



GENERAL MICROWAVE COMPANY

ENGLISH

**Antennas GMW GNSS 2.1-2.3
(specifications)**

2019 г.

GMW GNSS – 2.1 (CL)¹, GMW GNSS – 2.1



Specifications:

- Antenna module of general purpose GNSS signals consumer equipment
- Operating frequency band: GPS L1, GLONASS L1
- VSWR in the band, max: ≤ 2
- Gain, dBi: ≥ 32
- Axial ratio, dB: in zenith: $\leq 1,5$; at zenith angles $\theta < 40^\circ$: ≤ 5
- Phase center stability, mm: $\pm 2,0$
- LNA Noise level, dB: ≤ 3
- Output power 1 dB compression point: -10 dBm
- Power supply, V: $+3,3 \div +15,0$
- Supply current, mA: ≤ 60
- Operating temperatures, C: $-50 \div +85$
- TNC-type connector
- Dimensions, mm: 115*115*25 (GMW GNSS – 2.1 (CL)), 120*120*40 (GMW GNSS – 2.1)
- Weight, gr.: 80 (GMW GNSS – 2.1 (CL)), 310 (GMW GNSS – 2.1)

Mounting:

- M4x6 and 1xM8 screw or 5/8" screw

¹ Caseless.

GMW GNSS – 2.2²



Specifications:

- Antenna module of general purpose GNSS signals consumer equipment
- Operating frequency band: GPS L1/L2, GLONASS L1/L2
- VSWR in the band, max: ≤ 2
- Gain, dBi: ≥ 32
- Axial ratio, dB: in zenith: $\leq 1,5$; at zenith angles $\theta < 40^\circ$: ≤ 5
- Phase center stability, mm: $\pm 2,0$
- LNA Noise level, dB: ≤ 3
- Output power 1 dB compression point: -10 dBm
- Power supply, V: $+3,3 \div +15,0$
- Supply current, mA: ≤ 60
- Operating temperatures, C: $-50 \div +85$
- TNC-type connector
- Dimensions, mm: 140*140*40
- Weight, gr.: 310

Mounting:

- M4x6 and 1xM8 screw or 5/8" screw

² GMW GNSS-2.2 and GMW GNSS-2.3 use the same type of case.

GMW GNSS – 2.3



Specifications:

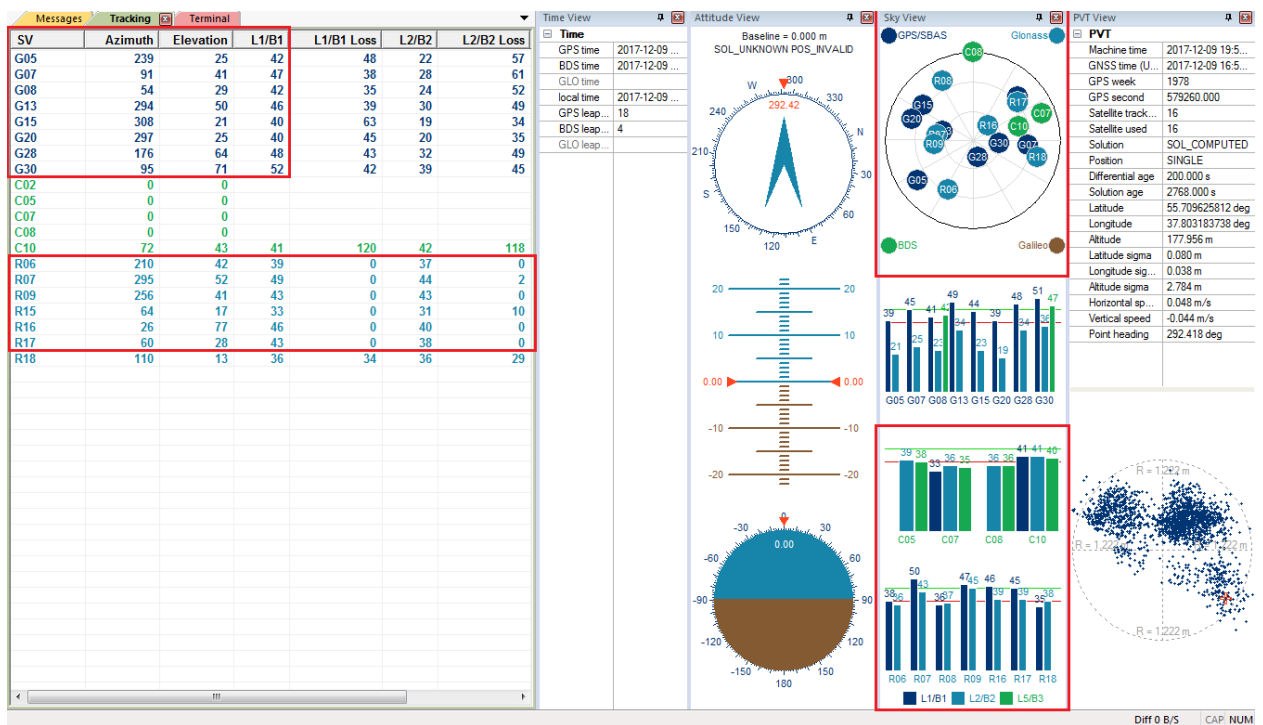
- Antenna module of general purpose GNSS signals consumer equipment
- Operating frequency band:
GPS, GLONASS, BEIDOU, GALILEO, QZSS, WAAS: L1/L2/L3/L5, B1/B2/B3, E1/E2/E5a/E5b/E6
- VSWR in the band, max: ≤ 2
- Gain, dBi: ≥ 32
- Axial ratio, dB: in zenith: $\leq 1,5$; at zenith angles $\theta < 40^\circ$: ≤ 5
- Phase center stability, mm: $\pm 2,0$
- LNA Noise level, dB: ≤ 3
- Output power 1 dB compression point: -10 dBm
- Power supply, V: $+3,3 \div +15,0$
- Supply current, mA: ≤ 60
- Operating temperatures, C: $-50 \div +85$
- TNC-type connector
- Dimensions, mm: 140*140*40
- Weight, gr.: 310

Mounting:

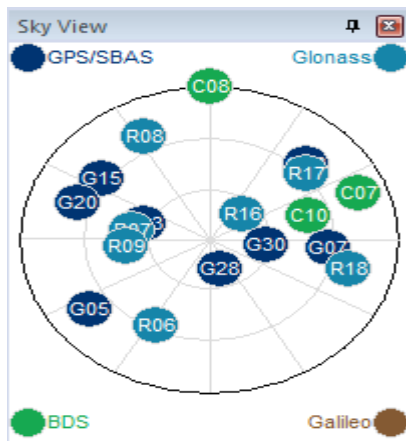
- M4x6 and 1xM8 screw or 5/8" screw

Experimental data on the power of satellite reception, the signal-to-noise ratio of satellites in constellation:

General characteristics:



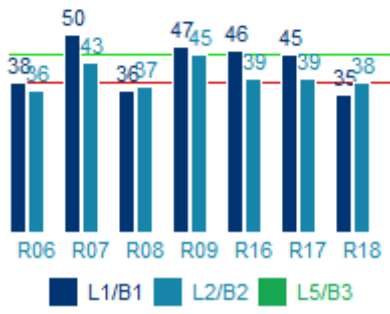
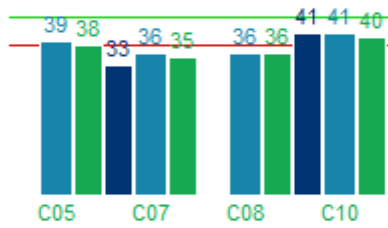
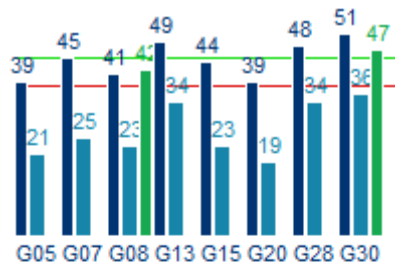
Constellation of satellites:



Signal-to-noise ratio of satellite signals in constellation:

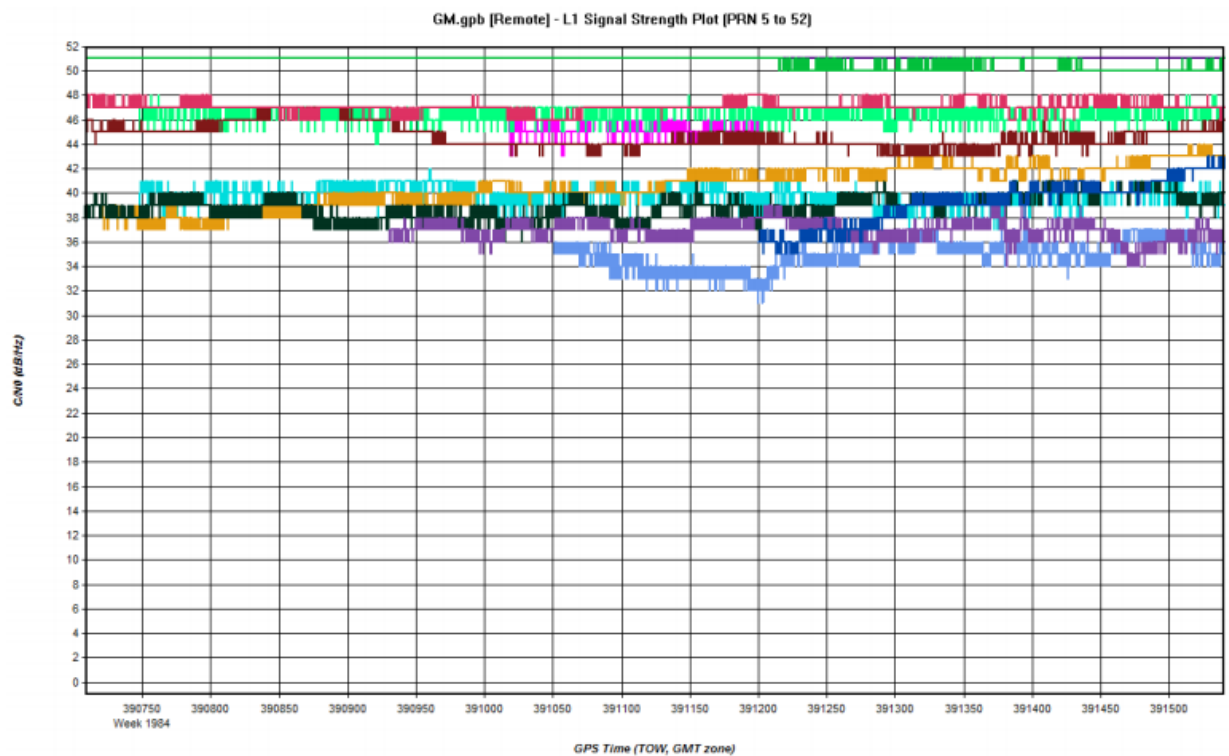
SV	Azimuth	Elevation	L1/B1
G05	239	25	42
G07	91	41	47
G08	54	29	42
G13	294	50	46
G15	308	21	40
G20	297	25	40
G28	176	64	48
G30	95	71	52
C10	72	43	41
R06	210	42	39
R07	295	52	49
R09	256	41	43
R15	64	17	33
R16	26	77	46
R17	60	28	43
R18	110	13	36

Satellite power reception diagrams in working ranges:

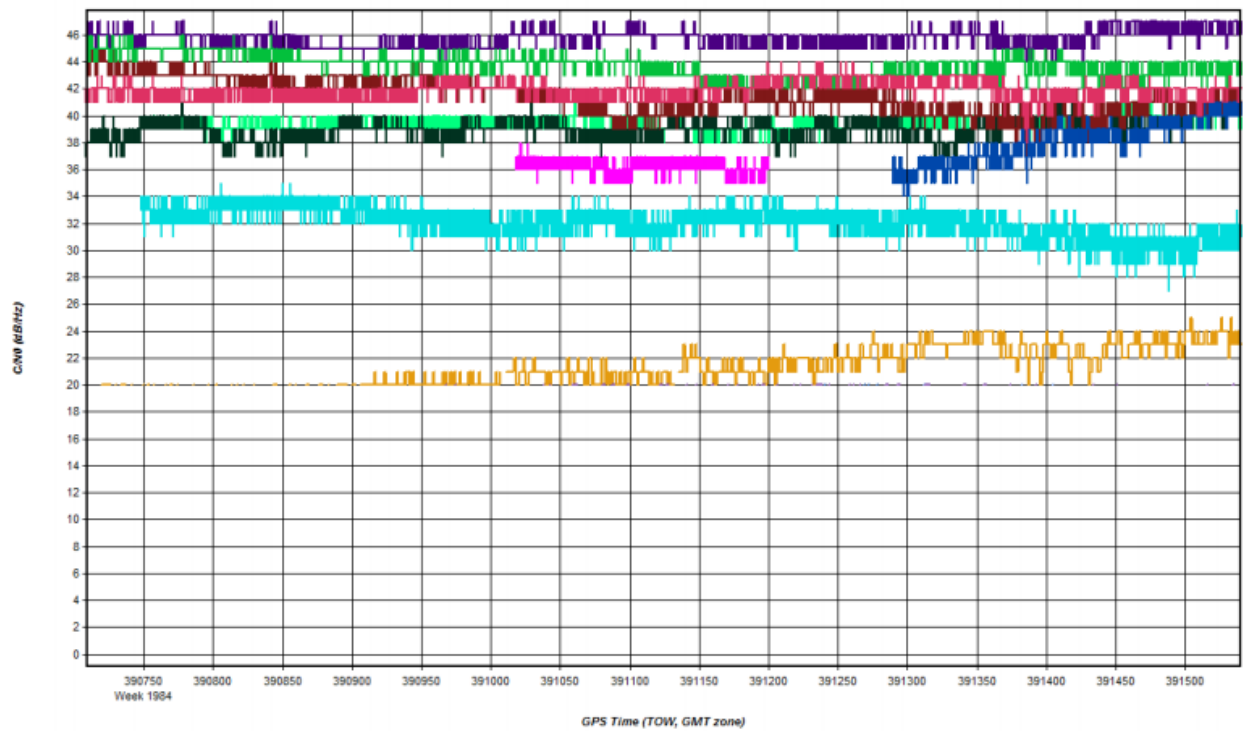


Dynamic change in reception quality of satellite signals:

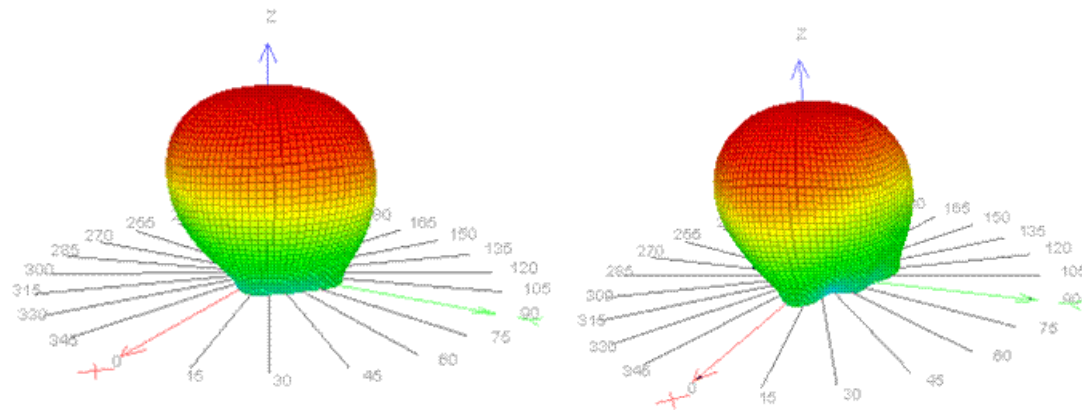
- L1-band:



- L2-band:



Direction pattern in the upper (left) and lower (right) range:



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