

**World leader in flash memory  
integration and duplication**

# About Cardwave

A multi-award winning, pioneering services business specializing in flash memory products.

- Formed in 2004, privately owned
- Offices in the UK and US with a global presence to support all customers
- Trusted partner to OEMs, enterprise and SMEs
- Strategically partnered with the world's leading manufacturers of flash memory
- The 'go to' trusted expert in the industry



# Our Offices



A Multinational  
Organisation



## Serving

- Europe
- Middle East
- Asia
- Australia/NZ



## Serving

- North America
- South America



**US Office**  
Plano, Texas

**UK & European Office**  
Devizes, Wiltshire



# Our Market Focus

Our success is based on >20 years experience of delivering projects across multiple sectors.

## We support customers in

- Automotive
- Embedded & industrial computing
- Mobile technology & wearables
- IoT & factory automation
- Healthcare
- Government
- Media & film
- Plus many more...



# In The Beginning

Digital still cameras and MP3 players drove the adoption of removable flash memory.

- Multiple versions of removable memory cards
  - >15 formats in 2007
- Compatibility problems, frustrated users
- Standards did not exist, poor user experience





# The Need For Standardisation

The SDA was formed in 2000 to bring companies and technology together

- Too many competing form factors gave the user a bad experience
- Standardisation enabled the growth of the SD form factor
- Continues to set new standards for high performance microSD



The screenshot shows the SD Association website. At the top, there's a navigation bar with links for 'About SD Association', 'Consumers', 'Developers', 'Downloads', 'News & Events', 'Members Site', and 'Licensees Sites'. A search bar is also present. The main banner features a 3D rendering of SD Express memory cards and the text 'Introducing New SD Ver.8.00 SD Express (PCIe Gen.4)'. Below the banner, there's a section titled 'What's New' with a 'VIEW MORE' button. This section lists several updates: a May 18, 2022 press release about SD Specification 9, a May 12, 2022 article about SD memory cards in medical innovation, a May 9, 2022 announcement about new security features in SD 9.0, and an April 15, 2022 news brief. On the right side of the 'What's New' section, there's a video player titled 'Watch SD Express Implementation Video' and a blue badge that says 'SVP Verified Product'.

# Commercial Products

SD and microSD memory cards have multiple markings, logos and pictographs, intended to explain specification and performance

- Most consumers do not know what they all mean
- Commercial products are not designed or built to the same specification as an industrial product



# Commercial Needs Are Different

Consumers are given a choice when purchasing removable memory cards

- Consumers care most about;
  - Price
  - Brand
- Less of a consideration;
  - Performance
  - Reliability



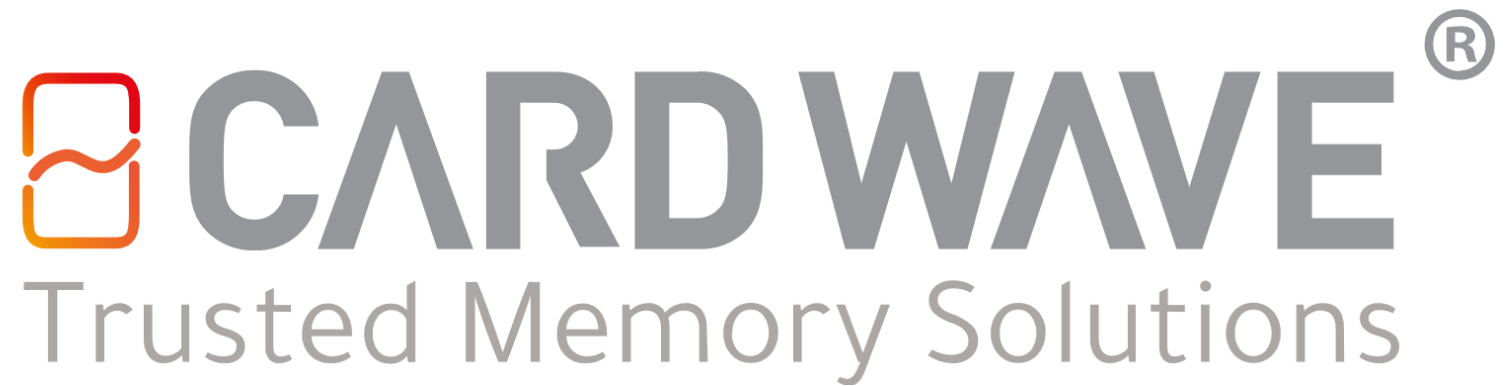


# Industrial Use

Using a consumer grade card for an industrial application is risky!

- Industrial/OEM users care about;
  - Performance
  - Reliability
  - Endurance
  - Support





**Our services**

# Production Facilities

Cardwave has one of the largest production facilities in Europe and the US, supporting all form factors of flash memory products.

- High-volume capability
- Binary image replication
- On-site customization & packaging
- Reporting & traceability
- Quality assurance
- Secure storage





# OEM Services

Our services include	1st Line	2nd Line
	In-House	Manufacturer
Independent advice on best product to use per application	✓	✗
Advanced test & qualification services	✓	✓
Mastering & binary image replication of your data	✓	✗
Just-in-time (JIT) production & fulfilment	✓	✗
Product migration and change management	✓	✓
Technical & engineering support – including direct with manufacturer	✓	✓
Environmental compliance & technical documentation (PPAP, RoHS)	✓	✓
Comprehensive reporting including by serial number and test status	✓	✗
Quality management and reporting	✓	✗

# Quality Management

We have an aspirational approach to quality and invest in our people, processes and facilities to ensure we are 'best in class'.

- Our culture endorses a commitment to continual improvement and transparent communication with our customers
- Our quality management system is accredited to ISO9001-2015 and is the nucleus of our business
- We are also accredited to ISO14001
- Our products have a very low failure rate <0.05%
- Customer satisfaction is measured, we aim for a minimum approval of 99.5%





Find Us



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# Questions?