

## MOOG RADIATION TESTED COMPONENTS



Moog offers radiation tested and ready to qualify high performance electronic components for payload applications. These devices are sourced from single lot date code (SLDC) procurement. Components include DSP and ARM processors and DDR4 and FLASH memory.

Radiation test data available.

### MULTICORE DSP PROCESSOR

- Multiple high performance DSP cores
- Multiple ARM A15 Cores
- Up to 1.3 GHz clock speed
- Typical power 15 watts
- Multicore shared memory controller
- DDR3 controller with ECC
- High Speed external interconnect bus to other devices
- 10/100/1000/10000 Mbps ethernet
- SRIO, PCIe, USB2/3, SPI, I2C, UART, GPIO
- Configurable power selection and DSP/ ARM core control
- SEL Immune to 75 MeV (Heavy Ion)
- TID Tested to >100 krad(Si) (Proton)
- BGA Package

### MULTICORE ARM PROCESSOR

- Multiple ARM A72 Cores
- 2 GHz clock speed
- Typical power 20 watts
- Multicore shared memory controller
- PCIe, SRIO, SATA interfaces
- 8-lane 10 GHz SerDes
- AES256 Encryption
- Trusted boot
- Two 64-bit DDR4 controllers
- UART, I2C, SPI, GPIO, USB3
- 10/100/1000 Mbps ethernet
- SEL immune to 75 MeV (Heavy Ion)
- TID Tested to >100 krad(Si) (Proton)
- BGA Package

# RADIATION TESTED COMPONENTS

## DDR4 X8 MEMORY

- 8 Gb total capacity per device
- 8 bit data bus width
- 2400 MT/sec maximum data rate
- SEL immune to 75 MeV (Heavy Ion) (1E7 ions/cm2)
- No DSEE to 63 MeV (Proton)
- TID tested to 100 krad(Si)
- FBGA Package

## FLASH MEMORY

- SLC NAND
- 128 Gb total capacity per device
- 8 bit data bus width
- 333 MT/sec maximum data rate
- TID tested to 48 krad(Si)
- VFBGA Package

## APPLICATIONS

- High Performance Spacecraft Avionics
- Payload Processing Electronics

## DDR4 X16 MEMORY

- 8 Gb total capacity per device
- 16 bit data bus width
- 2400 MT/sec maximum data rate
- SEL immune to 75 MeV (Heavy Ion) (1E7 ions/cm2)
- No DSEE to 63 MeV (Proton)
- TID tested to 100 krad(Si)
- FBGA Package

## ETHERNET PHY

- 10/100/1000Base-T IEEE 802.3 Compliant
- GMII, TBI, RGMII, RTBI, SGMII Interfaces
- Internal 1.25 GHz SERDES for fiber applications
- IEEE 802.3 compliant auto-negotiation
- Fiber or copper operation
- No DSEE to 75 MeV (Heavy Ion)
- TFBGA Package

## AVAILABILITY

- Immediate
- Qualification Available Upon Request
- Components shipped with SLDC CofC



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