



C-MAC MicroTechnology

>> The Future of Low Cost Modular Electronics in Defence

Date: Thursday 13th September, DSEI

Presented by

Matt Howchin – Head of Sales, Aerospace and Defence

Bob Hunt – Head of Engineering

>> Eurofighter and C-MAC



- **Typhoon Eurofighter**
 - **The perfect model of today's engineering excellence**
- **C-MAC's engineering competence has evolved leading edge modular electronic solutions for many aspects of the Typhoon, including the radar, munitions and avionics**





- **C-MAC MicroTechnology is a leading modular electronics and sub-system solutions provider**
- **We provide engineering design services and advanced technology manufacturing for our customers**

>> History



- **Over 60 years of electronics products and services into the defence industry**
- **Acknowledged to be one of the leaders in our field of**
 - **Hi-reliability**
 - **High density**
 - **Rugged**
 - **Opto-electronic assemblies**



>> C-MAC Programmes



F16



F22



Rafale



JAS Gripen



SAAB Viggen



M346 Trainer



EH101



NH90



Bowman
Radio



Bradley
Fighting
Vehicle



Sincgars Radio



INMARSAT 4



AMRAAM



International
Space Station



INMARSAT 3



Sea Dart



Sea Wolf



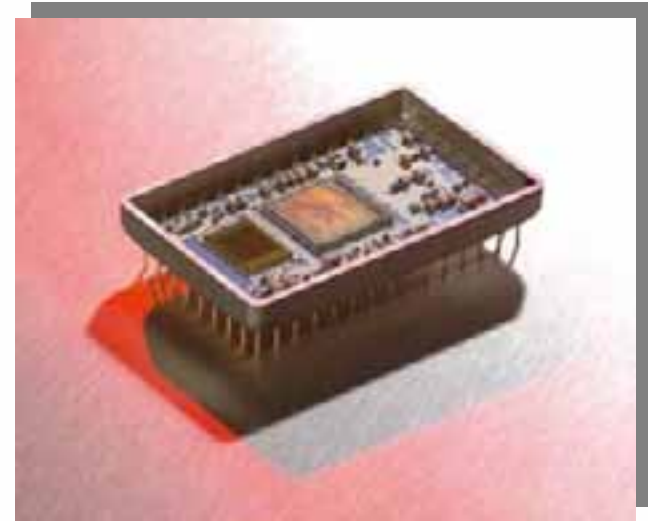
ASRAAM



Meteor

• Drivers

- Cost
- Size
- Reliability
- Functionality – Performance

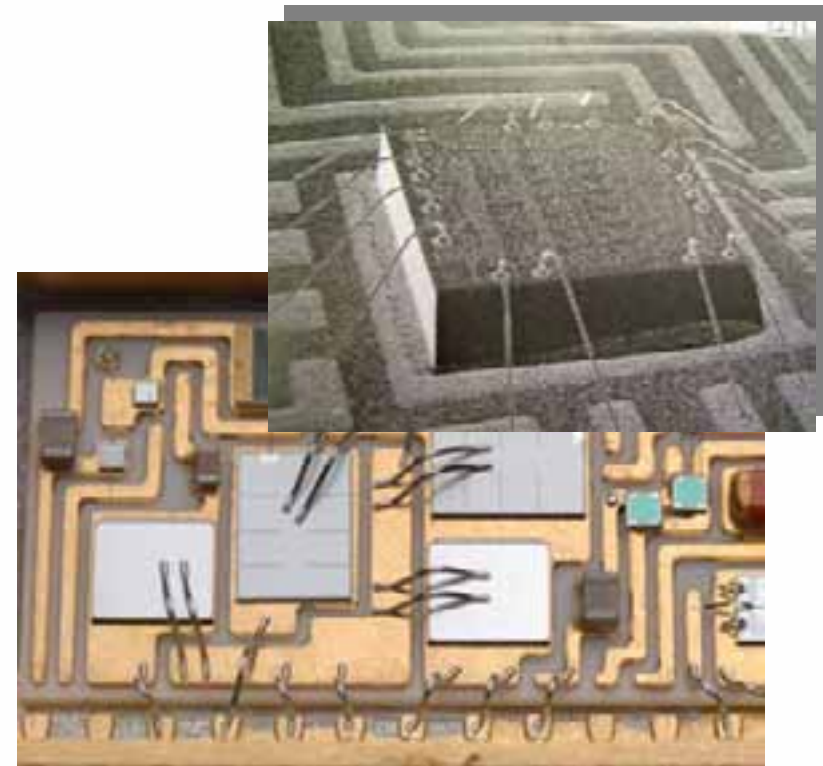


Current standards

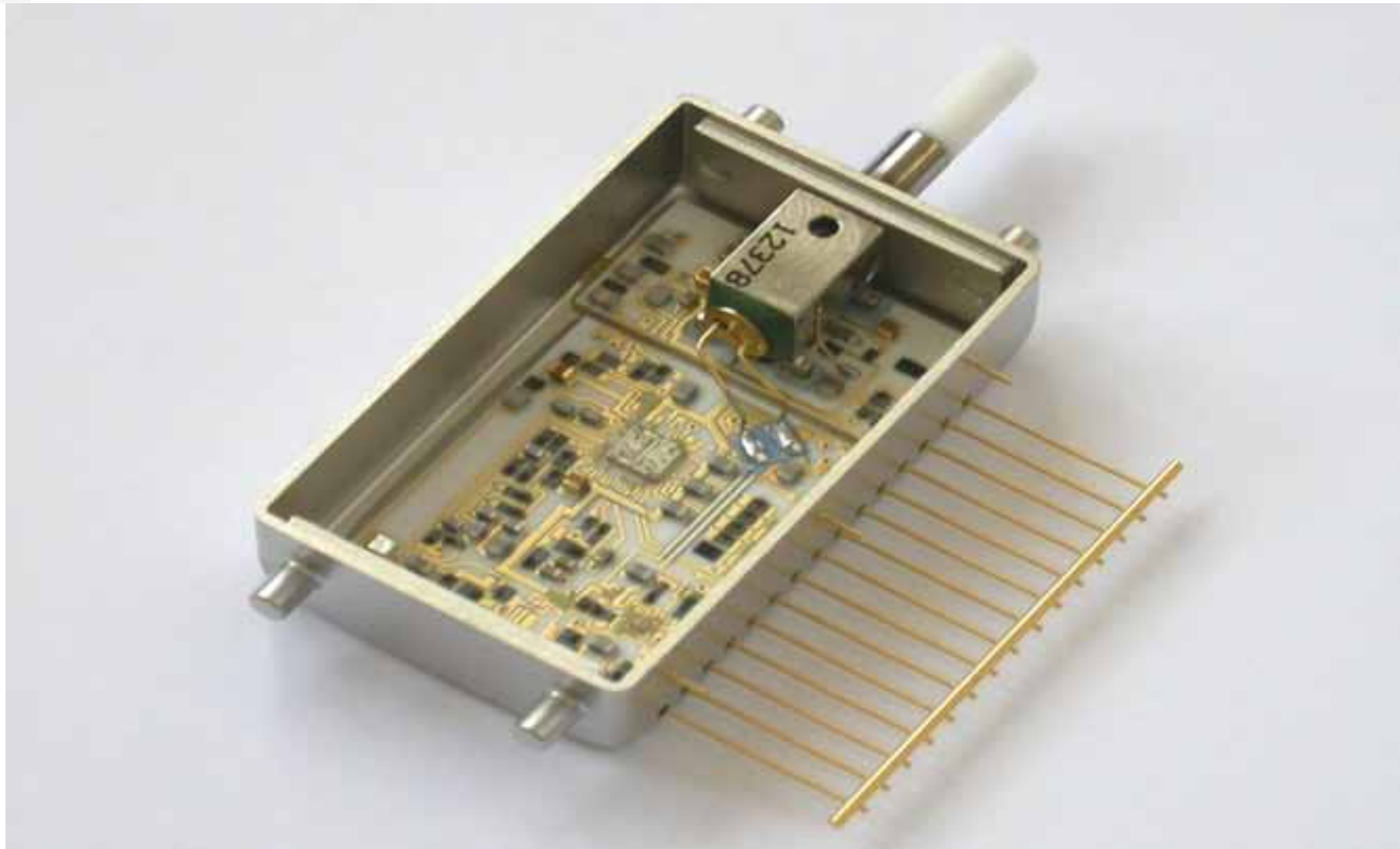
- **Modular solutions**
- **Conventional 'hybrid' technology**
 - **Metal (kovar) packages**
 - **Glass-to-metal 'feed throughs'**
 - **Ceramic based Thick Film Interconnect**
- **'Chip & Wire**



- **Thick film / hermetic hybrid solution is well established technology**
 - **Thick film technology**
 - **Direct Bonded Copper**
 - **LTCC**
 - **Epoxy adhesive**
 - **Wirebonding**
 - **Robust packages**
 - **Hermetic sealing**



» Case Study Fibre Optic Front End Transceiver



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