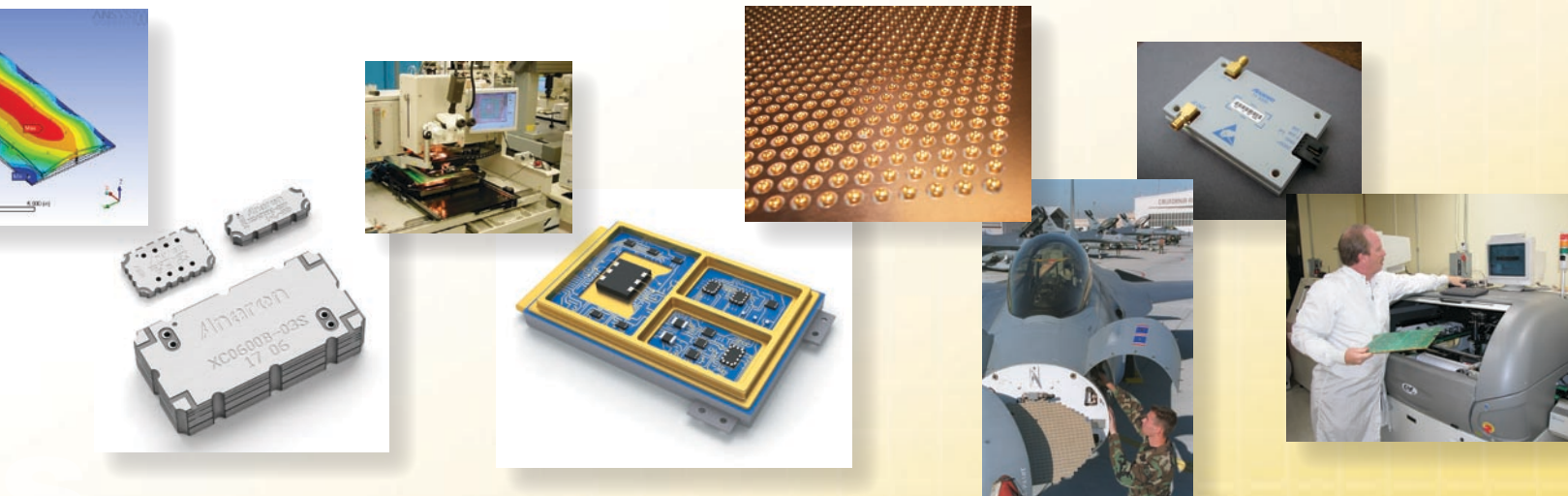


Performance PWB



Multimission, multifunction

Solutions for space & defense

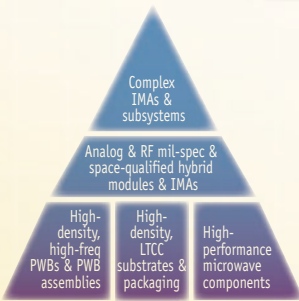
- > Complex, high-frequency solutions at all levels of integration:
 - high-precision building blocks — high-rel PWBs, LTCC packaging, high-performance mil-spec components
 - modules & assemblies — hybrid modules, complex PWB assemblies, IMAs, more
 - complex microwave subsystems — in support of EW, radar, or communications platforms
- > Active or passive solutions, DC to 44GHz
- > Analog, digital, mixed signal
- > Vertically integrated capabilities offer turnkey service-solution:
 - R&D/design-to-spec
 - PWB & ceramic packaging
 - Advanced assembly/build-to-print
 - Test development/test
- > Much more

Anaren®

What'll we think of next?™

800-544-2414 > www.anaren.com

One company, endless possibilities



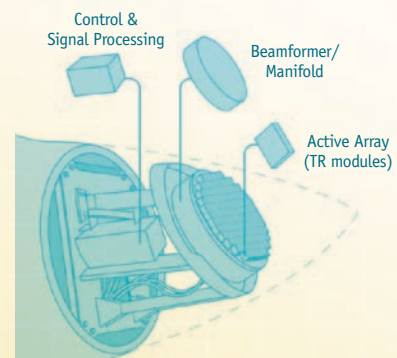
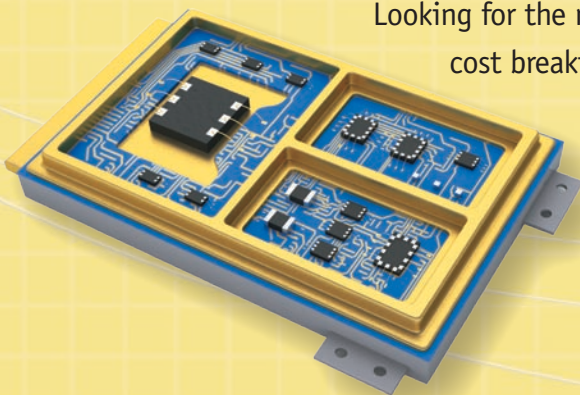
Anaren's vertically integrated capabilities are resulting in game-changing improvements in performance, footprint reductions, and cost. Plug and play our services to fit your needs.

- > three state-of-the-art facilities, with 300,000 sq. ft. of design, test, and manufacturing space
- > over 40 years of service to prime contractors, with a continuing commitment to *remaining* a supplier to Tier 1 OEMs
- > financially stable, growing, and committed to aggressive investments in equipment, technology, and talent
- > committed to customer-service excellence and early collaboration with our customers and vendors to find differentiated solutions

With a vision "to be a global leader in high frequency electronic technology"— and a proven core competency in providing integrated solutions and optimum, wideband RF-signal integrity from DC to 44GHz, our top-level capabilities include:

- > Precision building blocks — high-rel PWBs, LTCC, high-performance mil-spec components
- > Modules & assemblies — hybrid modules, complex PWB assemblies, IMAs
- > Complex microwave subsystems — in support of EW, airborne/ground-based radar, or communications platforms

Looking for the next microwave technology, footprint, performance, or cost breakthrough? Email, call, or visit our website for our free capabilities overview and to schedule an introductory presentation.



Our expanded S&D Group offers integrated solutions for next-gen systems like tomorrow's AESAs.

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R&D/Design-to-spec

- > Extraordinarily deep RF/microwave engineering bench
- > Other engineering disciplines include process, mechanical, test, physics
- > Robust modeling and simulation library, including:
 - circuit simulators
 - EM simulators
 - digital design toolkit
 - general purpose, finite element analysis (i.e.: linear static, frequency/buckling, thermal, non-linear, advanced dynamics)
 - full arsenal of CAD design tools



PWB & Ceramic packaging

Anaren offers advanced packaging options, supported by robust engineering, manufacturing capabilities (including Class 10,000 Clean Rooms), and stringent quality control:

High-reliability BWP

- > Wide range of technologies supported, including:
 - RF/microwave
 - composite/hybrid
 - sequential blind & buried via structures
 - step lamination/die cavity
 - embedded passives/components
 - thermal management
 - CTE constraintment
 - high-density interconnect
- > Tight tolerances
- > Extensive materials expertise (low Dk, high Dk, low loss materials, high Tg materials, more)
- > Choice of surface finishes

LTCC

- > Solutions from DC-44GHz, developed by industry experts using best-in-class equipment (compatible with DuPont, Ferro, and Heraeus materials)
- > Tight tolerances
- > Tremendous design flexibility (e.g.: up to 30 layers, numerous via placement options, multiple wrap options, plating, etc.).
- > Typical applications include:
 - frequency generation next-gen receiver/exciter modules
 - high-performance filtering custom circuit boards (including multilayer)
 - hybrid integrated circuits RF/microwave distribution (including IMAs)

What'll we think of next for you?

Performance PWB

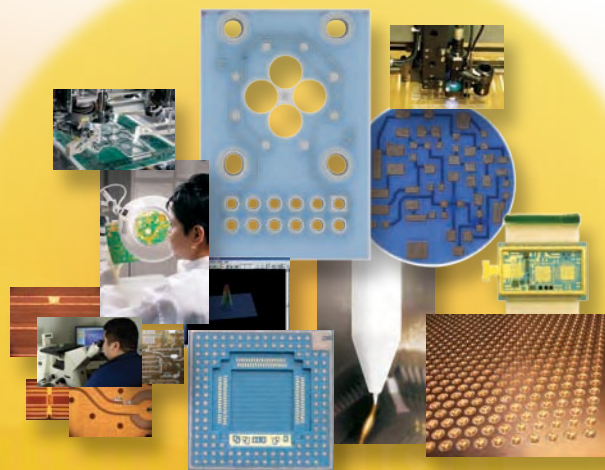
ES

RF multi-chip modules



Advanced assembly/Build-to-print

- > High-performance, high-reliability modules for military or space-based applications
- > Hybrids for use in motor control, actuators, power supplies, inverters, switches, and other power control applications
- > Formidable microelectronics engineering support (RF, module/circuit design, test)
- > State-of-the-art build-to-print/manufacturing:
 - automated wire bonding
 - automated die bonding & deep cavity die attach
 - precision fluid dispense
 - cleaning, hermetic sealing & leak detection
 - proprietary stacking
- chip & wire
- more
- > Robust testing capabilities
- > Wide range of materials (direct-bond or actively brazed copper on ceramic for power semiconductor, multilayer thick film, LTCC, co-fired ceramic, thin film, chip-on-board, etc.)
- > Service orientation — speedy prototyping (generally <12 weeks) and to-production cycle (12-18/mos)
- > Specialty products/ components include standard (amplifiers, motor drives, PEMs, linear regulators, DC-DC converters, filters, and RAD-hard components) and custom (hybrids, power-hybrids, multi-chip, RF)



Test development/Test

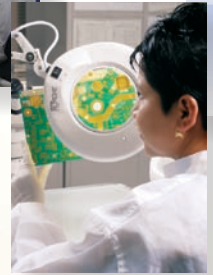
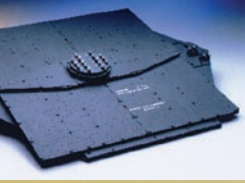
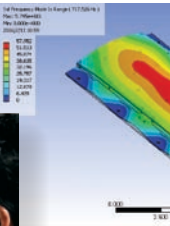
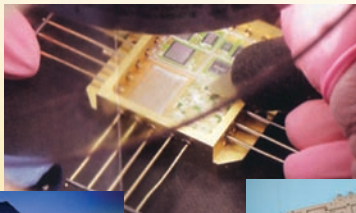
- > Our engineers work with yours to develop testing systems and regimens based on your requirements:
 - design & fabricate fixtures
 - write test code using LAB windows CVI
 - optimize level of automation
 - maintain flexibility for engineering & troubleshooting testing
- environmental tests include:
 - o vibration (room temp)
 - o mechanical shock
 - o salt fog
 - o humidity
 - o thermal cycle
 - o thermal shock
 - o burn-in temperature testing
 - o limited thermal vacuum
 - o EMI sniff test
 - o others as needed

Active & passive solutions

ryou?

What'll we think of next for you?

High-perfor



RF multi-chip module

More about Anaren

Anaren has been a valued supplier to the world's leading aerospace and defense primes since 1967 — where our proven expertise in RF and microwave engineering and manufacturing has played a critical role in terrestrial, maritime, airborne, and space-based radar, communications, and EW programs. Of additional benefit where size reduction, performance, materials know-how, and cost-containment are concerned — Anaren is also a world-leading innovator of standard and custom RF and microwave technology for the commercial wireless sector. Learn more about Anaren (NASDAQ: ANEN) at www.anaren.com today.

Active & p

multifun

PWB

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