SD card Applications - A Day in the Life of SD card

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Agenda

• SD history and insight
• SD mainstream applications
  • Automotive
  • Surveillance/Edge
  • Professional
• Phison’s role and value
SD Card’s Evolution

Our journey accomplished great things...

- **High Speed Mode** @ 25MB/s
- **UHS-I mode** @ 624MB/s
- **UHS-II mode** @ 312MB/s
- **UHS-104 mode** @ 312MB/s
- **UHS-104 mode** @ 104MB/s
- **UHS-II mode** @ 104MB/s
- **UHS-III mode** @ 985MB/s
- **SD Express @ PCIe Gen 3** 4GB/s
- **SD Express @ PCIe Gen 4** 4GB/s

**Same User Friendliness**
- Same dimension!
- Same convenience!
- Same serviceability!

Year 2000

Year 2023

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Automotive Usage
SD Has More Potential To Look Forward To

Dash cam
32GB+

Infotainment & Digital Cockpit
64GB+

Navigation
16GB+

Connection & Telematics
4GB+

ADAS
16GB+

Central Gateway
8GB+

$5.3Bn 2028

$2.0Bn 2023

CAGR: 21.2%

Automotive NAND Storage Revenue

Source: IHS Markit 2022
SD Has Great Automotive Values

- Best value **removable** memory storage: 128MB to 512GB

- Selected AEC-Q100 / VDA6.3 qualifications
  - IATF16949

- Health monitoring function
  - Field Firmware Update function
Surveillance/Edge Usage
SD Has More Surveillance/Edge Usage

Global: 148Bn 2023
CAGR: 12% to 2027
Source: Research and Markets 2023

Asia Pacific: 48Bn 2022
CAGR: 9.4% to 2027
Source: Markets and Markets 2022

Mobile: 2.3Bn 2022
CAGR: 8.5% to 2032
Source: Polaris Market Research 2022

Crime reported per 100K population

Source: Macrotrend 2023, Eurostats 2023
SD Satisfies Critical Recording Characteristics

- Health monitoring function
- Field Firmware Update function

**Sustained Recording Speed**

- SD ability: Stable 21~22MB/s
- 4K UHD: 12.5MB/s
- Full HD: 6.25MB/s

**Maintenance Free**

**Format-Free Function**
Professional Usage
SD Can Be Very Professional

V60  V90

Global vlogging-camera sales of 19.10% CAGR from 2022 – 2029

Example: Panasonic G100, Sony ZV-1, with microSD slot!

Source: Brand Essence Research 2023
Phison can provide complete SD solutions
Why, Phison Can Help You?

We are a total solution provider

NAND Flash-based IC Designer

Experience

20+ Years

80%+ R&D Exp./ OPEX

70% R&D
3800+HC

ODM
From Design to Manufacturing

Turnkey (w/ customization)
Flexible Business Model
So, What And How, Can Phison Help You?

Complete Lineup + Latest Technology

- **UHS-II V60/V90**
  - PS8601
- **UHS-I U3 V30 A1/A2**
  - PS8132 & PS8229
- **SD Express (SD8.0)**
  - PS5017
- **SD9.0**
  - PS8133
Thank you