

New 4RU Rack Mount

# High Power Pulsed Amplifier

4.0 kW X-Band Chassis



Teledyne Paradise Datacom introduces its line of **GaN High Efficiency Solid State High Power Pulsed Amplifiers** for use in radar applications and ship-board environments.

This new SSPA represents an ideal pathway for Operators seeking to upgrade their existing legacy radar platforms – typically TWT, Magnetron, or Klystron-based - with a newer generation of technology. Solid state technology delivers superior SWaP, power density, scalability, and performance over a longer life cycle.

These amplifiers draw upon Teledyne Paradise Datacom's rich history in the design and production of Gallium Nitride (GaN) based SSPAs.

The amplifier is designed for installation in a standard 19" equipment rack, and features forced-air-cooling with hot-swappable fan trays at the front panel. Each amplifier takes up 4 rack units (4RU).

The **High Power Pulsed Amplifier** may be connected over an ethernet connection to a PC for remote monitor and control of the unit.

## FEATURES & BENEFITS

- For Defense-related applications
- Ideal for Shipboard requirements
- Designed for navigation, targeting, tracking
- Superior SWaP and power density
- Configurable for diverse radar platforms
- Scalable to address other power levels
- Longer life cycle than legacy systems
- Suitable for commercial navigation & weather/air traffic control systems
- Forced-air convection cooling system with hot-swappable fan trays
- Optional AC power

# High Power Pulsed Amplifier

4RU Rack Mount / 4.0 kW X-Band Chassis

## SPECIFICATIONS

| PARAMETER                                   | NOTES                | LIMITS      | UNITS   |
|---|----------------------|-------------|---------|
| Frequency Range                             |                      | 9 to 10     | GHz     |
| Output Power, Saturated (P <sub>sat</sub> ) | Typical              | 66.1 (4074) | dBm (W) |
| RF Duty Cycle                               | Maximum              | 10          | %       |
| Pulse Width                                 | Range                | 1 to 100    | μs      |
| VSWR  | Maximum              | 1.5:1       |         |
| RF Input                                    |                      | -1 to +1    | dBm     |
| Average Power Consumption                   |                      | < 3200      | Watts   |
| Voltage                                     |                      | 48.0 ± 1%   | VDC     |
|   | w/ optional AC power | 220         | VAC     |

## ENVIRONMENTAL SPECIFICATIONS

| PARAMETER             | NOTES | LIMITS   | UNITS |
|-----------------------|-------|----------|-------|
| Operating Temperature |       | 0 to +40 | °C    |
| Operating Humidity    |       | 0 to 90  | %     |

## MECHANICAL SPECIFICATIONS

| PARAMETER            | NOTES       | LIMITS                           | UNITS      |
|----------------------|-------------|----------------------------------|------------|
| Dimensions, 4RU      | (H X W X D) | 7 X 19 X 17<br>(177 X 483 X 432) | in<br>(mm) |
| Weight               |             | 51.0 (23.2)                      | lbs. (kg)  |
| Connectors           |             |                                  |            |
| RF Input             |             | 50Ω SMA                          |            |
| RF Output            |             | WR-90 UG136 B/U                  |            |
| Pulse Gate Input     |             | 50Ω BNC                          |            |
| DC Prime Power Input |             | 23 SHELL, MIL-DTL                |            |
| Ethernet Control     |             | RJ45 (RJF21N)                    |            |

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