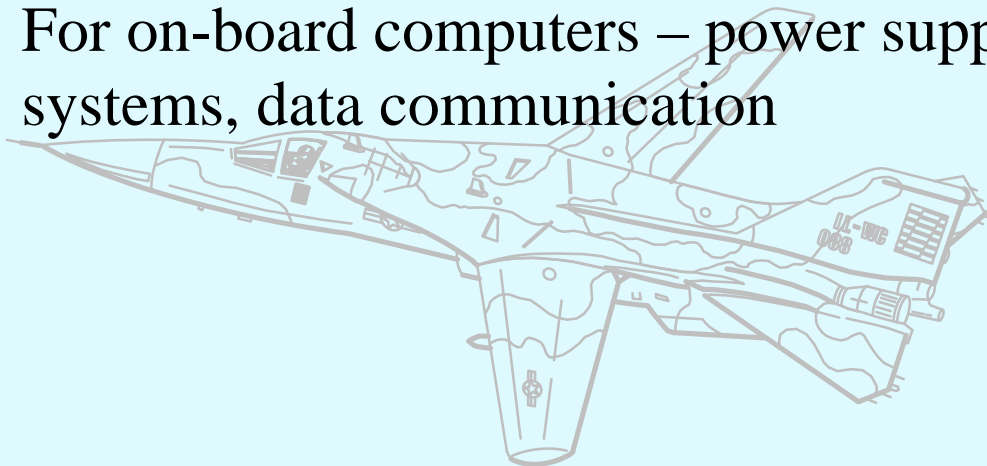# Aerospace and Defense Segment

Full range of components for the demanding environment of space, defense, and the avionics industries.

Aerospace and Defense

At **TEMIC Semiconductors, we provide a full range of components for the demanding environment of space, defense, and the avionics industries.**

- Long-term qualified supplier to commercial and military hi-rel

- Optimal combination of quality and performance

- For on-board computers – power supplies, guidance, and control systems, data communication

Products follow the stringent requirements of:

- MIL STD 883 Class S or SCC 9000
- MIL STD 883 Class B
- CECC 90000
- AQAP1/RAQ1
- ISO 9001

Product/line qualifications

- SMD, JAN, and CECC
- QPL/PPL for government agencies
  (ESA, CNES, MOD)

TEMIC Semiconductors

- Two entities with significant revenues: Siliconix and Matra MHS

- Strong worldwide sales and marketing network

- Large product line includes ASICs, Micros, Memories, and Power ICs

- Credible shareholders include Daimler-Benz Aerospace and Matra

- Focus on sub-system applications

- Preferred relationship to government agencies

- Dual-use strategy – migrate commercial technology to space markets

Solutions For

Space

- Launchers, satellites, experiments

Avionics

- Inertial navigation, GPS, flight control and fuel control units, cockpit displays, radar systems

Defense

- Seeker and guidance systems for missiles

Communications

- Tactical radio, encryption, warning radars

Subsystems

Space

- On-board data handling

- Configurable flight computer

- Image compression module

- Signal processors for radars

- Ruggedized notebook

- Low-power (switching for radar systems, small motor control, fuse control for tanks)

TEMIC
Semiconductors

Space

Space

- Launchers – Ariane 5

- Earth Observation Sat. – Spot 5/Helios 2, Meteosat, Envisat, Metop, Osiris

- Communication satellite: Stentor, Bimilsat, Worldstar, Eutelsat, Intelsat, Inmarsat, Globalstar, Iridium

- Scientific: MIR (DMS-R), ERA, COF, XMM, Hubble
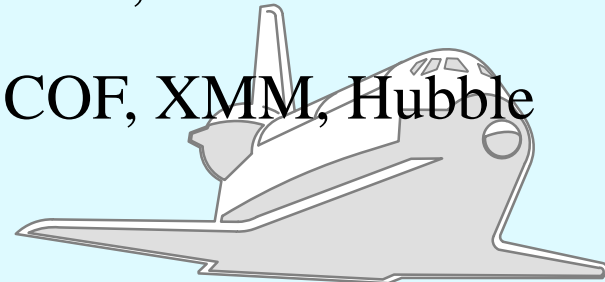
Aerospace and Defense

Aircraft

- Commercial: Airbus A3XX, Boeing 7XX

- Fighters: Mirage 2000–5, Tornado, Rafale, EFA, JAS/Grippen, F16, NH90, Tigre
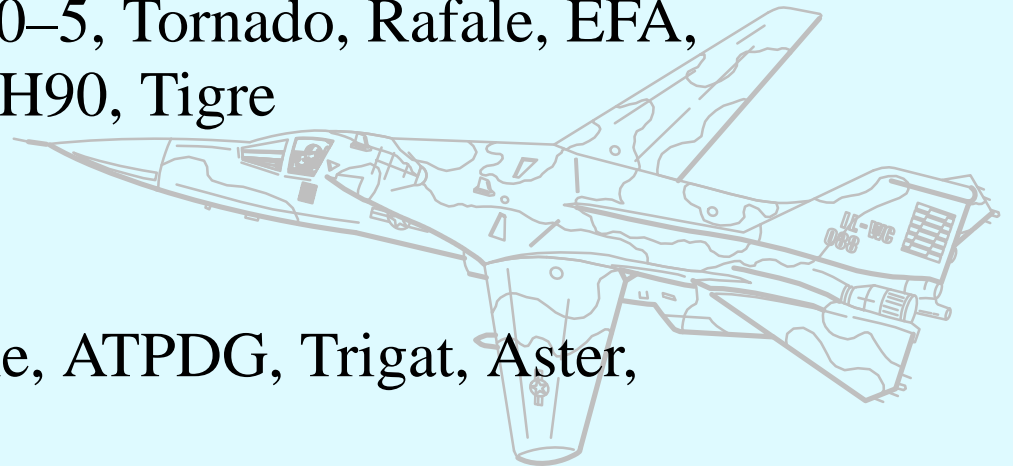
Missiles

- Mistral, Mica, Apache, ATPDG, Trigat, Aster, TOW2B, ERINT

Communications

- BATES and SINCGARS systems

Aerospace and Defense

Product Lines

Power Products

- MOSPOWER
- Power ICs
- Power modules
- LITTLE FOOT

Low-Power Discretes

- JFETs
- High-speed DMOS
- N- and P-channel transistors

Integrated Circuits

- Analog switches and multiplexers
- Wideband video switches and multiplexers
- MOSFET driver and PWM ICs
- Ruggedized plastic

ASICs

- Gate arrays from 400 to 500 Kgates
- Composite array with specific hard blocks: RAM, ROM, processors
- Embedded arrays
- Compass, standard cells
- High performance multi-chip modules
- EDA tools: Mentor, Cadence, Compass, Synopsys

Memories

- SRAM from 16 K to 1 Mbits
- Dual-port 1 K x 8 to 8 K x 16
- FIFO 512 to 16 K x 9

Micros

- 80C51 family
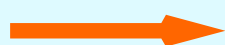- SPARC: 90C600, 90C700

Aerospace and Defense

ASSP for Aerospace

Radiation Tolerant

- DCT 29C80E

- EDAC 29C516E

- SPARC microprocessor chip set 90C600E
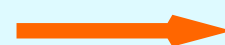
- Dedicated DSP structures: Viterbi, FFT

TEMIC
Semiconductors

Aerospace and Defense

Processor Architectures

Yesterday → *Today* → *Tomorrow*

Standard Products   **Dedicated ASSP Processor**   **High-Performance Embedded Processors**

SPARClet™
16-bit DSP
32-bit DSP

90C60XE

90C60X

80C51

1994   *1995*   *1996*   *1997*
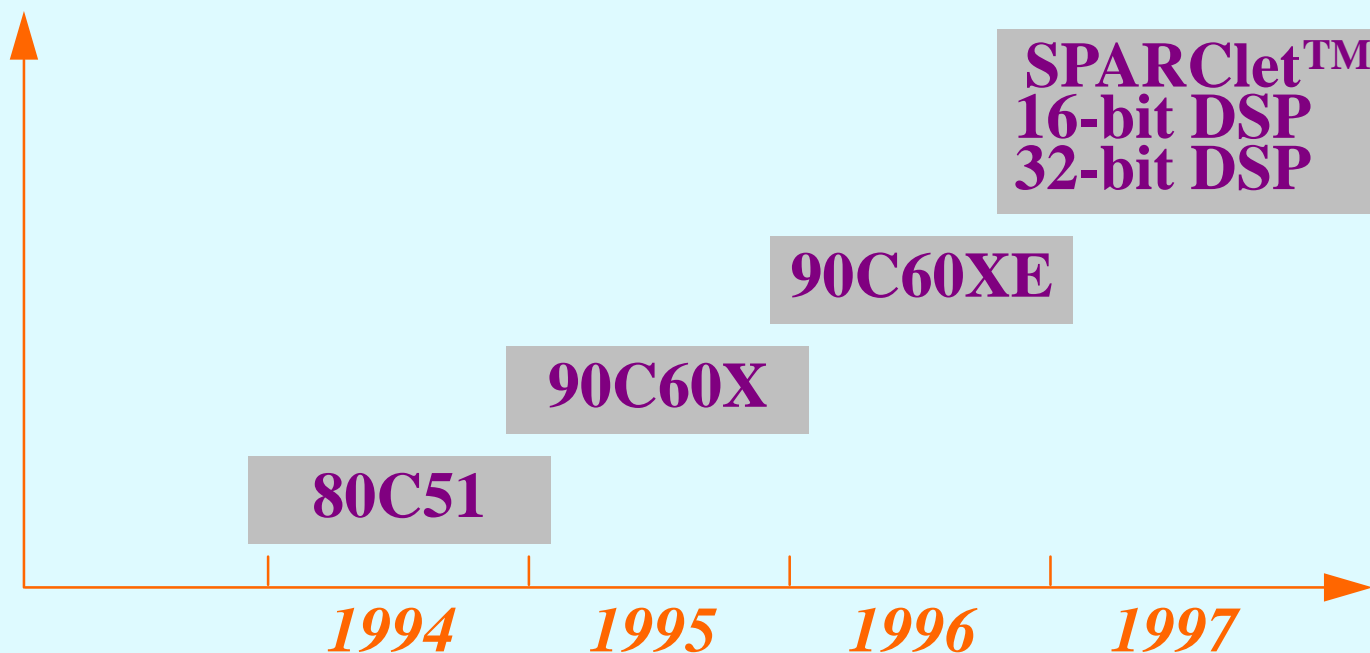
Typical Processor Applications

- Central Computer
  - 90C60XE chipset

- Coder/decoder for voice and data transmission, voice compression/decompression – data management system
  - 16-bit fixed point DSP

- High bandwidth signal processing (image, radar, etc.) and quick DSP breadboarding
  - 32-bit floating DSP

- Real-time control with embedded DSP
  - SPARClet™

- Real-time intensive processing (FFT, etc.)
  - Dedicated logic

Support Tools for Embedded ASSPs

- Easy to use hardware and software development tools

- System builder for reduced embedded systems development cycle time

- Evaluation boards for processors

- VHDL models

- Comprehensive literature