

5G Testbed

- Description: 5G air interface, NR (new radio), achieving record-breaking speed in a real environment up to around 25Gbps. Prototype system comprises of a base station, Advanced Antenna Integrated Radio units (512 Antenna elements), and two sets of user equipment.
- Demonstrated functionalities:
 - Beam-centric transmission & mobility using beam-tracking
 - MU-MIMO (multi user - multiple input multiple output) with two 5G prototype UE's and high throughput transmission > 20Gbps DL
- Applicability & Technology Value: By the end of 2022, according to forecasts, there will be 550 million 5G subscriptions and a population coverage for the technology of 10%. Commercial 5G networks are expected to be available in 2020 and early deployments of pre-standard networks are anticipated in several markets. 5G will enhance mobile broadband and enable a wide range of use cases for the Internet of Things.
- 5G air interface, NR, brings data rates up to 20/10 Gbps DL/UL, 2-3x improved cell edge performance, improved energy efficiency by 5-100 times and 10x reduced cost per bit.
- Besides broadband services, 5G will accelerate the industrial digitalization of many vertical such as Automotive, Utilities, Public Safety, Manufacturing, Healthcare and Media/Gaming which require higher bandwidth and ultra low latency.

