

# Delivering the most advanced mmwave solutions

### Overview

mmTron has the most linear and efficient power amplifiers in millimeter wave (mmwave) for 5G, SATCOM and Aerospace and Defense markets. mmTron's mmwave GaN, GaAs, SiGe, InP, and RFSOI products are highly differentiated in the marketplace and address the insatiable appetite for bandwidth in 5G, SATCOM, military, aerospace, satellite and the commercial communication markets.









# **Opportunity**

The exponential growth in data rates and the increasing need for bandwidth in applications such as mmwave 5G FR2, 600 Gbps PAM4, 76GHz ADAS, and phased array radar presents the opportunity for innovative broadband, high power, highly linear and efficient products.

### Solution

mmTron has developed the most linear and efficient power amplifiers in Ka/Q/V bands. Complementing these innovative power amplifiers are a variety of cutting-edge mmwave solutions, such as complete front-end modules, turn-key mmwave phased array Baseband to Antenna solutions, distributed amplifiers, integrated broadband low noise amplifiers, ultra low-phase noise VCOs and high linearity up and down converters.

## Market Size/TAM

The total available market for mmTron products is \$4.1B by 2027 with > 37% CAGR.

### **Business Model**

mmTron offers complete mmwave solutions using a combination of its own mmwave GaN, GaAs, SiGe, InP, and RFSOI packaged ICs and off-the-shelf components. The integrated solutions address both niche applications demanding cutting-edge products, such as mmwave 5G, SATCOM, SSPA for space and high-volume markets in 20 to 250 GHz mmwave.



## Competition

mmTron solutions are optimized for mmwave bands with cutting-edge performance. The linearity (EVM) and efficiency specification of mmTron power amplifiers such at 25W at Ka-band are second to none. Compared to existing solutions, our products have improved performance, smaller size, weight and cost and can be tailored to each customers' needs.

### Milestones

- Developed a portfolio of mmwave ICs, 2019
- Developed high power mmwave packaging, 2020
- Seed Fund Raise, convertible Notes, Q2 2021
- Seed Fund Raise, convertible Notes, Q2 2022
- Taped out three sets of products, 2021
- Engaged with 21 customers, Purchase orders from 5 Customers
- Seven new products to launch in 1H of 2022

Silicon Catalyst Start Date: June, 2020

Headquarter: 275 Shoreline Drive, Suite 130, Redwood City, CA

### **Founders**

- Seyed Tabatabaei, CEO mmTron, CEO of Teramics, Ex-VP Endwave
- Mona Molaasgari, COO mmTron, Ex-VP Teramics

#### **Executives**

- Steve Llyod
- Pat Kelly
- Betty Kayton
- George Black

# **Board Observers / Advisors**

- Glen Riley
- Brian Crutcher
- Dennis Faerber
- Keith Lobo

- Richard Curtin
- Austin Erlich
- Anh-Vu Pham