



A passion for performance.

**Aeroflex Colorado Springs**

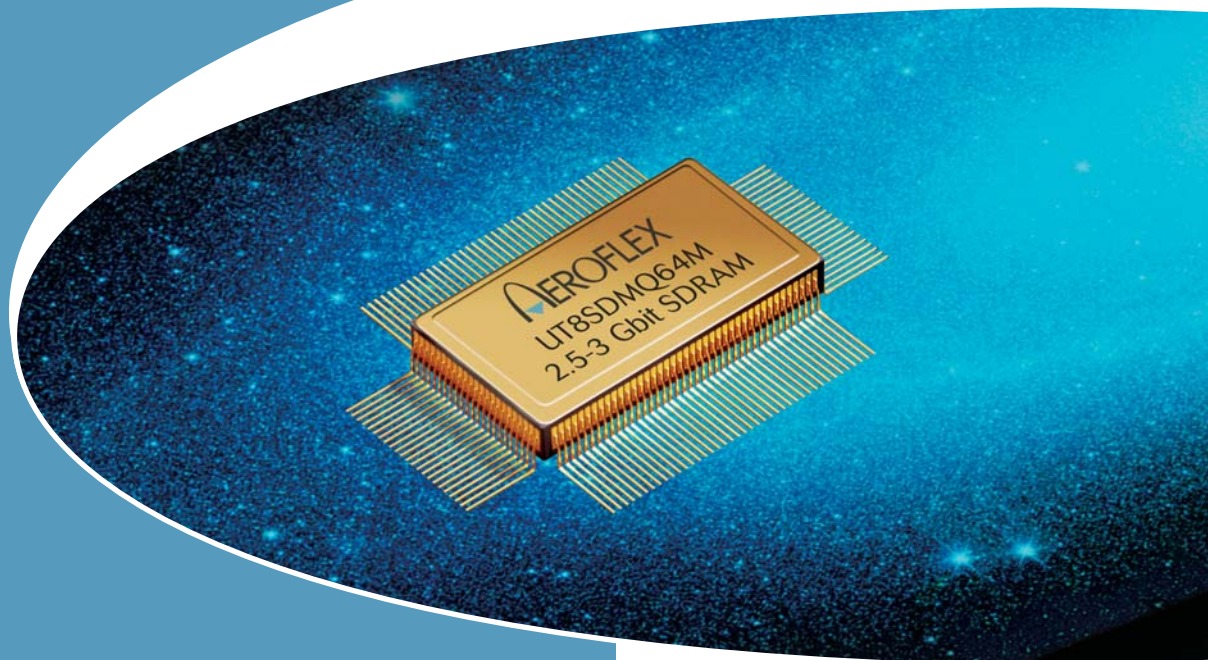
**Over 20 years experience  
in HiRel memories**

**50 to 300 krads(Si)**

**4.0 Mbit to 3.0 Gbit options**

**Best-in-class bit density  
per square inch**

**Flight proven**



**HiRel Memories**

# HiRel MEMORIES

## HiRel Memories

[aeroflex.com/memories](http://aeroflex.com/memories)

|                             | Configuration | Voltages | Access/Clock | Total Dose rad(Si) | LET <sub>TH</sub> (0.25) MeV - cm <sup>2</sup> /mg | Saturated Cross Section (cm <sup>2</sup> ) per bit | Latch-Up Immune MeV - cm <sup>2</sup> /mg | CMOS Inputs | Flatpack | QML Q & V | SMD #      |
|-----------------------------|---------------|----------|--------------|--------------------|--|--|---|-------------|----------|-----------|------------|
| UT8R128K32 SRAM             | 128K x 32     | 3.3V*    | 15 ns        | 3.0E5              | >50  | 1.7E-7   | >100                                      | ■           | 68       | Q,V       | 5962-03236 |
| UT8R512K8 SRAM              | 512K x 8      | 3.3V*    | 15 ns        | 3.0E5              | >50  | 1.7E-7   | >100                                      | ■           | 36       | Q,V       | 5962-03235 |
| UT8CR512K32 SRAM            | 512K x 32     | 3.3V*    | 17 ns        | 3.0E5              | >50  | 1.7E-7   | >100                                      | ■           | 68       | Q,V       | 5962-04227 |
| UT8ER512K32 SRAM Monolithic | 512K x 32     | 3.3V*    | 20 ns        | 1.0E5              | >50  | NA**   | >100                                      | ■           | 68       | Q,V       | 5962-06261 |
| UT8Q512E 4M SRAM            | 512K x 8      | 3.3V     | 20 ns        | 5.0E4              | >50  | 2.8E-8   | >100                                      | ■           | 36       | Q,V       | 5962-99607 |
| UT8Q512K32E 16M SRAM MCM    | 512K x 32     | 3.3V     | 25 ns        | 5.0E4              | >50  | 2.8E-8   | >100                                      | ■           | 68       | Q         | 5962-01533 |
| UT9Q512E 4M SRAM            | 512K x 8      | 5V       | 20 ns        | 5.0E4              | >50  | 2.8E-8   | >100                                      | ■           | 36       | Q,V       | 5952-00536 |
| UT9Q512K32E 16M SRAM MCM    | 512K x 32     | 5V       | 25 ns        | 5.0E4              | >50  | 2.8E-8   | >100                                      | ■           | 68       | Q         | 5962-01511 |
| UT8ER1M32 32M SRAM MCM      | 1M x 32       | 3.3V*    | 20 ns        | 1.0E5              | >50  | NA**   | >100                                      | ■           | 132      | Q,V***    | 5962-10202 |
| UT8ER2M32 64M SRAM MCM      | 2M x 32       | 3.3V*    | 20 ns        | 1.0E5              | >50  | NA**   | >100                                      | ■           | 132      | Q,V***    | 5962-10203 |
| UT8R1M39 40M SRAM MCM       | 1M x 39       | 3.3V*    | 20 ns        | 1.0E5              | >50  | 8.0E-8   | >100                                      | ■           | 132      | Q,V***    | 5962-10205 |
| UT8R2M39 80M SRAM MCM       | 2M x 39       | 3.3V*    | 20 ns        | 1.0E5              | >50  | 8.0E-8   | >100                                      | ■           | 132      | Q,V***    | 5962-10206 |

Please call 800-645-8862 for more information or visit the web site at [aeroflex.com/memories](http://aeroflex.com/memories)

\*1.8V core \*\*The SEU error rate is driven by particle flux and EDAC scrub rate. The error rate is  $6 \times 10^{-16}$  errors/bit-day. \*\*\*QML V pending

## QCOTS™ Memories

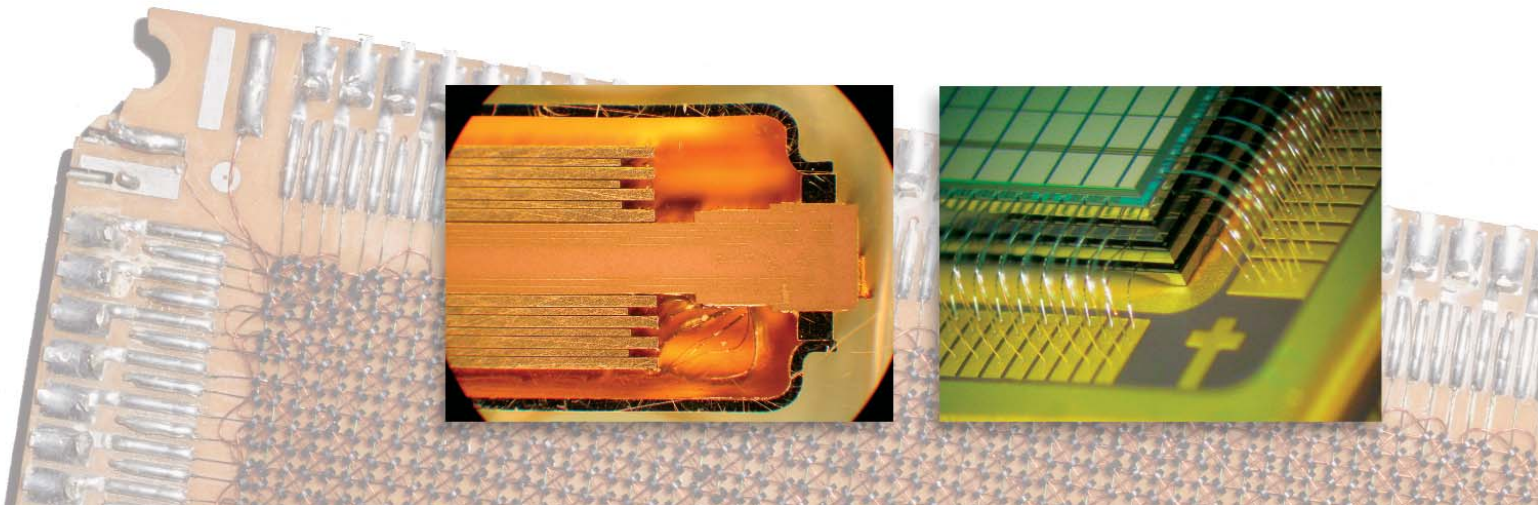
(Quantified Commercial Off-the-Shelf)

[aeroflex.com/memories](http://aeroflex.com/memories)

|                              | Configuration | Voltages | Access/Clock | Total Dose rad(Si) | LET <sub>TH</sub> (0.25) MeV - cm <sup>2</sup> /mg | Saturated Cross Section (cm <sup>2</sup> ) per bit | Latch-Up Immune MeV - cm <sup>2</sup> /mg | CMOS Inputs | TTL Inputs | Flatpack | QML Q, T & V | SMD #      |
|------------------------------|---------------|----------|--------------|--------------------|--|--|---|-------------|------------|----------|--------------|------------|
| UT7Q512 4M SRAM              | 512K x 8      | 5V       | 100 ns       | 3.0E4              | 5  | 1.0E-7   | >80                                       | ■           |            | 32       | Q,T          | 5962-99606 |
| UT8Q512 4M SRAM*             | 512K x 8      | 3.3V     | 20 ns        | 5.0E4              | 10   | 5.0E-9   | >80                                       | ■           |            | 36       | Q,T          | 5962-99607 |
| UT8Q1024K8 8M SRAM*          | 1024K x 8     | 3.3V     | 25 ns        | 5.0E4              | 10   | 5.0E-9   | >80                                       | ■           |            | 44       | Q,T          | 5962-01532 |
| UT8Q512K32 16M SRAM MCM*     | 512K x 32     | 3.3V     | 25 ns        | 5.0E4              | 10   | 5.0E-9   | >80                                       | ■           |            | 68       | Q,T          | 5962-01533 |
| UT8SDMQ64M40 2.5Gb SDRAM MCM | 64M x 40      | 3.3V     | 133 MHz      | 5.0E4              | 21   | 7.6E-10  | >100                                      | ■           |            | 128      | Q,Q+**       | TBD        |
| UT8SDMQ64M48 3.0Gb SDRAM MCM | 64M x 48      | 3.3V     | 133 MHz      | 5.0E4              | 21   | 7.6E-10  | >100                                      | ■           |            | 128      | Q,Q+**       | TBD        |

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\* Contact factory for availability. \*\*QML qualification in process.





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Aeroflex Colorado Springs has been providing HiRel memories for over 20 years – from PROMs to discrete SRAMs and SRAM Multi-Chip Modules (MCMs) – and now SDRAM MCMs. We have worked with you, listened to your requirements, and executed!

You wanted lower power consumption with higher performance; our SRAM unique read architecture allows this.

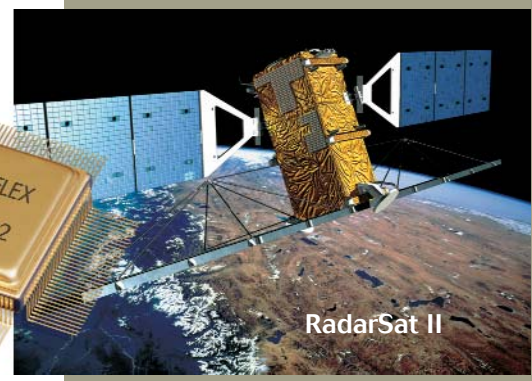
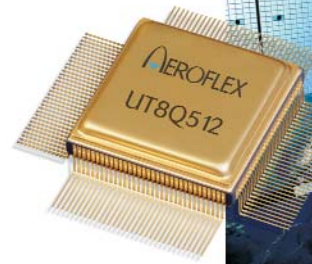
You wanted higher density; our packaging techniques achieve this.

What can we do for you next?"

– Anthony Jordan  
Director of Standard Products

OUR PACKAGE HISTORY SHOWS OUR COMMITMENT TO IMPROVEMENT

We've worked diligently to constantly miniaturize our package footprints while all the while increasing density and speed. Our package history begins in 1980 with flat-packs, continues with planar MCMs, and now progresses to vertically-stacked die packages.



RadarSat II



Phoenix Mars mission



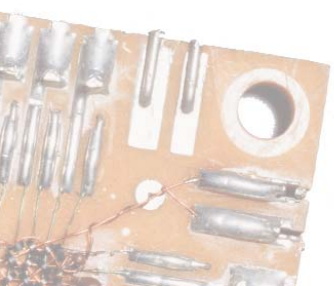
Themis system



C/NOFS system

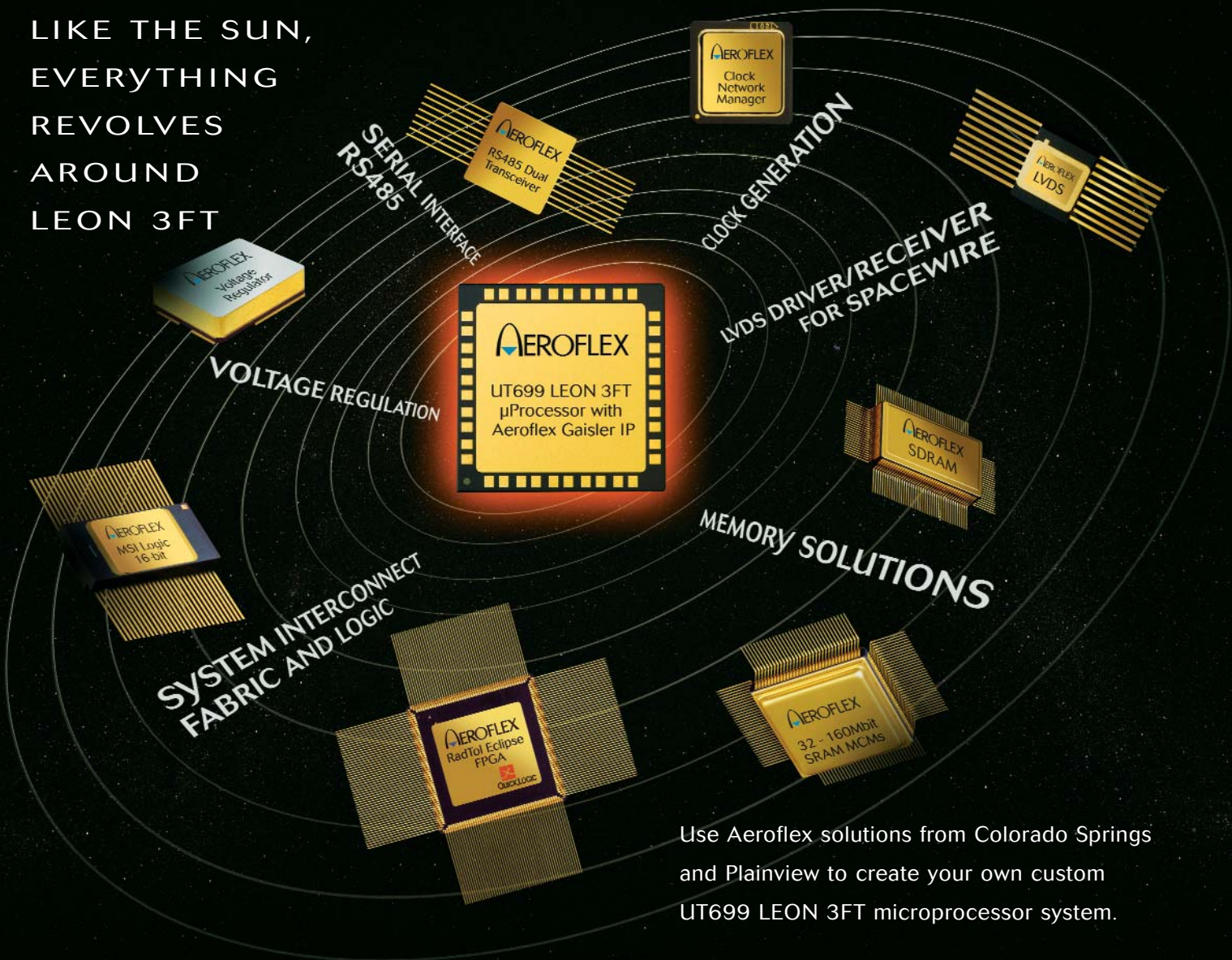


GLAST satellite





LIKE THE SUN,  
EVERYTHING  
REVOLVES  
AROUND  
LEON 3FT



Use Aeroflex solutions from Colorado Springs and Plainview to create your own custom UT699 LEON 3FT microprocessor system.



Aeroflex Colorado Springs

**WEB SITE** [www.aeroflex.com/memories](http://www.aeroflex.com/memories)

**TELEPHONE** 800-645-8862



Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused.