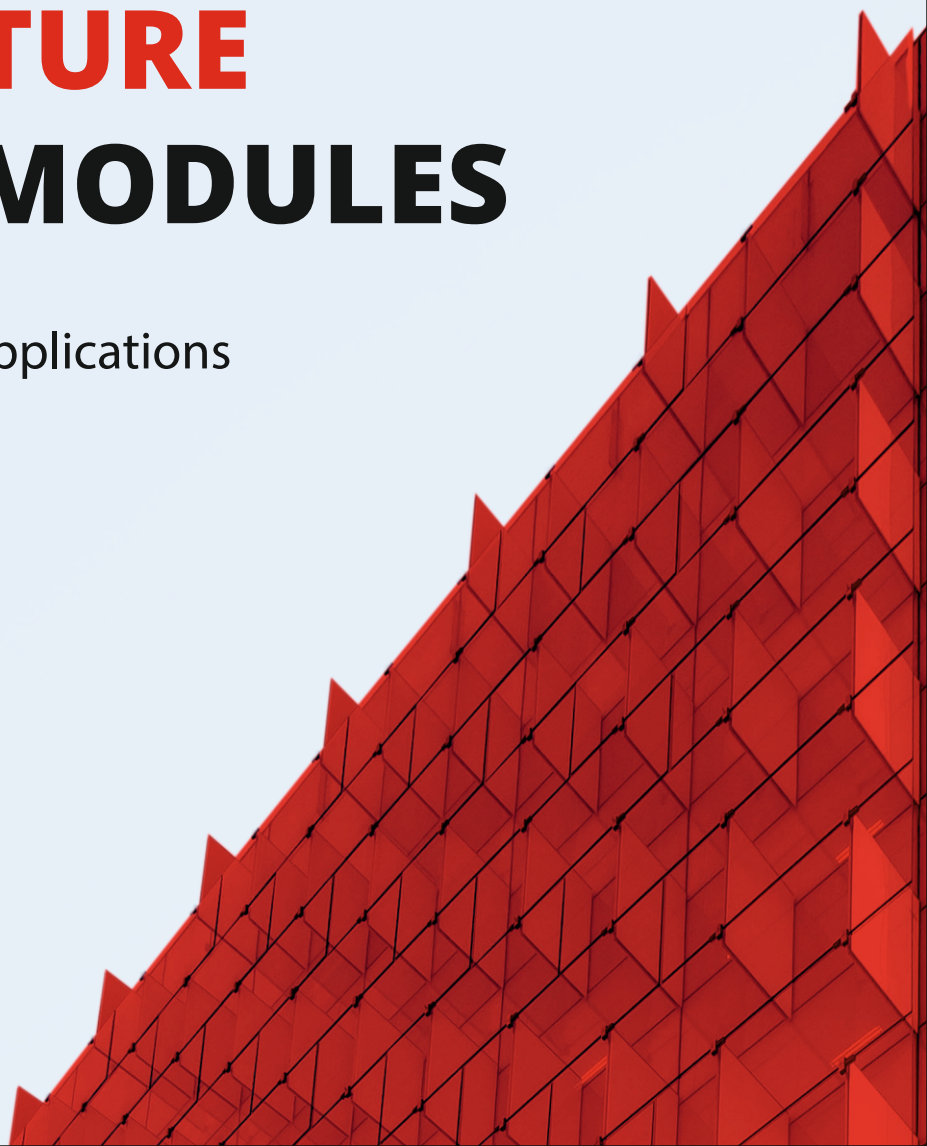
ABSOLUTE PRECISION

OPEN PLATFORM FOR DEVICES BASED ON HIGH-PRECISION OEM GNSS OPEN ARCHITECTURE RECEIVER MODULES

Different markets, many applications
and only **one platform**!



OPEN ARCHITECTURE
FOR HIGH-PRECISION OEM GNSS RECEIVER MODULES

Overview

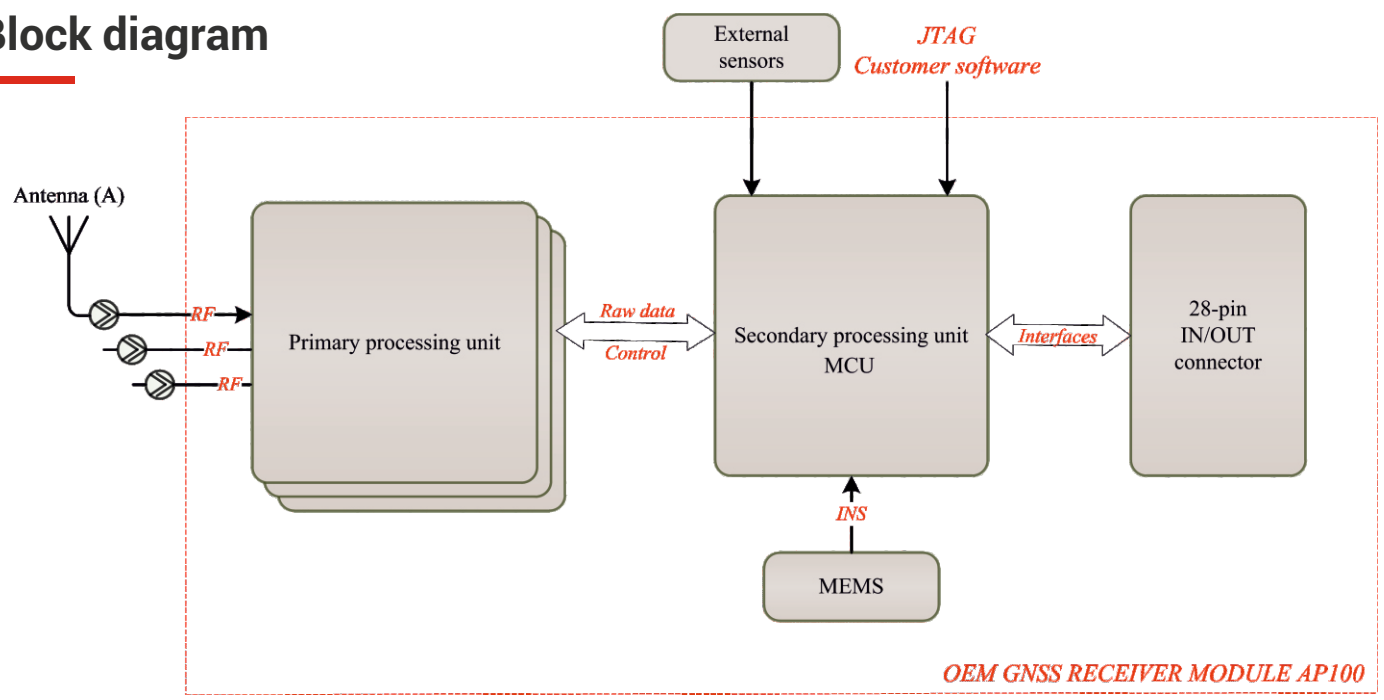
AP100 family is a wide range of high-precision OEM GNSS receiver modules with open architecture. Modules maintain the industrial standard form-factor (71 x 46 mm). Raw measurement data are available for developers as well as API functions to control the baseband chip. Customers can use Absolute Precision OÜ firmware or develop their own proprietary firmware (or use third-party firmware) for on-board MCU to implement secondary processing (standalone positioning, RTK, PPP…), thus it is possible to create an effective solution for each specific case.

Owing to the MEMS availability, the algorithm of RTK and INS integration is also implemented. This in turn increases the frequency of navigation data (position/velocity/heading/observables) up to 200 Hz.

Application Programming Interface (API) of the AP100 family

- FreeRTOS real time operation system
- Support of tasks, semaphores, mutexes and queues
- Full control of General Purpose Input/Output (GPIO) lines
- Controller Area Network (CAN) support
- Support of USB interface
- IP network support with LWIP and MBEDTSL
- Access to on-board MCU, 9-axis MEMS and NAND Flash
- Ability to upgrade module firmware via USB interface

Block diagram



OPEN PLATFORM FOR DEVICES BASED ON HIGH-PRECISION OEM GNSS RECEIVER MODULES

Overview

The open platform of Absolute Precision OÜ is based on the high-precision OEM GNSS receiver modules of AP100 family. The main feature of platform is the possibility to upload customer proprietary or third-party software to on-board Computer-on-Module Platform with Windows/Android/Linux operation system. Also it is possible to choose different types of wireless interfaces due to mini-PCI Express connectors availability. Open platform devices can be easy configured.

This approach helps to implement an effective solution for each specific case. The list of optional plug-in wireless and wired interfaces is mentioned below.

Interfaces

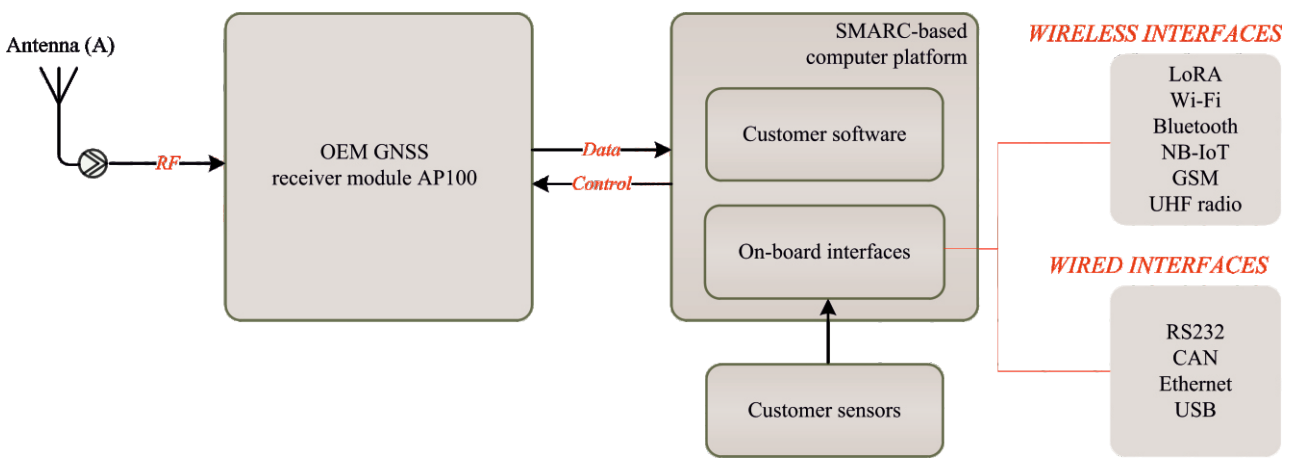
Wireless interfaces

- LoRa
- Wi-Fi
- Bluetooth
- NB-IoT
- GSM
- UHF radio

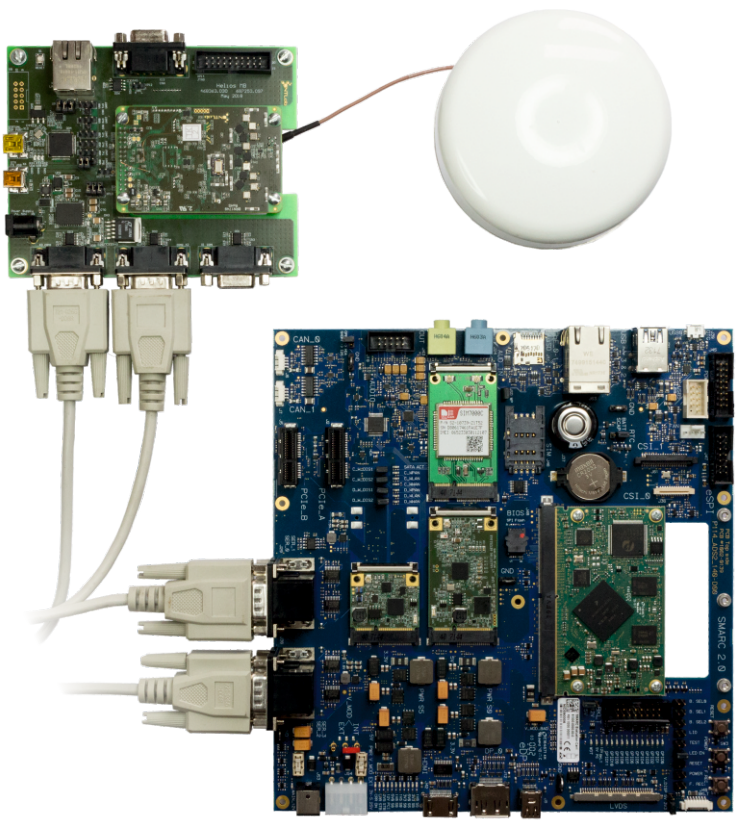
Wired interfaces

- RS232
- CAN
- Ethernet
- USB

Block diagram



Absolute Precision OÜ



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