



Flash Memory Summit

Flash for Autonomous Vehicles

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Flash Memory Summit

Flash in Autonomous vehicles

1. Developing Autonomous vehicles
2. Flash in Autonomous vehicles





Flash in Autonomous Vehicles

- Nor Flash has been used for many years - Infotainment, instrument cluster, etc.
 - Used in semi autonomous applications as well (Advanced Driver Assistance Systems)
- Autonomous vehicles will require large amounts of storage – NAND flash critical.
 - A 4 hour trip could generate 14TB of data! (Not all saved)
- New flash products being developed to meet the requirements
- Low Cost is critical
- But Safety is tantamount





Flash and Safety

- Wide Temperature Range
- Retention requirements are long
- Reads probably more than writes
- Must have redundancy, Good ECC, Extreme recovery techniques





Automotive Industry Standards

- Impose a requirement at the design stage to perform rigorous analysis of the ways in which a system's designed functions can fail
- specifies very low maximum failure rates for complete systems
- requires systems to have the ability to detect functional failures reliably and quickly
- requires systems to put in place robust means to survive safely, and recover from, any foreseeable functional failure