

1 OVERVIEW

Multi GNSS Grabber is 7-channel all-band all-system multi-channel GNSS software defined receiver (SDR) platform based on RFFE IC NT1065 "Nomada" and NT2024 for receiving GPS/GLONASS/Galileo/BeiDou/IRNSS/QZSS signals in L1/L2/L3/L5/E1/E5/E6/B1-C/B1I(Q)/B1-2I(Q)/B2/B3 bands, and also for receiving IRNSS signals in S band. In total it has 4 coherent channels and 3 additional channels, available for simultaneous reception of navigational signals. Multi GNSS Grabber can be configured for capturing wide band GNSS signals (such as Galileo E5) by two coherent channels with common LO source. GNSS raw data are transferred to the USB 3.0 interface with sample rate up to 100MHz and can be received by PC or another computing device.

2 KEY FEATURES

- IO ports:
 - Every channel has individual RF input with active antenna supply option
 - External reference frequency input
 - USB 3.0 output
- On-board reference frequency sources:
 - 10 MHz 0.28ppm TCXO
 - 24.84 MHz 1.5ppm TCXO
- Comprehensive software and manual:
 - GUI for NT1065 registers access (Windows XP/ Windows 7 compatible)
 - GUI for NT2024 registers access (Windows XP/ Windows 7 compatible)
 - GUI for USB 3.0 data capture
 - Configuration examples
 - Complete NT1065 "Nomada" datasheet
 - Complete NT2024 datasheet
 - PCB reference design database



3 STRUCTURE

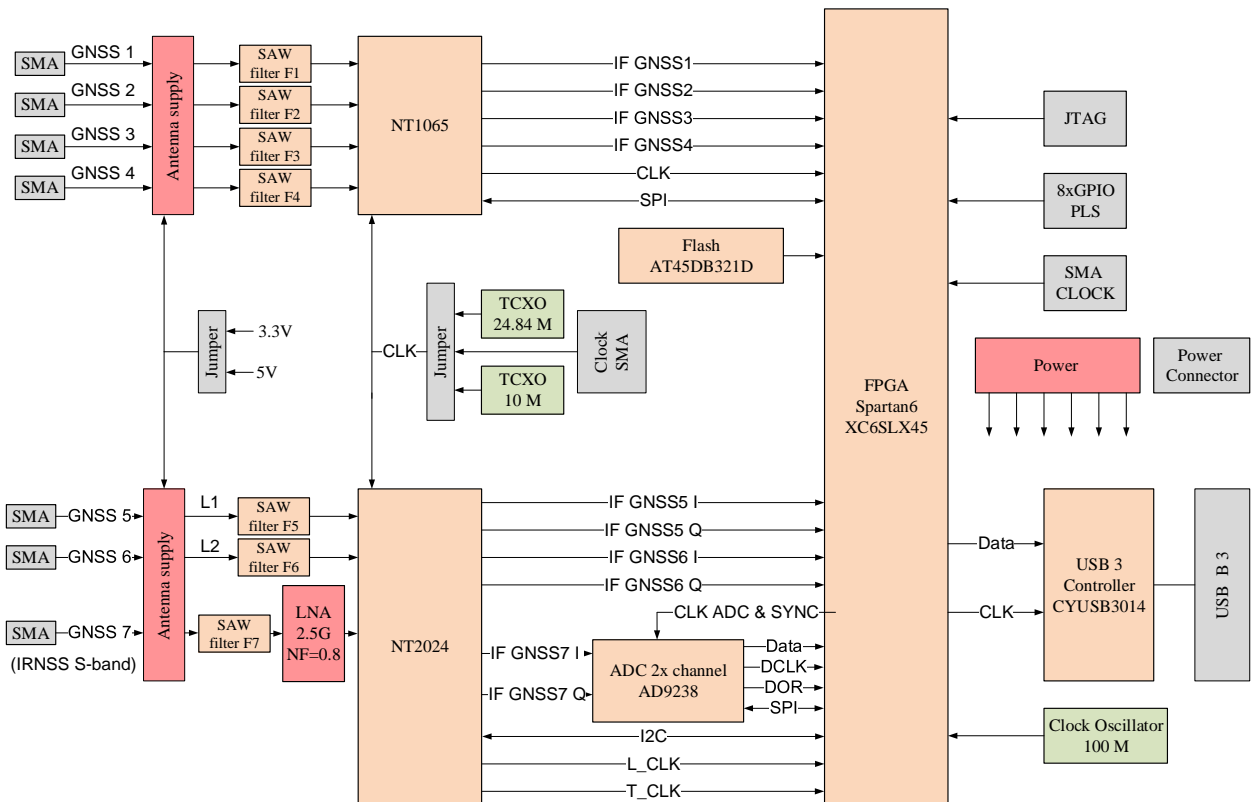
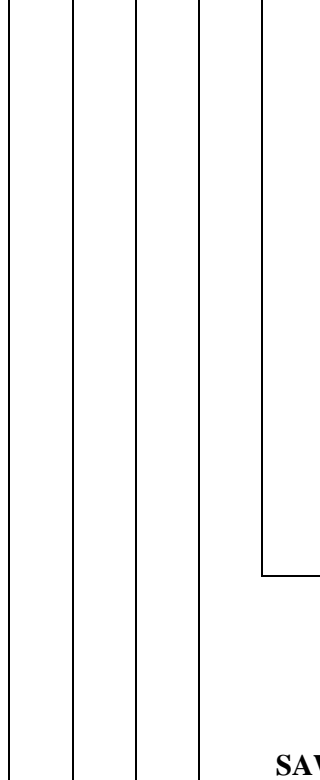


Figure 1: Block diagram

B1065G1 -

X	X	X	X	X	X
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SAW filter for channel #6

- 0 - No filter
- 1 - BeiDou B3: 1250 – 1287 MHz
- 2 - GLONASS L2: 1231 -1261 MHz
- 3 - GPS L2: 1217 – 1237 MHz
- 4 - BeiDou B2, Galileo E5b and GLONASS L3: 1187 – 1223 MHz
- 5 - GPS L5 and Galileo E5a:1161 – 1192 MHz

SAW filter for channel #5

- 0 - No filter
- 1 - GLONASS L1: 1587 – 1617 MHz
- 2 - GPS L1 and Galileo E1: 1559 – 1587 MHz
- 3 - BeiDou B1: 1556 – 1601 MHz

SAW filters for channels #1..#4

F1	F2	F3	F4
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- A - No filter, L1: 1550 – 1620 MHz frequency range
- B - No filter, L2, L3, L5: 1150 – 1300 MHz frequency range
- 1 - GLONASS L1: 1587 – 1617 MHz
- 2 - GPS L1 and Galileo E1: 1559 – 1587 MHz
- 3 - BeiDou B1: 1556 – 1601 MHz
- 4 - BeiDou B3: 1250 – 1287 MHz
- 5 - GLONASS L2: 1231 -1261 MHz
- 6 - GPS L2: 1217 – 1237 MHz
- 7 - BeiDou B2, Galileo E5b and GLONASS L3: 1187 – 1223 MHz
- 8 - GPS L5 and Galileo E5a:1161 – 1192 MHz