and will not be effected. Only the week number will be affected. The actual time should not be affected. The Week Number problem just affects the calculated date. Therefore, the roll over event should only affect the UTC date. The position output will not be effected.

Product Number	Product Description	Link Bulletin (If link doesn't work, please copy and paste the url)	Potentially Affected by April 6, 2019 WNRO
46240-00	Lassen SQ	https://trimble.box.com/s/h9c5l6jzb851ybjpg7jjk77xk8mpo1d	*
46240-05	Lassen SQ	https://trimble.box.com/s/h9c5l6jzb851ybjpg7jjk77xk8mpo1d	*
46240-20	Lassen iQ	https://trimble.box.com/s/h9c5l6jzb851ybjpg7jjk77xk8mpo1d	
46240-25	Lassen iQ	https://trimble.box.com/s/h9c5l6jzb851ybjpg7jjk77xk8mpo1d	
38116-20	Lassen SK8 II	https://trimble.box.com/s/digt04yjixvahemuphuarktnqjaf623h	*
38116-25	Lassen SK8 II	https://trimble.box.com/s/digt04yjixvahemuphuarktnqjaf623h	
39263-00	Lassen LP	https://trimble.box.com/s/digt04yjixvahemuphuarktnqjaf623h	*
39263-10	Lassen LP	https://trimble.box.com/s/digt04yjixvahemuphuarktnqjaf623h	
39263-15	Lassen LP	https://trimble.box.com/s/digt04yjixvahemuphuarktnqjaf623h	
36916-00	Ace III	https://trimble.box.com/s/digt04yjixvahemuphuarktnqjaf623h	
38223-61	Thunderbolt	https://trimble.box.com/s/digt04yjixvahemuphuarktnqjaf623h	*
39448-61	Thunderbolt	https://trimble.box.com/s/digt04yjixvahemuphuarktnqjaf623h	*
48050-61	Thunderbolt II	https://trimble.box.com/s/digt04yjixvahemuphuarktnqjaf623h	*
58048-00	Copernicus	https://trimble.box.com/s/zxrmywszlew630dtilyqvfqk8g68nk	*
58048-10	Copernicus	https://trimble.box.com/s/zxrmywszlew630dtilyqvfqk8g68nk	*
58048-20	Copernicus	https://trimble.box.com/s/zxrmywszlew630dtilyqvfqk8g68nk	*
58048-30	Copernicus	https://trimble.box.com/s/zxrmywszlew630dtilyqvfqk8g68nk	*
63530-00	Copernicus II	https://trimble.box.com/s/zxrmywszlew630dtilyqvfqk8g68nk	*
63530-10	Copernicus II	https://trimble.box.com/s/zxrmywszlew630dtilyqvfqk8g68nk	*
63530-50	Copernicus II	https://trimble.box.com/s/zxrmywszlew630dtilyqvfqk8g68nk	*
67415-00	Copernicus IIA	https://trimble.box.com/s/zxrmywszlew630dtilyqvfqk8g68nk	*
68674-00	Condor C1011	https://trimble.box.com/s/xj0m2ad9sspgf2il6qs4wo60fo2241nl	*
68674-05	Condor C1011	https://trimble.box.com/s/xj0m2ad9sspgf2il6qs4wo60fo2241nl	*
68674-10	Condor C1011	https://trimble.box.com/s/xj0m2ad9sspgf2il6qs4wo60fo2241nl	*
68676-10	Condor C1216	https://trimble.box.com/s/xj0m2ad9sspgf2il6qs4wo60fo2241nl	*
68676-20	Condor C1216	https://trimble.box.com/s/xj0m2ad9sspgf2il6qs4wo60fo2241nl	*
68675-00	Condor C1722	https://trimble.box.com/s/xj0m2ad9sspgf2il6qs4wo60fo2241nl	*
67650-10	Condor C1919A	https://trimble.box.com/s/xj0m2ad9sspgf2il6qs4wo60fo2241nl	*
67650-20	Condor C1919C	https://trimble.box.com/s/xj0m2ad9sspgf2il6qs4wo60fo2241nl	*
70896-00	Condor C2626	https://trimble.box.com/s/xj0m2ad9sspgf2il6qs4wo60fo2241nl	*
68677-05	Silvana with C1919A	https://trimble.box.com/s/xj0m2ad9sspgf2il6qs4wo60fo2241nl	*
68677-55	Anapala with C1919A	https://trimble.box.com/s/xj0m2ad9sspgf2il6qs4wo60fo2241nl	*
80300-07	TM3000	https://trimble.box.com/s/xj0m2ad9sspgf2il6qs4wo60fo2241nl	*
80300-08	TM3000	https://trimble.box.com/s/xj0m2ad9sspgf2il6qs4wo60fo2241nl	*
80300-28	TM3000	https://trimble.box.com/s/xj0m2ad9sspgf2il6qs4wo60fo2241nl	*
80300-77	TM3000	https://trimble.box.com/s/xj0m2ad9sspgf2il6qs4wo60fo2241nl	*
80300-78	TM3000	https://trimble.box.com/s/xj0m2ad9sspgf2il6qs4wo60fo2241nl	*
52664-05	Resolution T	https://trimble.box.com/s/lp6267iqvdu8xwv43p55irf74a70u608	
52664-15	Resolution T	https://trimble.box.com/s/lp6267iqvdu8xwv43p55irf74a70u608	

66266-00	Res SMT	https://trimble.box.com/s/4m02hjipvmlmobybk1s1vomb2veffhet	
66266-05	Res SMT	https://trimble.box.com/s/4m02hjipvmlmobybk1s1vomb2veffhet	
77766-00	ICM SMT	https://trimble.box.com/s/4m02hjipvmlmobybk1s1vomb2veffhet	
99899-00	Res SMTx	https://trimble.box.com/s/4m02hjipvmlmobybk1s1vomb2veffhet	
39091-00	Acutime 2000	https://trimble.box.com/s/klu9i67gusee9vatj3zqowsqkpstyqy	
39091-20	Acutime 2000	https://trimble.box.com/s/klu9i67gusee9vatj3zqowsqkpstyqy	
55238-00	Acutime Gold	https://trimble.box.com/s/u4snrollc42thg0os042jjj54zxbvugn	
97975-05	Res SMT 360	https://trimble.box.com/s/pvy8tgxx2dojk7cwnhwi3urwdoq0es8r	
96975-00	ICM 360	https://trimble.box.com/s/pvy8tgxx2dojk7cwnhwi3urwdoq0es8r	
106406-00/05	Acutime 360	https://trimble.box.com/s/pvy8tgxx2dojk7cwnhwi3urwdoq0es8r	
89999-00	Res GG	https://trimble.box.com/s/pvy8tgxx2dojk7cwnhwi3urwdoq0es8r	
92626-00/05	Acutime GG	https://trimble.box.com/s/pvy8tgxx2dojk7cwnhwi3urwdoq0es8r	
95959-00	Mini T GG	https://trimble.box.com/s/pvy8tgxx2dojk7cwnhwi3urwdoq0es8r	
60333-30	Thunderbolt E	https://trimble.box.com/s/pvy8tgxx2dojk7cwnhwi3urwdoq0es8r	
60333-50	Thunderbolt E	https://trimble.box.com/s/pvy8tgxx2dojk7cwnhwi3urwdoq0es8r	

How to Fix?

Please review the bulletin for the particular module that you use. For some devices, there is a fw upgrade that will allow your device to continue normal operation beyond the WNRO date. Most Condor family devices have fw updates available to download. Unfortunately, some modules will not have a fw update available

In lieu of a fw update to the GPS device itself, the customer may wish to update their fw on their end product to accommodate for the week number change from the GPS module. Additionally if the end product is connected over the air to a backend....the fw on the backend application can be modified to accommodate for the week number change.

Should you wish to change your host fw on your device or backend to detect and correct the date.....sample source code and instructions can be found here.

[CondorTimeConversion2.zip \(open link\)](#)

Additional Resources

For Trimble statement on WNRO please see the Trimble GPS Week Number Rollover (WNRO) Resource Center

<https://www.trimble.com/wnro/>