

# KA-MULTIBAND DIAMOND SERIES

More Power in a Smaller Package

Another first from  
EM Solutions



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EM Solutions now offers unprecedented bandwidth across the Ka-band frequency range in the smallest and lightest packages commercially available.

With a passion to inspire customers globally as a technology developer of the most innovative microwave and on-the-move radio and satellite products, it comes as no surprise that the EM team has once again created more 'firsts'. Welcome to the new Ka-Multiband Diamond Series.

Recognising room for improvement in previous generation L- to Ka- band BUCs the EM team set to find a better solution. Previously, almost all satcom BUCs used direct up-conversion architecture with narrowband RF filters, and could convert only to a single and pre-selected frequency span within the broader Ka-band spectrum. The new EM Solutions nanoBUC HUB converts any modem signal to anywhere within the 28-31 GHz frequency spectrum, and its linearizer can be programmed to compensate for the distortion introduced by many types of power amplifiers that follow in the transmitter chain.

EM Solutions Ka-band Gallium Nitride (GaN) nano-BUC power amplifier products are smaller, lighter and more power efficient in their respective output power classes and depending on the requirements, can cover the complete Ka-band frequency range in a single unit.

GaN based MMICs intrinsically offer more linear power across a wider operating bandwidth with a greater efficiency, compared with previous GaAs technology. EM Solutions is capitalising on these benefits by coupling its new range of GaN based SSPAs – available with linear output powers of 16, 25, and 50W - with its new upconverter and linearizer, the nanoBUC HUB.

This new generation of BUC/ SSPAs offers more power, better linearity, wider frequency span, enhanced user interface and the smallest form factors available on the market. Available as single package integrated BUCs or stand-alone power amplifier units with separate nanoBUC HUB, this new range of Ka-band Multiband GaN products can achieve output powers of up to 100W at any frequency in the Ka spectrum. All in the smallest form factor and with the highest efficiency on the market!

### Products available

- 355 Series Hub
- 357 Series SSPA (16W and 25W)
- 360 Series BUC (15W and 25W)
- 322 Series BUC (40W and 80W)

### What you'll get from the Diamond Series

- 1dB extra in linear power
- Only product that offers up to 3GHz of bandwidth in a single unit
- Up to 50% less DC power consumption
- Up to 50% lower weight
- Up to 50% less dimensional volume
- First to Market with GaN technology at Ka Band for these power levels

For more information on the EM Solutions Ka Multiband Diamond Series visit <http://www.emsolutions.com.au> or talk to the team on [info@emsolutions.com.au](mailto:info@emsolutions.com.au)

