

MillPack

MillPack provides CAD services and engineering consulting for the design of multi-chip modules, hybrids, custom semiconductor packaging and printed circuit boards for commercial and military applications including ITAR regulated. Our designs are found in applications such as satellites, medical MRI, cellular phones, guided missile systems, radars, power generation and distribution equipment, oil and gas exploration gear, power supplies, automotive and avionic control systems.

The wide array of component attachment options and diverse substrate and packaging materials suited for specific environments can present a daunting challenge on deciding how to define an electronic module. With over 30 years of experience, we take advantage of state-of-the-art technologies, advanced design software and the latest achievements on manufacturing processes and substrate materials, to focus on high manufacturability yields, quality and cost effectiveness.

Key Advantages

- Quick turn-around
- Real-time support
- Broad Technology expertise
- Quick quote
- Competitive pricing

Engineering Consulting and CAD Layout

- Schematic capture, substrate layout and mechanical drafting
- Design feasibility study / board density, electrical and mechanical constraints
- Reverse engineering from board samples, Geber files or other data
- Layer stack and dielectric definition for controlled impedance design
- Matched length, well balanced differential pair routing
- Knowledge of MIL standards and IPC standards as applicable, as well as FCC, UL, CE
- RoHS & Lead-free compliant design
- Blind, buried and stacked vias, laser microvias down to 3 mil diameters
- Embedded capacitors, inductors and thick-film printed resistors
- Signal Integrity, Power Integrity and Heat Management
- EMI / RFI shielding for cellular and WiFi circuitry used on computers and routers
- Mixed signal, high-speed and sensitive A/D circuitry used on MRI controller boards
- Power MOSFET circuits on aluminum clad substrates for motor and SMPS applications
- Power RF / microwave circuits up to 15 GHz on LTCC for space and military use
- High current density and high voltage circuits
- Hybrids and Multi-Chip Modules for engine control applications
- Chip carriers, Chip-scale packaging and stacked-chip packaging
- Single and multi-chip BGA, PGA and LGA designs on organic and ceramic substrates
- FR4 printed circuits, Flex and rigid-flex, Polyimide, BT
- Ceramics: LTCC and HTCC, Alumina, Aluminum Nitride
- Thick-films circuits including DuPont™ Fodel®
- Substrates with Kovar® ring and seal lid, brazed pins, cavities and lead frames

Software

We have selected a handful of packages capable of delivering fast and precise results.



Documentation

We accept inputs in a variety of electronic formats, even hand written. We stay in touch throughout the entire project cycle to ensure customers are up-to-date and comfortable with our progress, so we can deliver what they expect, when they expect.

Integration

Partnership with ISO 9001:2008 certified manufacturers provide the best integration design/manufacturing. Real-time interaction between customer, designer and manufacturer is imperative.

