

Rad-hardened SPARC LEON4 SOCs

The E698PM radiation hardened processor is a high performance, high reliability, high integration and low power multi-core system-on-chip (SOC). Its symmetric multi-processing (SMP) architecture is compliant with the SPARC V8 standard.



Rad-hardened SIP memories/OBCs/devices

System-in-package (SIP) products that are ideal for harsh environments such as space. The range includes SDRAM, SRAM, NOR Flash, NAND Flash, MRAM, EEPROM, DDR, OBC (SPARC+Flash+RAM), MCES (FPGA+Flash+RAM) and custom designed parts.

DMON debug software for SPARC/ARM

DMON helps improve productivity by speeding up debugging of embedded software running on system-on-chips (SOCs) with one or more SPARC/ARM processor cores. It's unique GUI with register drill down, Python/Tcl scripting, data monitoring and remote access features facilitate testing and the quick identification and correction of bugs.



Sun Sensors

These analog and digital sun sensors have small size and weight, low power consumption, and a simple reliable design. They provide good measurement accuracy and field of view and are an excellent choice for the next generation of satellites.

Magnetorquers

OCE's magnetorquers contain soft alloy rods with high permeability, low residual magnetism and low loss. Switching and linear methods can be used to control the magnet current. The output magnetic moment can be customized, ranging from 1 ~ 200Am².

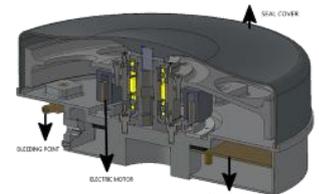


Magnetometers

For real-time measurement of the local geomagnetic field, satellite attitude measurement and satellite residual magnetism measurement. OCE's magnetometer uses a fluxgate sensor to measure the magnetic field strength on 3 axes and provide an analogue or digital output.

Reaction Wheels

OCE's reaction wheels are used in satellite attitude control systems. Each includes a brushless DC motor, reaction wheel body, base, bearing components and control circuit board.



Cameras

Miniature cameras designed to be mounted on a spacecraft platform and used to image parts of a satellite or spacecraft, allowing image-based health diagnosis for improved safety and reliability of the spacecraft.

Star trackers

More than 100 of these star trackers are in commission on satellites such as NS-1/2 and the JILIN-1 group. The majority of these satellites are used for earth observation, providing video and high resolution remote sensing data.

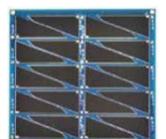


Li-Ion Batteries

OCE' Li-ion batteries are fully-enclosed in an aluminum alloy. Characteristics include high mechanical strength, resilience to impact and vibration during launch, high specific energy, long lifetime, and a wide working temperature range.

Solar Cells/Arrays

OCE's solar cells are GaInP2/GaAs/Ge on Ge substrate triple junction solar cells. The solar cell assembly is equipped with an external Si bypass diode, interconnectors and cover glass. The cells have high efficiency and high radiation resistance.



About OCE

O.C.E. Technology is a European company set up to provide high-reliability products and related software and services for demanding applications including aerospace. The company is supported by the Irish government and cooperates with the European Space agency in developing products to improve the productivity of embedded software developers.

Located in Dublin, OCE's products include a debug software tool for SPARC and ARM based systems-on-chip (SOC) devices, a range of radiation hardened SOC's including the Leon4 based E698PM, system-in-package (SIP) devices, and satellite subsystems.



Products, capability and partners

OCE has developed its debugging tool DMON with support from the European Space Agency (ESA,) and recently extended DMON to support ESA's new AGGA-4 SOC. Originally developed for a customer in China, DMON's unique features make it the debugging tool of choice when developing software for systems on a chip based around Sparc or Arm processors. DMON will continue to be developed to support new SOC's, and is available for evaluation from OCE's website.

OCE has a long-standing relationship with its principal Chinese manufacturing partner Zhuhai Orbita Control Engineering, a supplier of high technology and radiation hardened components to the aerospace sector in China. Orbita distributes OCE's products in China, and OCE has a worldwide distribution agreement for Orbita's products outside China. OCE also has agreements with other suppliers to the Chinese space program allowing it to provide a new range of satellite subsystems.

Of particular interest in a space context are OCE's system-in-package (SIP) products which are extremely robust, compact, light weight, and in many cases radiation hardened. Only a few companies in the world have mastered this technology. OCE offers a custom SIP design service for companies wishing to produce proprietary OBCs or other systems housed in an SIP package.

OCE has distribution partners in Europe, India and Russia. Its distribution partner in Europe is Dimac Red.

All registered trademarks are respected

For further details email or call:

Sales Department, O.C.E. Technology Ltd.,
NovaUCD, Belfield Innovation Park,
Belfield, Dublin 4,
D04 X8W9, Ireland.

Phone: +353 1 716 3530
Email: sales@ocetechnology.com



Distributor:-

