

## Using the RLS-2100 for 5G Testing



### Next Generation 5G Hybrid Networking

#### Connect to the future with confidence

The rate of change in satellite communications is only getting faster. Led by innovative mobile network operators and advanced militaries, 5G network use is set to explode around the world. Traditional infrastructure alone cannot handle the growing demand for greater capacity and enhanced coverage. The integration of non-terrestrial networks (NTNs) to create hybrid networks is critical to meeting these rapidly emerging needs.

#### 5G is a global opportunity and a network challenge

The demand for integrated hybrid networks requires the development of new and more adaptable technology and equipment whose operation must be verified in the presence of challenges such as large variations in distances between terminals and network relays, satellite motion, and complex handovers between satellite and terrestrial networks.

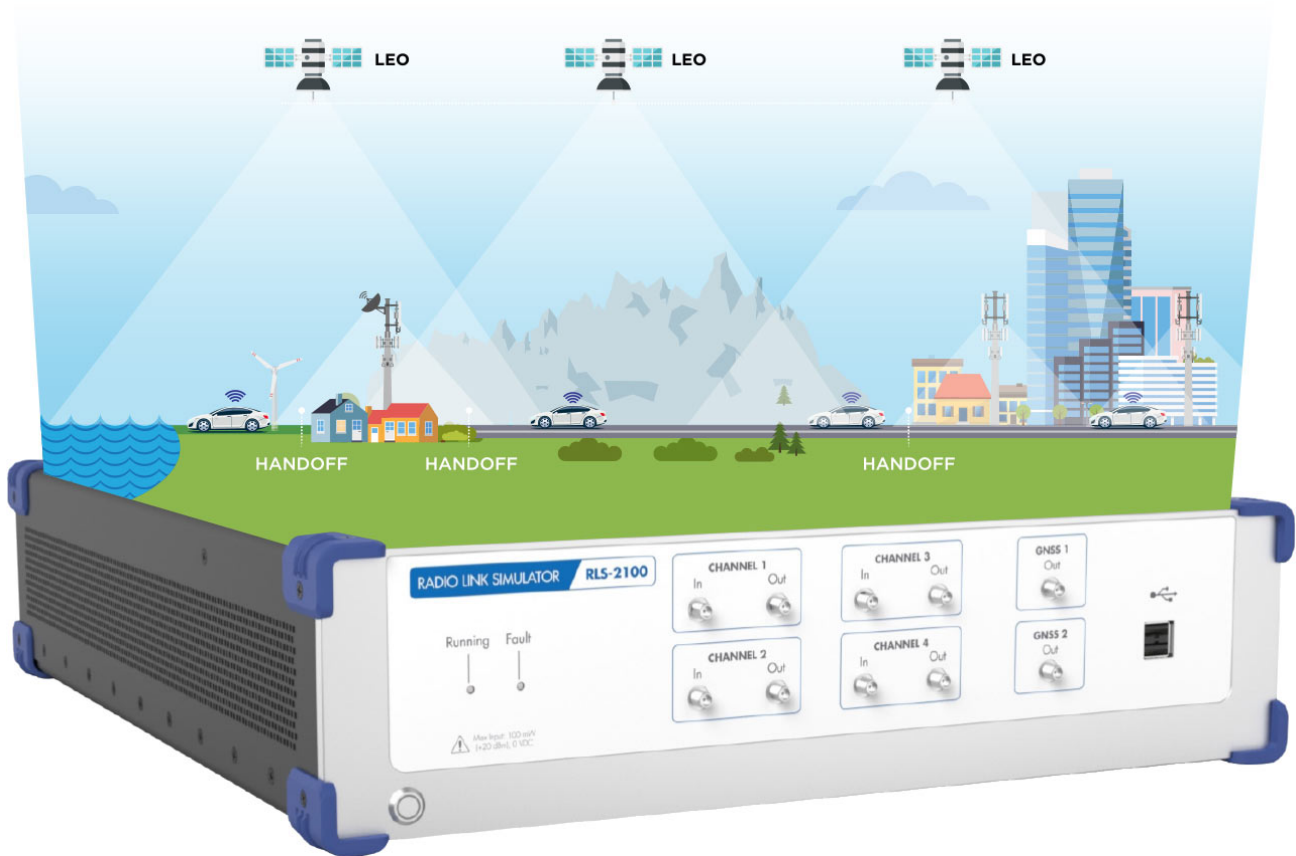
Leveraging the significant investments in the development of terrestrial 5G equipment will be key to unlocking economies of scale for 5G NTN. Careful evaluation of COTS solutions will be required in order to determine their suitability for NTN operation.

#### The RLS-2100 can help you realize your 5G vision

5G will push the limits of low latency, high bandwidth, and high mobility. While satellite 5G integration may be uncharted territory, the RLS-2100 Radio Link Simulator can help you test with certainty.

Born of a complete rethink of satellite link testing, the RLS-2100 can deliver everything today's 5G innovators need. It's an all-in-one system that can apply a comprehensive set of impairments for complex wideband satellite and terrestrial scenarios. For 5G NTN testing, the RLS-2100 includes support for:

- Emulation of terrestrial and non-terrestrial (NTN) links, including satellite or aeronautical
- Support for simultaneous satellite/terrestrial emulation in a single box
- Verification of satellite/satellite, beam/beam and satellite/terrestrial handovers
- Direct interface to equipment at 5G NR FR1 and FR2 frequencies
- Integrated orbital modeling of any constellation (LEO/MEO/GEO/HEO) or combination
- Ephemeris output to gNodeB
- 5G channel models, terrestrial and NTN



## RLS-2100 Multi-beam NTN Handover Testing

### 5G testing challenges

The RLS-2100 is the perfect tool to support innovative developers, service providers and militaries as they deploy 5G services with coverage anytime, anywhere. It enables rigorous testing of 5G NTN applications such as:

- wideband mobility (comms on the move)
- traffic backhaul
- multi-link networks
- urban aerial communication
- IoT applications
- cellular towers in space

### Expertise in Action: European Space Agency Collaboration

Square Peg has collaborated with the European Space Agency to develop new capabilities for the RLS-2100 to enable hybrid channel emulation, resulting in a unique integrated product that can simultaneously emulate both terrestrial and satellite links, with 5G channel models.



### WORK Microwave Integration

The RLS-2100 seamlessly integrates with frequency converters from WORK Microwave for direct interfacing to 5G equipment at FR2 millimeter wave frequencies, or at traditional satellite frequencies from 10.7 to 31 GHz.



## Contact Us

For more information or to schedule a demonstration contact:

**Square Peg Communications Inc.**  
 4017 Carling Avenue, Suite 200  
 Ottawa, Ontario K2K 2A3  
 CANADA  
 Tel: +1 613 271 0044 Fax: +1 613 271 3007  
 Web: [www.squarepeg.ca](http://www.squarepeg.ca)  
 Email: [sales@squarepeg.ca](mailto:sales@squarepeg.ca)

Or scan the this to learn more about how the RLS-2100 supports 5G and other applications:

