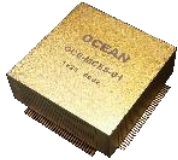
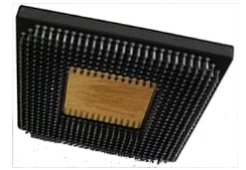


Rad-hardened SPARC LEON4 SOCs

OCE's Ocean 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.

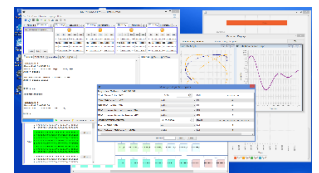


Rad-tolerant SIP memories/OBCs/devices

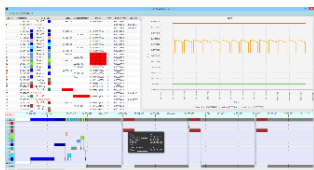
OCE's Ocean system-in-package (SIP) products that are ideal for harsh environments such as space. The range includes SDRAM, SRAM, NOR Flash, NAND Flash, MRAM, EEPROM, DDR, OBC (SPARC+Flash+RAM), MCEs (FPGA+Flash+RAM) and custom designed parts.

DMON debug software

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.



OCEOS Real-time Operating System (flight-quality)



OCEOS is a small footprint real-time operating system developed for ESA to flight category B standards. It schedules tasks of fixed priorities using the stack resource policy. Initial architectures supported are SPARC & ARM. Using RTEMS calling conventions OCEOS provides some unique precise timing control capabilities. OCEOS is based on stack resource policy which prevents unbounded priority inversion, chained blocking, and deadlocks.

Rad-hard Artificial Intelligence SOC

The hisaor is a next-generation rad-hard SOC for Aerospace applications. It is a heterogenous design consisting of four ARM CPUs with eight AI coprocessors each consisting of a GPU and neural network accelerator. Floating-point performance is 64 GFLOPS with integer performance of 12 TOPS at power dissipation of less than 5W. OPENCL\OPENVX\OPENCV software libraries are supported.



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.

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.



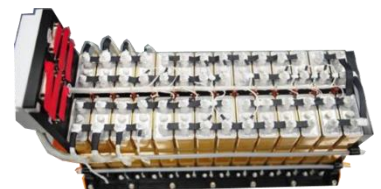
Star trackers



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's 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.



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 flight-ready real-time operating system, debug software tool for system-on-chip (SOC) devices, a range SPARC SOCs including the radiation hardened quad-core LEON4 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 provide additional support ESA's new AGGA-4 and GR716 SOCs. DMON's unique fetures 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 SOCs, and is available for evaluation from OCE's website. OCE's real-time operating system, OCEOS, is one of two ESA flight approved operating systems.

Of particular interest in a space context are the Ocean 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 a SIP package.

OCE also has agreements with other suppliers to the Chinese space program allowing it to provide a new range of satellite subsystems. These subsystems include star trackers, batteries, solar cells and arrays, and reaction wheels.

OCE has distribution partners in Europe, China, US, Russia, India, Korea, and Singapore.

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:-

