

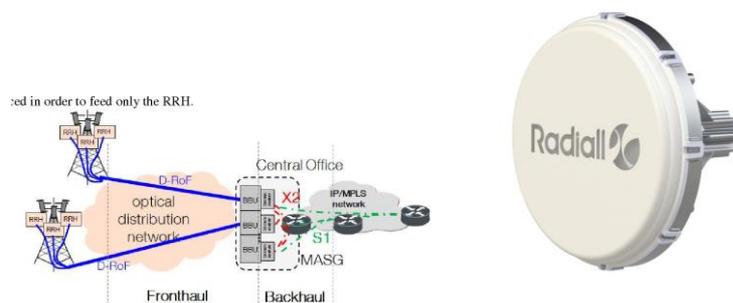
**FOR IMMEDIATE RELEASE**

**CEA-Leti & Radiall to Design Innovative RF Components for 5G Networks and Photonics Components for Harsh Environments**

*Common Lab Will Develop Ultra-Low Profile E-Band Antenna for Backhaul/Fronthaul Applications to Speed up Networks' Capacity & Coverage*

GRENOBLE, France – June 26, 2019 – Leti, a research institute of CEA Tech, and Radiall, a global manufacturer of leading-edge interconnect solutions, announced a five-year common lab to design innovative antennas, radio frequency (RF) to meet infrastructure requirements of 5G networks and photonics components for harsh environments.

Announced during Leti Innovation Days in Grenoble, the common lab will develop low profile, millimeter-wave antenna solutions for backhaul/fronthaul applications.



*Figure 1: The backhaul refers to the network links between the radio base stations and the network controller/gateway sites. The fronthaul is the network segment following the separation of the signal processing part from the RF part of the radio base station to the RAN (Radio Access Network) centralization*

*Figure 2: V-BAND 32 dBi ANTENNA product designed with Leti*

5G networks require high-speed, point-to-point communication at millimeter-wave frequencies. The explosive increase in ultra-dense 5G infrastructure systems required to accommodate high-speed mobile data traffic and Internet of Things data is fueling a demand for low-cost, robust and reliable RF subsystems. These include compact and reconfigurable antennas that can be integrated on urban buildings and street furniture with minimal deployment cost.

At millimeter-wave frequencies between 30 and 300 GHz, severe path loss must be compensated through high-gain antennas enabled by transmit-array designs. Leveraging its expertise in antenna design, CEA-Leti previously collaborated with Radiall on transmit-array technology development. This collaboration resulted in a V-band (57-66 GHz) high-gain (32 dBi) antenna delivering up to 20 Gb/s that Radiall added to its product line.

Multi-source transmit-array architecture is a promising solution to address this challenge because it minimizes the thickness of the antenna, while maintaining stability of the antenna gain over the entire bandwidth and controlling the sidelobe levels.



“Radiall and CEA-Leti launched a five-year common lab to create a sustained task force that will work on accelerating the development of high capacity and high coverage antennas to quench the world’s thirst for reliable and high-speed telecommunications, including 5G generations and beyond,” said Leti CEO Emmanuel Sabonnadière. “The goal is equally to extend the scope of collaboration to other technology development, such as RF filters or photonics components to interconnect 5G network systems.”

“The combined creativity of CEA-Leti research engineers and Radiall R&D/ production engineers to develop state-of-the-art products at competitive pricing was clearly demonstrated in the V-band antenna development,” said Radiall COO Dominique Buttin. “This joint lab provides Radiall with access to CEA-Leti’s broad expertise in microelectronics and RF technologies, which helps position us to deliver innovative products for 5G and vertical markets such as aeronautics and transportation at an ever-increasing pace.”

### **About CEA-Leti (France)**

*Leti, a technology research institute at CEA Tech, is a global leader in miniaturization technologies, enabling smart, energy-efficient and secure solutions for industry. Founded in 1967, Leti pioneers micro- and nanotechnologies, tailoring differentiating applicative solutions for global companies, SMEs and startups. CEA-Leti tackles critical challenges in healthcare; Leti’s multidisciplinary teams deliver solid expertise, leveraging world-class pre-industrialization facilities. With a staff of more than 1,900, a portfolio of 2,700 patents, 91,500 sq. ft. of cleanroom space and a clear IP policy, the institute is based in Grenoble, France, and has offices in Silicon Valley and Tokyo. CEA-Leti has launched 60 startups and is a member of the Carnot Institutes network. This year, the institute celebrates its 50<sup>th</sup> anniversary. Follow us on [www.leti-cea.com](http://www.leti-cea.com) and @CEA\_Leti.*

*CEA Tech is the technology research branch of the French Alternative Energies and Atomic Energy Commission (CEA), a key player in innovative R&D, defense and security, nuclear energy, technological research for industry and fundamental science, identified by Thomson Reuters as the second most innovative research organization in the world. CEA Tech leverages a unique innovation-driven culture and unrivaled expertise to develop and disseminate new technologies for the industry, helping to create high-end products and provide a competitive edge.*

### **About Radiall**

*Radiall is a global manufacturer of leading-edge interconnect solutions. The company offers an extensive range of RF coaxial connectors and cable assemblies, coaxial switches, optical active components, connectors and cable assemblies, microwave components, multipin connectors and more. Radiall has sales offices and subsidiaries throughout the world: R&D in the U.S., Europe and China, along with manufacturing facilities strategically located in the U.S., Mexico, India and China. <https://www.radiall.com>*

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