Azcom Technology offers Product Engineering Services across a wide range of development platforms and application domains. Our experienced and highly competent engineering teams provide specialized expertise in areas such as Signal Processing, DSP and FPGA Programming, Embedded Software and System Development, Radar Sensors, Digital Hardware Design, and RF Engineering. With established processes and necessary operational structures, Azcom has successfully executed many complex projects and turnkey product developments.



CORE COMPETENCIES

FPGA PROGRAMMING

- RTL code development, simulation and testing
- Signal processing, highspeed interface design
- Design with high degree of parallelism and pipelining
- Management of congested logic designs

EMBEDDED AND SYSTEM SW

- Board Support Package
- Boot Loaders
- Device Drivers
- OS Porting and Customization
- Linux, FreeRTOS
- Bare Metal Programming
- POST & Diagnostic

SIGNAL PROCESSING

- Algorithm design
- MATLAB simulation
- PHY Software Development
- · Test automation
- Continuous integration
- 3GPP conformance testing

HW DESIGN

- Board design and prototyping
- System SW
- Bring-up and Debug
- Testing EVT,
 DVT
- Certifications

RF ENGINEERING

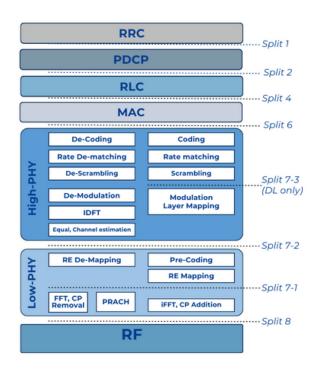
- Multi-layer DFE design
- Beamforming
- DUC, DDC
- Multibeam CFR and DPD development
- AFE Design
- Radio conformance Test



Wireless is one of our major areas of operation. Azcom Technology has been involved in developing access and core solutions for 5G, 4G, NB-IoT, 3G, and 2G for more than 25 years. We provide PHY, L2/L3 stack IPRs, and reference designs for 5G DU, and RU which can greatly accelerate customer product development for different application domains – Cellular, Aerospace for Regenerative Non-Terrestrial Networks, and Industries. All our solutions are designed completely in-house, permitting customizations and continued support without any third-party dependencies.

A SCALABLE AND HIGH PERFORMANCE PHY AND L2/L3 PROTOCOL STACK FOR 5G TERRESTRIAL AND NON-TERRESTRIAL NETWORKS

The emerging market of 5G NTN (Non-Terrestrial Networks) is driving a growing demand for highly flexible and high-performance solutions. In this context, FPGA-based developments are playing a crucial role, thanks to their ability to quickly adapt to evolving standards and complex processing requirements, as well as the fact that many devices are already flight-qualified and adopted in satellite payloads. This makes Azcom's FPGA-based full 5G-NR PHY and L2/L3 stack particularly well-suited to support the transition to 5G NTN networks, ensuring high performance and scalability.



Non-Terrestrial Networks

gNB Regenerative gNB Non-Regenerative NTN-IoT Test Environment Special use Cases Optimized Resource Consumption

Terrestrial Networks

4G eNB 5G gNB 5G RU, DU NB-IoT Test Equipment **Special Use Cases** Support of multiple Architecture Split Options

REFERENCE DESIGNS









5G Compact gNodeB

BASEBAND UNIT



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