

This guide covers the activation and re-activation of a TerraStar-C PRO subscription on NovAtel OEM7 receivers.

From firmware 7.09.06 onwards NovAtel uses a new **dispatch message** system for correction service subscriptions. The activation signal broadcast by NovAtel carries **both** the legacy activation message and the new dispatch message, so a single resend serves every firmware version. What changes is what the receiver does with it:

- Firmware **older than 7.09.06** – the receiver activates immediately. No reboot needed.
- Firmware **7.09.06, 7.10.01, 7.10.02 and later** – the receiver stores the dispatch message but does **not** activate until it is rebooted.

For more information refer to APN-061, APN-087 ([TerraStar on OEM7](#)) and the [OEM7 Documentation Portal](#).

After ensuring the antenna is positioned outside with a clear view of the sky from horizon to horizon, establish communication to the receiver using NovAtel Application Suite or a remote terminal program.

Step 1: LOG VERSION – check the model and the firmware

Use the [VERSION](#) log to verify that the receiver's software model is PPP (Precise Point Positioning) capable. The [MODELFEATURES](#) log states the features available for the current loaded model. In OEM7 the fourth character of the model must be an "R" or "P" for TerraStar-C PRO capability.

The same log also gives the firmware version, which determines the activation path used in the rest of this guide:

```
LOG VERSION
```

```
<VERSION COM1 0 73.0 FINESTEERING 2082 173571.562 02044000 3681 15833
< 9
< GPSCARD "DDNRNNTBN" "BMHR18210047D" "OEM7700-1.01"
  "0A7CR0906RN0000" "0M7BR0100RB0000" "2026/Mar/24" "08:21:01"
```

In the example above the 4th character of the model is "R" (PPP capable) and the firmware is 7.09.06 (0906).

Which path applies to my receiver?

Firmware 7.09.06 / 7.10.01 / 7.10.02 and later → dispatch firmware. Step 5 is mandatory (reboot required).

Firmware earlier than 7.09.06 → legacy behaviour. Skip Step 5; the subscription activates by itself once received. A reset is still recommended so the receiver applies the optimal channel configuration (SMCC).

Step 2: Enable L-Band tracking

By default the receiver will not automatically track TerraStar satellites. To enable L-Band tracking of a TerraStar geostationary satellite, use the [ASSIGNLBANDBEAM](#) command:

```
ASSIGNLBANDBEAM AUTO
```

Step 3: Verify L-Band tracking

To confirm that the receiver is tracking an L-Band signal, use the [LBANDTRACKSTAT](#) log:

```
LOG LBANDTRACKSTAT
```

The output would resemble:

```
<LBANDTRACKSTAT COM1 0 70.0 FINESTEERING 2082 173597.000 02044000 29e3 15833
```

```
< 5
< "98W" 1545865000 1200 974c 00c2 0 -210.932 41.166 3.4300 491.006
< "A0RW" 1545845000 1200 974c 00c2 0 -217.826 44.577 4.0725 491.669
< "POR" 1545905000 1200 974c 00c2 0 -164.045 35.910 1.8260 493.251
```

A tracking status of "00c2" indicates the receiver is tracking and locked onto the signal. Do not request the activation until you see 00c2 – the signal must be good and stable for the message to be received.

Step 4: Request the activation / re-activation

The activation signal is broadcast over the TerraStar L-Band satellites. If the receiver missed the original activation, or the subscription was renewed, or the firmware has just been upgraded, the signal has to be resent. Use one of the two options below:

Option A – Ask Waldytech or NovAtel Support to resend

Send an e-mail with the subject "**new activation**" and the **PSN** of the unit to be activated, to either address below. This is the standard route and requires nothing from your side except a receiver that is powered on and tracking L-Band (Step 3).

- Waldytech: office@waldytech.com
- NovAtel Support: support.novatel@hexagon.com

Option B – Self-service resend from NovAtel Application Suite (NAS)

From NAS version 2.3.0 onwards you can resend the subscription yourself while connected to the receiver. See [TerraStar subscription recovery \(FW 7.09.06 and later\)](#).

- Connect to the receiver in NovAtel Application Suite (the PC needs an Internet connection).
- Open **Device > Details > Subscription Information**.
- Click **Subscription Resend**. The message *Subscription successfully resent* confirms the request was accepted.

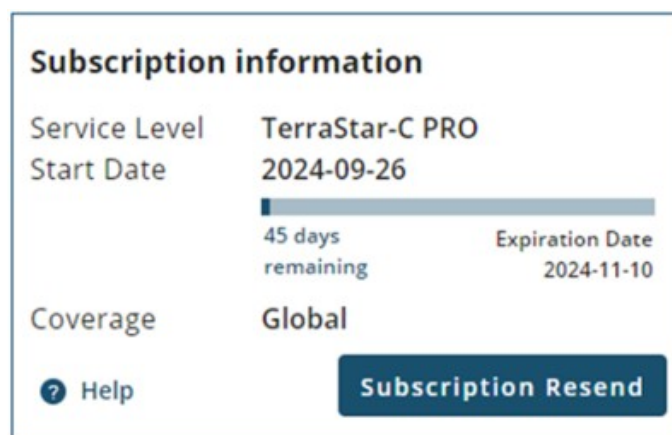


Figure 1: The Subscription Information tile in NovAtel Application Suite, with the Subscription Resend button

The tile also shows the Service Level, the Start Date with the days remaining and the Expiration Date, and the Coverage (Regional or Global). The Subscription Resend button is disabled when the receiver has no Internet access.

Note: the resend is limited to 3 requests per receiver PSN; after that a PSN Resend Limit Reached message is displayed and you should contact Waldytech or NovAtel Support.

Step 5: Confirm the dispatch message, then reboot (FW 7.09.06 and later)

Allow a few minutes for the message to reach the receiver over L-Band, then send the [DISPATCHMESSAGES](#) log:

LOG DISPATCHMESSAGES

The dispatch message has been received when the SPLIT entry changes – the sequence number increases by 1, and the date shown is the date the message was installed on the receiver:

```
<DISPATCHMESSAGES USB2 0 59.0 FINESTEERING 2434 144593.107 02008000 7b4e 18278  
< SPLIT 9 "2026/Aug/31" STREAM 0 1 "BMGX23210043M=HgCRAAAA..."
```

Repeat the log every few minutes until this happens. A single request is used here on purpose, so that no continuous log stream is left running on the port.

Once the new dispatch message is seen, reboot the receiver – either power-cycle it or send the [RESET](#) command:

RESET

The reboot is mandatory on dispatch firmware

On firmware 7.09.06 and later the subscription arrives in the dispatch message, but the channel configuration change only takes effect after a reset. Until the receiver is rebooted, TERRASTARSTATUS stays DISABLE and no PPP corrections are used. This is intended behaviour and is the same principle as SMCC on earlier TerraStar-C PRO subscriptions.

If you cannot check the logs during the activation

Simply reboot the receiver a while after the activation was requested, then check TERRASTARSTATUS (Step 6). If it still shows DISABLE, the dispatch message had not yet arrived – leave the receiver tracking L-Band, wait, and reboot again.

Optional – checking the service period

The date in the SPLIT entry above is the dispatch install date, not the subscription expiry date. The service start and end dates are reported by the DISPATCHSCHEDULE log, and the expiry date by TERRASTARINFO (Step 6):

LOG DISPATCHSCHEDULE

If a service period has already started but the first field reads EXPIRED, a reset is required for the service to begin. See [DISPATCHSCHEDULE](#).

Step 6: Verify the TerraStar subscription

After the reboot (or, on pre-7.09.06 firmware, once the activation message has been received) verify the subscription status:

LOG TERRASTARSTATUS ONCHANGED

LOG TERRASTARINFO ONCHANGED

The final output would resemble:

```
<TERRASTARSTATUS COM1 0 71.5 FINESTEERING 2082 173625.960 02044000 32bc 15833
```

```
< ENABLE LOCKED 0 DISABLED ONSHORE
<TERRASTARINFO COM1 0 70.5 FINESTEERING 2082 173623.946 02044000 91ea 15833
< "QY198:9565:5428" TERM 00002700 342 2026 0 NEARSHORE 0.00000 0.00000 0
```

The first field of the [TERRASTARSTATUS](#) log after the header will be ENABLE to indicate the TerraStar subscription is valid. It will be DISABLE when a valid activation has not been received – on dispatch firmware, this is also what you see if the receiver has not yet been rebooted. The second field will be LOCKED when the receiver is tracking a TerraStar satellite.

The [TERRASTARINFO](#) log gives the subscription details and is where the real expiry date is read. A subscription details mask of '00002700' indicates a TerraStar-C PRO subscription. The two fields after the mask are the Service End Day of Year and the Service End Year – in the example above, 342 and 2026, so the service expires at the end of 8 December 2026.

Step 7: TerraStar position convergence

PPP is the engine used to calculate a TerraStar position. To monitor the PPP convergence use the [PPPPPOS](#) log:

```
LOG PPPPOS ONTIME 1
```

Initially the position type will report PPP_CONVERGING (or PPP_BASIC_CONVERGING for TerraStar-L). Once the TerraStar solution has converged, the position type changes to PPP for TerraStar-C and TerraStar-C PRO, or PPP_BASIC for TerraStar-L.

```
<PPPPPOS COM1 0 71.5 FINESTEERING 2082 173923.000 02044000 ec34 15833
< SOL_COMPUTED PPP_CONVERGING 51.15039068456 -114.03070035301 1097.2318

<PPPPPOS COM1 0 71.5 FINESTEERING 2082 173924.000 02044000 ec34 15833
< SOL_COMPUTED PPP 51.15039069035 -114.03070040513 1097.2302
```

Summary – what to do, by firmware version

Step	Firmware earlier than 7.09.06	FW 7.09.06 / 7.10.01 / 7.10.02 and later
L-Band tracking 00c2 before activation	Required	Required
LOG DISPATCHMESSAGES after the resend	Not applicable	Required – confirm the SPLIT entry changed, then reboot
Resend by Waldytech / NovAtel Support or NAS	Same for both	Same for both
Reboot / RESET after reception	Not required (recommended for optimal channel configuration)	MANDATORY
TERRASTARSTATUS shows ENABLE LOCKED	Shortly after reception	Only after the reboot

If the subscription still does not activate

- Confirm LBANDTRACKSTAT shows 00c2 on a TerraStar beam – an obstructed antenna is the most common cause.
- Confirm the 4th character of the model is “R” or “P” (Step 1).
- On dispatch firmware, confirm the new DISPATCHMESSAGES entry appeared before you rebooted. If you rebooted too early, request another resend and wait for the log this time.
- If the firmware was just upgraded from a pre-7.09.06 version, any subscription previously stored in the receiver is erased and must be resent – this is expected.
- The subscription looks wrong: check the expiry date with TERRASTARINFO or DISPATCHSCHEDULE, not with the date in DISPATCHMESSAGES – that one is the dispatch install date.
- Still not working: contact Waldytech at office@waldytech.com with the VERSION, LBANDTRACKSTAT, DISPATCHMESSAGES and TERRASTARSTATUS logs.

Reference documents: APN-087 TerraStar on OEM7, the [NovAtel 7.09.06 release notice \(March 2026\)](#) and the [TerraStar subscription recovery article](#).