

EJL Wireless Research Analyzes Ericsson 5G NR AIR 3219

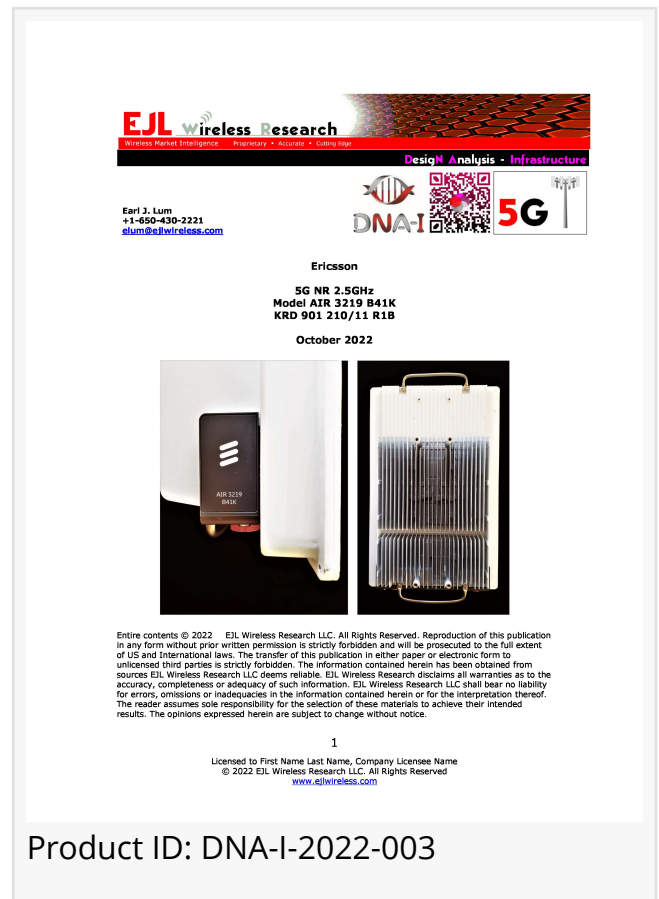
*DNA-I Teardown Report on Gen 4 Massive MIMO Radio Platform Solution;
Design Architecture Provides Insights into Ericsson Silicon for Ericsson Radio System*

SALEM, NEW HAMPSHIRE, UNITED STATES, October 13, 2022 /EINPresswire.com/ -- EJL Wireless Research is excited to announce a new report to its [DesigN Analysis-Infrastructure \(DNA-I\)](#) research series. The DNA-I series focuses on radio access network (RAN) equipment teardown reports. These reports provide invaluable insight into the design philosophies and architectures for the major radio equipment OEMs as well as a full bill of materials (BOM) for major semiconductor integrated circuit (IC) and passive component products and suppliers.

The new report is on an Ericsson 5G NR antenna integrated radio (AIR) unit, the AIR 3219. The unit is a [32T32R massive MIMO radio](#) with 320W output power and is part of Ericsson's Gen 4 platform that has focused on size/weight reduction along with reduced energy consumption and not on increasing RF output power.

The AIR 3219 was introduced in February 2021 and highlighted Ericsson's focus on a 45% weight reduction as well as a 15-20% improvement in energy efficiency for the new 4th generation radio architecture. The improvements stated are primarily due to the use of [Ericsson Silicon System on a Chip \(SoC\)](#) solutions compared with commercially available silicon solutions from third party vendors. The previous 3rd Generation 64T AIR product, the AIR 6449, weighs between 40-45kg compared with the 4th Generation equivalent AIR 6419 which weighs approximately 20-25kg. The first and most important question regarding the 4th Generation design is what changed to allow for the size/weight reduction and the lower power consumption.

"Our hypothesis for the 4th Gen improvements focused on two main areas for design changes in the radio architecture; the utilization of gallium nitride (GaN) technology for the RF power amplifiers and a radical change in the manufacturing and process technology for the RF channel





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Earl J. Lum, President, EJL Wireless Research LLC

filters. Additionally, we focused our analysis on the Ericsson Silicon (SoC) used for the eCPRI Fronthaul, the antenna array beamforming, and the digital front end (DFE). We were very surprised with the latest “upgrades’ we discovered within the unit along with radical design changes in the antenna radome and antenna array” says Lum.

About EJL Wireless Research

EJL Wireless Research provides proprietary, accurate, and cutting-edge market analysis and consulting services on

the wireless technology ecosystem. The firm's wireless infrastructure research focuses on vertical elements of the wireless ecosystem including telecommunication standards evolution, global and regional regulatory issues, spectrum availability, mobile operators, and mobile infrastructure equipment vendors. In addition, the firm provides analysis across horizontal technology suppliers including RF semiconductor materials, RF semiconductor/components, and RF subsystems. Our goal is to provide our clients with critical market analysis and information.

EJL Wireless Research believes it has a corporate responsibility, both local and international, in giving back to the community. Please visit our website for more information about the charitable organizations it supports at: http://www.ejlwireless.com/corporate_responsibility.html.

EJL Wireless Research is managed by Earl Lum. Mr. Lum has over 25 years of experience within the wireless industry including 8 years as an Equity Research Analyst on Wall Street. The company is headquartered in Salem, New Hampshire. For more information about EJL Wireless Research, please visit the company's website at www.ejlwireless.com.

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