


Fact Sheet – US Monolithics

A division of 

Background

Specializing in custom microwave technology design and manufacturing

The US Monolithics division of ViaSat Inc. designs and produces custom microwave technology for high frequency communication and sensing, including integrated millimeter-wave transmit and receive modules, components, and microchips. Capabilities cover the full range of frequencies from UHF- to W-band and applications in commercial, military, and space environments. US Monolithics areas of expertise include monolithic semiconductor design, millimeter wave MMICs, high power density design, high levels of functional integration, high-frequency packaging, and design for low-cost manufacturing.

The company is located southeast of Phoenix in Gilbert, Arizona.

Products

Optimized for customer needs

Products cover applications such as commercial internet over satellite transceivers, phased array transmit and receive modules for communications and sensing on multiple platforms, EHF Solid State Power Amplifiers (SSPAs), UHF DAMA SSPAs, and Link 16 L-Band SSPAs. Experience with numerous MMIC processes and foundries enables MMICs to be developed and produced on the optimal process and foundry. The ability to integrate controls, BIT, and other non-RF functionality into hardware helps optimize system architecture for its customers.

US Monolithics also excels in the area of high frequency packaging. The company has in-house ability to perform 2D and 3D mechanical designs and layouts, 2D and 3D electromagnetic designs and analysis, thermal simulations from MMIC channel to ambient, and a variety of structural simulations.

Strategic Value

Expands the ViaSat portfolio across a range of digital communication programs

While ViaSat expertise has been focused on the indoor terminal and modem side, US Monolithics enables ViaSat to expand its role to the complete user terminal, including the outdoor electronics. This technology has put ViaSat into a much stronger competitive position and moved it “up the food chain”, to provide more complete, integrated network terminals for wireless communication applications.

Through innovation from US Monolithics, the lowest cost and most advanced Ku-band and Ka-band 1- to 3-watt block upconvertors (BUCs) are priced at less than half of what they were just a few years ago.

ViaSat is using this expertise for both commercial and defense digital communication programs, but US Monolithics technology and products are available to any manufacturer or system integrator.

Key Customers

Mix of commercial , military and space

Commercial: WildBlue and Telesat, new broadband-by-satellite services that are experiencing rapid growth by targeting underserved households in the U.S. and Canada, are using US Monolithics to produce the outdoor electronics for their ViaSat consumer broadband terminals. US Monolithics has shipped more than 650,000 of its single-module, 2-watt Ka-band transceiver. The low cost of these transceivers is a key to driving satellite terminal price points down to levels acceptable for consumer services. With the addition of the KA-SAT and ViaSat-1 satellites, US Monolithics is providing an even more affordable, flexible Ka-band transceiver, offering improved network management.

Military and Space: Supports primes and antenna manufacturers such as Harris, Lockheed Martin, Ball Aerospace, and First RF. Also government agencies and related labs, such as MIT Lincoln Labs, U.S. Army CECOM, and AFRL.