

Topics

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VirusPilot (/s/profile/0052p000009ANb4AAG) (Customer) asked a question.

May 22, 2020 at 7:25 AM (/s/question/0D52p00009Task6CAB/neom9n-pubx03-number-of-gnss-satellites-tracked-32-42-92).

NEO-M9N PUBX,03 number of GNSS satellites tracked? 32? 42? 92?

In multi GNSS configuration, the NEO-M9N PUBX,03 never exceeds 32 as the number of tracked channels (in my case), although when individually switching on a single GNSS then the sum of all tracked channels exceeds 32. u-center shows that a maximum of 42 is possible, the data sheet of the M9N says 92 channels. Im am confused, why do I not see >32 channels in PUBX,03?

Positioning(/s/topic/OTO2p000000Hr7dGAC/).pubx(/s/topic/OTO2p000000Hrg5GAC/).neo(/s/topic/OTO2p000000Hr7GAC/).+3 more

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Answer



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clive1 (/s/profile/0052p000008HYMwAAO) (Customer)

6 years ago

The firmware does limit the output count on PUBX,03 (SVSTATUS) to 32 satellites, this likely serves two goals, a) backward compatibility, b) limits total NMEA line length.

The UBX-M9140 has 92 channels/correlators the breakdown tracking vs acquisition is not provided.

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clive1 (/s/profile/0052p000008HYMwAAO) (Customer)

6 years ago

The ZED-F9T provides for 60 tracking channels, but again limits PUBX,03 to 32 entries.

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<https://www.u-blox.com/en/info/ublox-privacy-policy> (Customer)

6 years ago

Thanks for clarifying.

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clive1 (/s/profile/0052p000008HYMwAAO) (Customer)

2 years ago

The UBX-M10050 has an undisclosed number of total channels, I think perhaps 64 total, and reportedly 49 tracking channels.

The NEO-F10T / F10N uses a variant of the chip (UBX-F10150), but with two RF down-converters connected to the base-band processor.

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clive1 (/s/profile/0052p000008HYMwAAO) (Customer)

5 years ago

Related discussion, <https://portal.u-blox.com/s/question/0D52p00009utV1UCAU/m9n-gnss-config-cannot-change-minmax-number-of-channels> (<https://portal.u-blox.com/s/question/0D52p00009utV1UCAU/m9n-gnss-config-cannot-change-minmax-number-of-channels>).

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clive1 (/s/profile/0052p000008HYMwAAO) (Customer)

5 years ago

Another related discussion here where the NEO-M9N drops to solving using only 16 satellites, but looks to track others when update rate ≥ 10 Hz

<https://portal.u-blox.com/s/question/0D52p0000AOK91vCQD/can-neom9n-only-use-16-satellites-with-nav-update-rate-5hz> (<https://portal.u-blox.com/s/question/0D52p0000AOK91vCQD/can-neom9n-only-use-16-satellites-with-nav-update-rate-5hz>).

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clive1 (/s/profile/0052p000008HYMwAAO) (Customer)

a year ago

Configuration of this functionality

https://github.com/cturvey/RandomNinjaChef/blob/main/M9_channels.c
(https://github.com/cturvey/RandomNinjaChef/blob/main/M9_channels.c).

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clive1 (/s/profile/0052p000008HYMwAAO) (Customer)

5 years ago

Also related, I've asked that the list actually be sorted so the USED satellites are prioritized when satellite counts >32 start getting discarded. This current behaviour is unhelpful.

<https://portal.u-blox.com/s/question/0D52p0000AT0rV9CQJ/how-to-detect-waasegnos-is-actually-being-used-for-the-fix> (<https://portal.u-blox.com/s/question/0D52p0000AT0rV9CQJ/how-to-detect-waasegnos-is-actually-being-used-for-the-fix>).

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