

INTRODUCING The Next Generation ModuMAX and QuadMod SSPAs

No Down Time: Quality Where It Counts

More than 750 General Dynamics' Solid State Power Amplifier Systems have been fielded over the last 15 years without a single 'off-the-air' event.

Plug-and-Play Amplifier Maintenance

There is no other product offering in the market that provides the one to three-minute plug-and-play maintenance capabilities that ModuMAX and QuadMod hot-swappable amplifiers offer.

Complete Control

General Dynamics' state-of-the-art user interface control offers color touch-screen control and an embedded web page interface for remote monitor and control utilizing robust, secure, industry standard networking protocols.

Ultimate Power

Both ModuMAX and QuadMod amplifiers deliver prime power operational savings through active RF module configurations that boast complementary, automated, ready-to-power-up RF modules availability.

And All Secure

Both the ModuMAX and QuadMod Ku-Band SSPAs provide a secure environment for systems management through the use of Simple Network Management Protocol version 3 (SNMPv3). SNMPv3 provides confidentiality through the use of packet encryption; message integrity to ensure that a packet has not been altered while in transit, and authentication that assures the received message originated from a valid source.

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Superior Hot Swappable Components and GaN-Based Technology Make ModuMAX and QuadMod the Most Reliable and Versatile SSPAs Available Today.

General Dynamics is proud to introduce the next generation ModuMAX and QuadMod Solid State Power Amplifiers (SSPAs). These exciting new products offer increased RF output power in a smaller package for ease of operations and expanded services.

The ModuMAX and QuadMod enhanced design offers improved linear performance, higher reliability and increased efficiency all within a true hot-swappable amplifier chassis.

General Dynamics' advanced technology leads the market in true hot-swappable architecture and is designed for robust applications where 100% uptime is required. The new GaN power amplifiers can increase profitability through its high linearity enhancements. These hot-swappable amplifiers provide outstanding throughput and flexibility for single and multi-carrier operations.

General Dynamics' Gallium Nitride (GaN)-based amplifiers are completely modular, offering saturated power from 500 Watts up to 5 kilowatts in Ku-Band. Patented technology uses hot-swappable, plug-in RF modules, power supplies, and electronic assemblies to maximize performance in SATCOM systems. A leading-edge software interface provides customer monitoring of amplifier performance along with virtual diagnostic support and service through the interface.

The patented ModuMAX and QuadMod SSPA hot-swappable component architecture minimizes real-time repairs to less than three minutes for modular replacement without any service impact. There are no other amplifiers in the market that can match the plug-and-play maintenance ease that ModuMAX and QuadMod hot-swappable products provide.

GaN Rewards

GaN Transistors Offer Improved Linear Performance, Higher Reliability and Increased Efficiency

GaN offers a 'softer' compression curve which helps to avoid signal distortion in phase and amplitude and interference to adjacent communications signals.

In addition, GaN is capable of tolerating higher transistor junction temperatures than competing technologies which allow for operating at higher temperatures or higher power densities — this increases Mean-Time-Between Failure rates resulting in extending operational life.

All major components in the General Dynamics' amplifier lineup can be monitored and controlled at the system level and through customer controlled applications. The new designs deliver improved operational efficiency and flexible power levels as GaN provides improved linearity for the lower power settings as well as support for very high power applications.

Available Now

The next generation Ku-Band ModuMAX and QuadMod SSPAs continue to offer industry-leading hot-swappable capabilities along with improved linearity and configurable designs.

The new ModuMAX offers saturated power up to 3,000 Watts in a single rack cabinet.

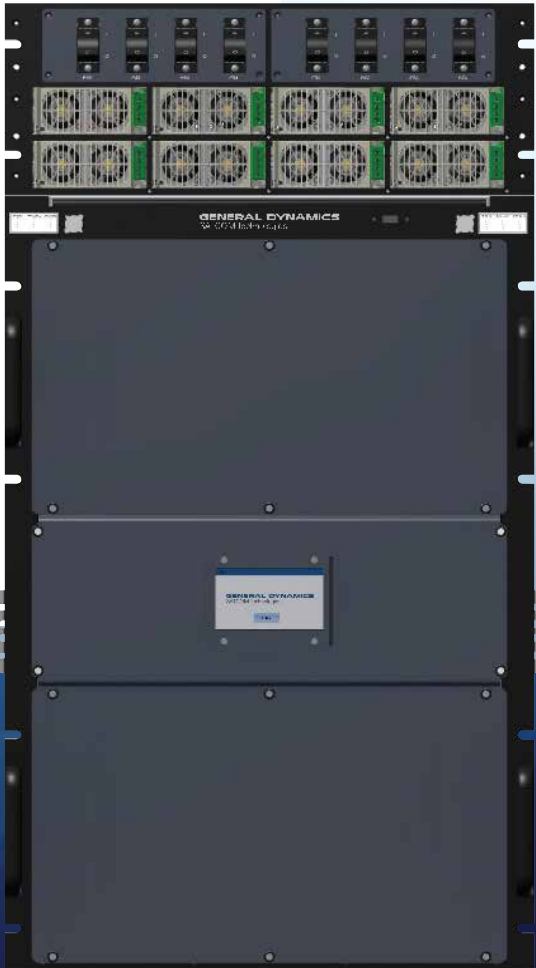
General Dynamics' products are designed with the highest operational integrity for mission critical applications. These new power levels provide excellent support for higher power applications, such as commercial, military, government and teleport operations.

General Dynamics' new Ku-Band GaN product line-up includes the following power levels:

- 500 W QuadMod
- 1000 W QuadMod
- 1100 W ModuMAX
- 1900 W ModuMAX
- 3000 W ModuMAX
- 5000 W ModuMAX

Compare These Features:

- GaN-based technology delivers the required linearity (-25dBc IMD suppression for a 2 tone CMPL) with only 3dB of backoff from P_{SAT}
- Both the ModuMAX and QuadMod systems feature hot swappable RF Modules, Power Supply Modules, Cooling Fans, System Controllers and System Interfaces
- Plug and play system components are replaceable in less than three minutes without system shutdown or restarts
- A single-chassis is self-redundant as it is designed for 100% uptime with hot-swappable components
- These unique amplifiers can operate in single-chassis self-redundant footprints as noted above, or can be used in redundant configurations in the most rigid of operational requirements
- Both ModuMAX and QuadMod offer an industry leading full three-year warranty
- GaN-based models have an MTBF of 150,000 hours.



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