

Press release from Gapwaves AB (publ)

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Gapwaves presents active 5G-antenna with integrated GaN power amplifiers

Following the release of an active 5G-antenna in August 2018, Gapwaves now presents a second release using Qorvo's GaN-on-SiC technology. The second release of the active 28GHz antenna demonstrates high EIRP with low power consumption while maintaining good thermal handling, which is essential for the power amplifiers. This solution, demonstrating Gapwaves' waveguide antenna technology and Qorvo's GaN front-end module, represents one of few solutions meeting the future performance needs of 5G Mobile Access and Fixed Wireless Access networks.

Gapwaves presents a second release of its 28GHz active 5G-antenna with integrated GaN front-end MMIC's from Qorvo, a leading provider of innovative RF solutions. The 28GHz high EIRP beam forming antenna with a high performing filter and transition from PCB to waveguide is a further development from the previous beamforming antenna. The integration of the dual channel GaN front-end module together with the beamforming chip-set demonstrates a state-of-the-art prototype built on standard components and Gapwaves waveguide technology. Measurements performed on the prototype have shown very good performance, high antenna efficiency with low losses and high EIRP, confirming the results that were presented earlier. The building practice of the active antenna has also shown excellent thermal performance.

The antenna prototype and measurement results will be presented at Mobile World Congress in Barcelona from February 25-28. Gapwaves waveguide solutions provide telecom equipment suppliers with a platform to develop millimeter wave products with exceptional coverage and performance for e.g. 5G Mobile Access or Fixed Wireless Access. Further releases of the 28GHz 5G-antenna will include features such as up- and down-conversion and digital beam forming.

"The release of the 28GHz 5G-antenna further emphasizes the high performance of Gapwaves waveguide technology. The solution with Qorvo GaN integrated front-ends is very interesting for 28GHz systems such as 5G Mobile Access and Fixed Wireless Access as the test results confirms the combination of high EIRP with low power consumption" says Thomas Emanuelsson, CTO Gapwaves.

"Built on standard components and Gapwaves waveguide technology, this product is one of few on the market that truly demonstrates a solution that meets the requirements of future 28GHz 5G-networks. Power consumption and large coverage are key elements when realizing the future's millimeter wave mobile networks. Our second release of Gapwaves 5G antenna is really a milestone on this journey" says Lars-Inge Sjöqvist, CEO Gapwaves.

Roger Hall, general manager, Qorvo High Performance Solutions, said, "Qorvo is excited to be supplying products that demonstrate 5G mmW solutions, including Gapwaves unique antenna application. Qorvo's innovative 5G products leverage decades of millimeter RF design, and have helped conduct dozens of 5G field trials. Our differentiated GaN solutions are now addressing complex network requirements that are making 5G a reality."

For more information, please visit www.gapwaves.com or www.qorvo.com or contact:

Lars-Inge Sjöqvist, CEO Gapwaves AB
Phone number: + 46 736 84 03 56
E-post: lars-inge.sjoqvist@gapwaves.com

Per Andersson, CFO Gapwaves AB
Phone number: +46 709 39 53 27
E-mail: per.andersson@gapwaves.com

Gapwaves certified adviser is G&W Fondkommission AB

GAPWAVES

Phone number: +46 (0)8 503 000 50

E-mail: ca@gwpaital.se

www.gwkapital.se

About Gapwaves AB

Gapwaves originates from research conducted at Chalmers University of Technology and was founded in 2011. Gapwaves vision is to be the leading supplier of active antenna solutions. Gapwaves develops waveguide and antenna products based on the patented GAP waveguide technology. The company's markets are e.g. telecom radio links, automotive radars, surveillance systems, and space observatories.

Gapwaves share (GAPW B) is traded at Nasdaq First North Stockholm and G&W Fondkommission is appointed Gapwaves AB's Certified Advisor.

About Qorvo

Qorvo (NASDAQ:QRVO) makes a better world possible by providing innovative Radio Frequency (RF) solutions at the center of connectivity. We combine product and technology leadership, systems-level expertise and global manufacturing scale to quickly solve our customers' most complex technical challenges. Qorvo serves diverse high-growth segments of large global markets, including advanced wireless devices, wired and wireless networks and defense radar and communications. We also leverage unique competitive strengths to advance 5G networks, cloud computing, the Internet of Things, and other emerging applications that expand the global framework interconnecting people, places and things. Visit www.qorvo.com to learn how Qorvo connects the world.