Infineon Memory Solutions – When Failure is not an Option

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Infineon offers a unique portfolio that links the real and the digital world

- **Battery-powered devices**
- **Coin cell-powered devices**
- **Power supplies**
- **Industrial IoT**
- **Drives**
- **Smart Home**
- **Consumer IoT**
- **5G**
- **Automotive**

**Sense:** sensors

**Compute:** microcontrollers, memories

**Actuate:** power semiconductors

**Connectivity:** Wi-Fi, Bluetooth, USB

**Value addition and optimized use of resources**

**Information and data about the real world**

**Software Ecosystem**

**Connectivity**

**Digital world**

**Real-world applications**
Applications rely on safe, secure and reliable memory solutions

<table>
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<tr>
<th>Reliability</th>
<th>Performance</th>
<th>Low Power</th>
<th>Security</th>
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<tbody>
<tr>
<td>Automotive</td>
<td>Communications</td>
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<td>Instant-on performance, functional safety and security</td>
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<td>Longevity (15+yrs) and reliability at high temperatures (&gt;125°C)</td>
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<td>Compact and low power</td>
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Reliable boot code, secure storage, over-the-air update
Innovations in Memory Solutions enable emerging applications

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<th>Segment</th>
<th>Applications</th>
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<tr>
<td>Automotive</td>
<td>Autonomous Drive Systems, Instrument Clusters, Battery Management, Camera Systems, Infotainment, Gateway</td>
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<tr>
<td>Industrial/Medical/A&amp;D</td>
<td>Solar Inverters, Service Robots, Programmable Logic Controllers (PLC), HMI, Medical equipment, Satellites</td>
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<tr>
<td>Communications</td>
<td>Acceleration Cards, Server Board Controllers, 4G / 5G Radios, Small / Pico Cells, Enterprise Routers / Switches, Baseband Systems</td>
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Infineon Memory Solutions -
Emerging applications require differentiated solutions

- **SEMPER™ NOR Flash**
  - Integrated Functional Safety and Security
  - Integrated Compute Core

- **EXCELON™ F-RAM**
  - NoDelay™ writes
  - 100 trillion read/write cycles

- **Serial/Parallel NOR Flash**
  - Automotive-grade reliability
  - High random access performance at low power

- **SRAM**
  - Best standby power
  - Lowest SER with embedded ECC

- **nvSRAM**
  - Combine SRAM performance with power-loss data protection

- **HyperRAM™**
  - Low pin-count
  - Common HyperBus/Octal interface with NOR-Flash

- Comprehensive portfolio of automotive and industrial solutions with highest quality and reliability
- Best-in-class technical support with broad ecosystem support
- Longevity of supply assurance backed by 35+ year of experience in Memory Solutions
Semper Flash architecture – The Flash You Can Trust

- Unique Device Secret
- Secure Boot (TCG DICE)
- Key Management
- Side Channel Attack Protection
- Diagnostics
- Crypto Engine
- Secured Transactions
- Interface and Data CRC
- Serial Memory Controller
- EnduraFlex™
- Quad SPI
- Octal
- HyperBus™

45-nm MirrorBit® NOR Flash Array
With User Configurable Secure/Non-Secure Regions

- 45-nm MirrorBit® NOR Flash Array
- World’s Most Advanced Secured NOR Flash
- First NOR Flash to Combine Safety with Security
- Easy-to-Use Solution Development Kit (SDK) to Accelerate Development

- Security
- Functional Safety
- Reliability
- Performance

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Conclusion

1. Electronics are pervasive in the real world - our lives increasingly depend on them

2. Applications are diversifying - different technologies and solutions are required

3. Dependability is key: functional safety and security against cyberattacks required
Part of your life. Part of tomorrow.