

**DEFENSE**

**Powering Your Next Mission**  
**Air | Ground | Sea**



**Traveling-Wave Tubes (TWTs)**



**Klystrons & Active/Passive Components**



**Magnetrons & Crossed-Field Amplifiers (CFAs)**



**Microwave Power Modules (MPMs)**

- **Electronic Attack / Electronic Warfare Support / Electronic Protection (EA/EWS/EP)**
- **Secured Communications**
- **Missile Defense**
- **Threat Simulators**
- **Unmanned Aerial Systems**



**Together, We Can Go Farther.**

F-16 image courtesy of Jamie Hunter/Aviacom.

# DEFENSE

## OVERVIEW

Stellant has been a leading supplier of RF systems for the defense industry for decades. Our products meet and exceed the stringent requirements for operation and durability in today's advanced radar, EW and communication systems. Whether your application requires TWTs, MPMs or Linear Accelerators our miniature and lightweight products provide state-of-the-art power, bandwidth and efficiency for sea, airborne, and ground-based applications.

## TRAVELING-WAVE TUBES (TWTs)

Stellant has delivered over 30,000+ Traveling-Wave Tubes (TWTs) for various defense missions as the leading domestic supplier of TWTs. For over 60 years Stellant has been pushing the boundaries of physics to detect, protect and connect people through exceptional technology designed to last in the most harsh environments and sometimes for decades.

At our sites in Torrance, CA and Williamsport, PA, scientists, engineers, technicians and operators share unrivalled knowledge and objectives, ensuring Stellant is powering a safer, more aware and connected world—with our tubes!



Ring-Bar TWT



Miniature TWT



Millimeter-Wave TWT



Helix TWT



Coupled Cavity TWT

**From UHF- to V-B, with RF output power to 600+ watts**

## MICROWAVE POWER MODULES (MPMs)

Stellant Systems is the industry leader in Microwave Power Modules (MPMs), having delivered thousands for use in some of the aerospace and defense industry's most highly-effective platforms. Our MPMs typically include a miniature Helix Traveling-Wave Tube (TWT), a Solid-State Amplifier (SSA) driver and a miniature power supply.

Our MPMs are qualified for space, ground, sea and/or airborne applications and are typically used in Unmanned Aerial Vehicles (UAVs), Radar and ECM systems, portable and mobile SATCOM systems, and point-to-point communications.

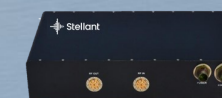
**From 2 to 235GHz, with RF output power to 300+ watts**



Millimeter-Wave  
18 – 40 GHz, 100 W



Low Band  
2 – 6 GHz, 70 W



E-Band Secure Uplink  
81 to 86 GHz, 100 W



High-Band  
6.5 – 18 GHz, 200W

### KLYSTRONS

Our Low-power klystrons are used as oscillators in terrestrial microwave relay communications links, while our high-power klystrons are used as output tubes in UHF television transmitters, satellite communication, radar transmitters, and to generate the drive power for modern particle accelerators.

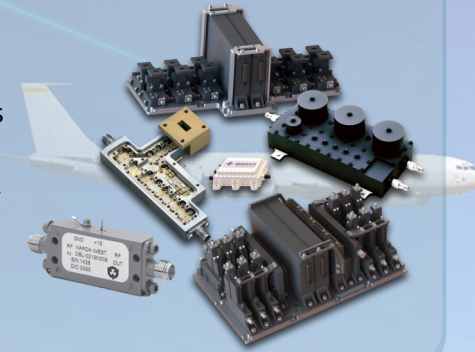


### RF COMPONENTS

We are a trusted partner for RF, microwave and millimeter-wave components and subsystems, serving global connectivity and

#### From UHF to V-Band

- \* RF Filters
- \* Power Combiners
- \* Multiplexers
- \* Low Noise Amplifiers
- \* Receivers



### CROSS-FIELD AMPLIFIERS

Stellant has over 50 years of Cross-Field Amplifier (CFA) production and development.

**From UHF to X-Band with power levels from 60 kW to 5 MW peak**

#### Key Features

- \* Ideal for radar systems requiring both high peak and high average power
- \* Medium bandwidth, moderate gain, high-efficiency
- \* Utilizes long life cold cathode technology



### MAGNETRONS

Our magnetrons power the military radars that are used to protect assets and detect hazards across land, air and sea. They are specially designed to operate at extremely high frequencies and with very low noise levels to quickly detect small or complex threats at long range.

**From L- to Ka-Band**



### THYRATRONS

Stellant produces a broad line of metal ceramic hydrogen Thyratrons that are capable of switching voltages up to 100 kV and currents up to 20,000 amps.

The tubes are used for a variety of applications, including radars, particle accelerators, broadcast transmitters, medical and industrial lasers.



# Together, We Can Go Farther!

Stellant Systems is a partner for civil, military, and commercial organizations whose missions seek to ensure a safe, aware, and connected world.

We are a premier manufacturer of critical spectrum and power amplification systems for defense, space, medical/scientific and industrial customers worldwide.

## History of Innovation

Our business started as Charles Litton's Engineering Laboratories in 1932 (Redwood City, CA) and Howard Hughes Microwave Tube division in 1959 (Culver City, CA).

Along the way, there have been multiple acquisitions and consolidation of divisions that operated under larger organizations such as Sylvania, Loral, GM Hughes, Sperry, GE, RCA, Boeing, Raytheon & L3Harris—to name a few.

This heritage is preserved and continues today as Stellant Systems.

## Our Business

- \* Approximately 900 employees
- \* 3 manufacturing facilities — all ISO 9001:2015, AS9100:2016, DCMA certified
- \* ONLY Vertically Integrated Space TWTA supplier in the world
- \* ONLY manufacturer of space-qualified TWTs in the USA



StellantSystems.com



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