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## NUWAVES ENGINEERING ANNOUNCES THE COMPLETION OF A 20 WATT C-BAND RADIO FREQUENCY BIDIRECTIONAL AMPLIFIER MODULE FOR COMMUNICATIONS, TELEMETRY AND ELECTRONIC WARFARE MARKETS

Middletown, Ohio, June 21st, 2017 – NuWaves Engineering, an international Radio Frequency (RF) and Microwave solutions provider, announces the completion of the IRaD phase for their miniaturized C-band bidirectional amplifier (BDA), to be added to their line of NuPower Xtenderth bidirectional amplifier products.

The NuPower Xtender<sup>TM</sup> C20RX01 BDA module, part number NW-BA-C-20-RX01, follows the recent releases of both the C-Band Low Noise Amplifier (HILNA<sub>TM</sub> CX) and the C-Band Power Amplifier (NuPower<sub>TM</sub> C20R01) as NuWaves looks to push their presence and expertise to higher-frequency applications. This BDA offers the performance of a traditional power amplifier coupled with a low noise amplifier for receive mode, providing an amplification solution in one miniaturized package for half-duplex transceivers.

The NuPower Xtendertm C20RX01 provides saturated RF output power of 20 Watts in transmit mode and 15 dB of gain in receive mode across the C-band frequency range of 4.4 GHz to 4.9 GHz. For complex waveforms that require a linear PA, the C20RX01 has an error vector magnitude (EVM) of 4% at 2 Watts of output power. The NuPower C20RX01 has been designed to operate flawlessly with constant envelope, GFSK, OFDM, and LTE-based waveforms, allowing maximum range extension for communication links that utilizes these waveform types.

With a nominal input drive level of 0 dBm, the NuPowertm C20RX01 offers an impressive 30 dB of RF gain. Further, the PA's aluminium chassis features improved heat dissipation characteristics for higher-temperature operation, and at a compact size it is small enough for integration into a wide variety of air- or ground-based tactical, test or training platforms.

"We are excited to offer this bidirectional amplifier module. This product is targeted at the military communications market, including unmanned aircraft systems (UAS), filling the gap in the market for small bidirectional amplifiers," said Jeff Wells, President and CEO of NuWaves Engineering. "The NuWaves' team takes pride in our ability to support our clients with best-in-class RF solutions, rapidly fulfilling the ever-changing needs of the Warfighter."

An RF engineering powerhouse, NuWaves offers a broad range of design and engineering services related to the development and sustainment of key communications, telemetry and electronic warfare systems, as well as a complete line of commercially available RF products. NuWaves' products include wideband frequency converters, high-efficiency and miniature solid state power amplifiers and bidirectional amplifiers, high intercept low noise amplifiers and miniature RF filters. NuWaves Engineering...Trusted RF Solutions<sup>TM</sup>.





