

Need a radio you can rely on?

PRODUCTS & SERVICES



NLR has knowledge and facilities to realize highly-reliable and certified software-defined radios

You need a software-defined radio for your critical application. Failure is not an option. NLR designs, develops and integrates your radio hardware and software. NLR tests and certifies your radio system for your critical application.



WHAT YOU NEED

- A radio that is small, light and reconfigurable.
- A radio that is certified to operate on-board airplanes or in space.
- A radio for a mission-critical system.
- A radio that will work reliably in the most demanding environment.

WHAT WE DELIVER

- Support in design, development and integration of softwaredefined radio products.
- Support in the certification of software-defined radios
- Knowledge, tools and facilities for the measurement of the performance of radios.
- Facilities, knowledge and support for environmental testing of software-defined radios and other electronic equipment.

OUR CAPABILITIES

SOFTWARE-DEFINED RADIOS

In Software-Defined Radio (SDR) systems some functions that were traditionally performed in hardware (mixers, filters, amplifiers) are performed in software. The use of software instead of hardware makes SDR systems small, light and flexible. The software can be updated to comply with the latest radio standards or it can be changed to adapt to new requirements.

We have knowledge and capabilities to design and manufacture the RF and digital electronics of software-defined radios. Several tools and facilities are available for the task such as electromagnetic simulation tools (e.g. ANSYS Electromagnetics), electronic circuit simulator software and cleanroom facilities for the integration of prototypes.

We have knowledge and tools to produce the software needed for SDR. We can produce software that can be certified according to RTCA DO-178B/EUROCAE ED-12B at the appropriate Design Assurance Level (DAL) for avionics applications. We can program embedded systems such as FPGAs that are certified to EUROCAE ED-80. In order to prove that the designed equipment complies with the set requirements, it is often necessary to perform extensive verification. We have experience testing mission-critical hardware and software. We can prepare qualified tools for the verification process.

TEST FACILITIES

We operate several facilities for testing of SDR performance. We have a far-field outdoor Antenna Test Range of 160 m where we can test the SDR and its connected antenna(s). We have an RF laboratory where we can characterize the emission and reception characteristics.

NLR also operates multiple environmental test facilities, covering test requirements regarding temperature, humidity, EMC, vibration and shock, altitude, thermal vacuum, fluid contamination and salt spray. These tests can be done in accordance with any applicable standard including the RTCA DO-160F, MIL-STD-810F and IEC standards. Also dedicated test procedures can be applied.



PRODUCTS & FEATURES

Our expertise and facilities ensure you get a radio you can rely on. You can apply it in an aerospace or other demanding environment.

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