Centre Tecnològic de Telecomunicacions de Catalunya

Optical Access and Edge Networks Laboratory

1. EQUIPMENT

AI Wireless Experimental Platform:	
10	Ettus Research USRP X310
12	RF frontends SBX400-4400 MHz RX/TX (40 MHz bandwidth)
8	RF frontends SBX400-4400 MHz RX/TX (120 MHz bandwidth)
40	VERT2450 Vertical antennas
20	10G ethernet cables
3	GPU-equipped workstations for emulating a UE
1	GPU-equipped workstation for emulating a gNB
4	CDA-2990 channel clock distribution
5	USRP rack mounts
2	Loopback cable kits (SMA)
1	GPU-equipped laptop
2	Rack mounts with wheels for workstations
1	Simulation workstation with two GeForce RTX3080
1	Simulation workstation with GeForce GTX1080 Ti

Parc Mediterrani de la Tecnologia - Building B4
Av. Carl Friedrich Gauss 7
08860 - Castelldefels
Barcelona (Spain)
www.cttc.es

Block 2:

- A set of GNSS antennas (all qualities, sizes and prices) receiving signals broadcast by actual satellites, located in a platform at the roof of CTTC premises.
  - NavXperience 3G+C antennas (geodetic-grade, triple band).
  - NovAtel GPS-600 antennas (dual band).
  - Mighty Mouse III antennas (cheap, small, single band).
- A GNSS RF signal generator for controlled testing.
- Ifen's NavX-NCS GNSS Navigation Constellation Simulator with Module for generation of Galileo E5 signals.
- Professional GNSS receivers (for reference).
- A set of RF front-ends (all qualities, sizes and prices).
  - Ettus Research's USRP x300 / SBX-200.
  - Fraunhoffer's Flexiband (triple band).
  - NSL's Stereo (dual band).
  - Great Scott Gadgets's HackRF One.
  - Realtek's RTL2832U-based USB dongles
- GESTALT® Server: a Dell's PowerEdge R730 server housing a CPU with two Intel Xeon E5-2630 v3 at 2.4 GHz (8 cores, 16 threads each) and an NVIDIA Tesla K10 GPU with 2 x 1536 CUDA cores clocked at 745 MHz
- GNSS-SDR®: An open-source software-defined GNSS receiver that implements the whole processing chain from the output of a RF front-end up to computation of GNSS observables and position fixes.