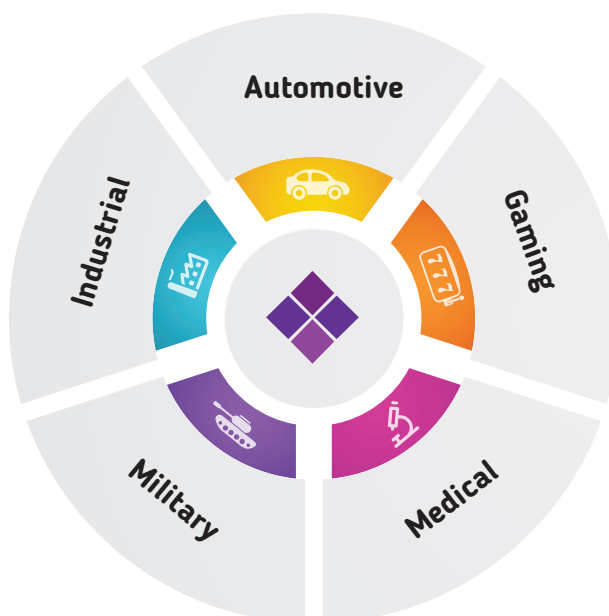


FLEXXON REFERENCE APPLICATION



Flexxon targets the niche markets – Industrial, Medical and Automotive (IMA). The IMA industries have stringent requirements on the NAND flash storage products that are utilized. This application introduction serves to provide an insight of how every Flexxon product will serve to enable and enhance user experience. There are 5 main industries that Flexxon currently serves: Automotive, Gaming, Medical, Military and Industrial.

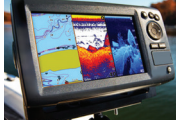
Automotive

The rise of IoT has revolutionized the automotive industry to become more connected and intelligence as well as safer and efficient in performance. Flexxon storage solutions deliver top-notch quality and reliability to meet the requirements of major automotive suppliers, service providers and system developers for these five categories, namely Automotive Computer System, Infotainment and GPS Tracking Device, Rail, Vehicle Performance and Vehicle Safety and Security. Moreover, Flexxon is ISO/TS 16949 certified company and compliant to Automotive Grade AEC Q-100 Grade 2 (-40C~105C) Standard. Flexxon eMMC is equipped with intelligent technology features such as Auto Read Refresh, Dynamic Wear Leveling, Data Integrity in Reflow and etc. Please see [Flexxon eMMC](#) for more information.



Automotive Computer System

Self-driving Car System	Half Slim
Passenger Information System in Vehicle	mSATA
Vehicle Mounted Computer	mSATA, CF Card



Infotainment and GPS Tracking Device

Fleet Management GPS Tracking System	eMMC, microSD, 2.5" SSD
Automotive GPS Device	eMMC
Light Vehicle Display	eMMC
In-flight Entertainment Program	M.2 2242
Marine GPS/Fish Finder	eMMC, microSD



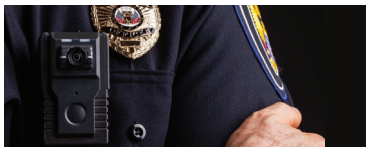
Rail

Train Control System	USB DOM
Train Borne Video Surveillance System	2.5" SSD
Locomotive Event Recorder	2.5" SSD, USB DOM
Rail DVR	2.5" SSD



Vehicle Safety and Security

Law Enforcement Video Solutions	USB, 2.5" SSD, M.2 2280
Law Enforcement Wearable Cameras	microSD
Vehicle Advanced Vision System	SD Card, eMMC, USB
School Bus/Public Transit DVR	SSD



Vehicle Performance

Automotive Brake System	CF Card
Electronic Control Unit	microSD
Handheld Tuner	microSD

Gaming

The growing of gaming and casino industry has led to an increase in the demand of gaming machines. Memory cards and SSDs are needed in these powerful and intelligent gaming machines such as bar top gaming machine, slot machine, lottery machine, pinball machine, and laser tag gaming system. The aforementioned are few of the countless forms that are present in the industry. Please check out this link for the top gaming equipment manufacturers:

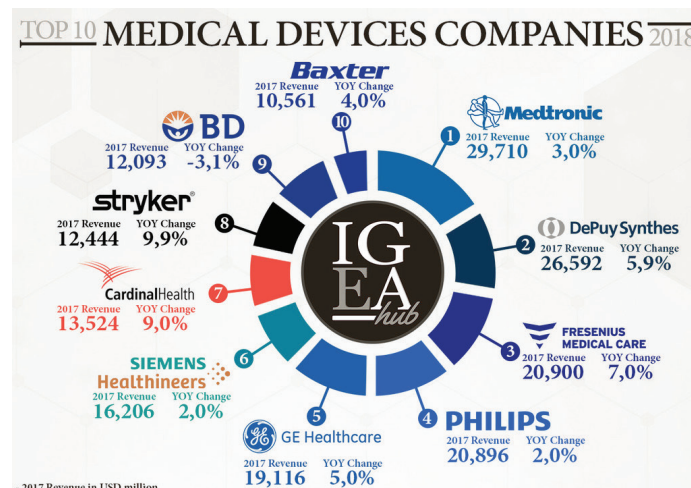
<http://www.agem.org/members.html>



Gaming	
Slot Machine	2.5" SSD, M.2 2280, Half Slim, USB, SD Card, eMMC, CFast
Bar Top Gaming Machine	microSD
Laser Tag Game	microSD
Lottery Machine	Half Slim
Pinball Machine	SD Card

Medical

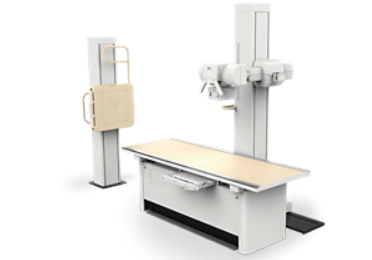
For the medical industry, the 4 main applications that Flexxon focus on are Diagnosis, Monitoring, Treatment and Home Care. Medical devices are used to measure and record data for diagnostic applications. The nature of its application warrants the use of memory products. Medical monitoring application include Patient Monitoring System is used for measuring the patient's vital signs and displays data. For Treatment segment, it is called as therapeutic which includes the machine instrument or implants used for treatment of any ailment. Last but not least, the homecare electronic device is increasingly in demand as it allows patients to monitor their personal health conveniently. According to Igeahub.com, the global medical device market will reach USD483.8 billion in 2022 due to the extensive use of medical devices in hospitals and other healthcare facilities, please check [Top 10 Medical Devices Companies](#). Flexxon is very strong and well understand the requirements of medical industry and has developed the HIGH IOPS Solution that cater to small random written data applications by delivering 8 times higher performance than standard solutions. For more details, please see [Flexxon Memory Card HighIOPS Introduction](#).





Diagnosis

Diagnosis of the Peripheral Vascular Circulation	SD Card
Life Science Laboratory Instrument	microSD, eMMC
Medical Cardiovascular Devices	eMMC
Medical Imaging	mSATA, microSD
Microbial Identification	USB
Precision Instrument	PATA DOM



Patient Monitoring System

Dosimeter	microSD
Medical Cardio-respiratory	SD Card
Patient Data Monitors System	microSD, eMMC, USB DOM



Treatment

Defibrillators	microSD
Medical Aesthetics Device	microSD
Medical Hearing Aids	eMMC, microSD
Minimally Invasive Therapy	eMMC, microSD
VNS Therapy System	SD Card
Vision Impairment	microSD



Home Care

CPAP Machine	SD Card
ECG Signal Tracking	microSD
In-home Medication Dispenser	eMMC
Infusion Pump Analyzer	microSD
Medical Video Glasses	microSD, 2.5" SSD
Medical Wearable Device	eMMC



Others

Precision Lens Edging Equipment	CFast
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Military

High Performance, Intense Security and High Reliability are always the top concern for memory products in the Military industry. Flexxon Galaxy Series Military Grade SSD is tailor-made for military applications which offer Advanced Hardware UPS Design, Self-Destruction, Secure Erase, Full Drive Hardware Encryption, Conformal Coating and etc. For more information, please click: [Flexxon Galaxy Series Military Grade SSD](#). One of our highlights is that Flexxon has a NCAGE Code which allow us to serve the military industry including these applications: aircraft data acquisition, mission recorder and communication server, military grade rugged computers and embedded board, electronic warfare, rugged electronics packaging and NTDS emulator.



Military

Aircraft Data Acquisition, Mission Recorder and Communication Server	2.5" SSD, M.2 2242, PCIe M.2 2280, mSATA, mSATA mini, USB
Electronic Warfare	2.5" SSD
Rugged Computer & Embedded Board	2.5" SSD, mSATA, micro SSD
Rugged Electronics Packaging	2.5" SSD
Naval Tactical Data System Emulator	2.5" SSD

Industrial

The possibilities of using memory products spreads across countless industries and will be further elaborated. Just to name a few uncommon applications – lawn mower for agricultural industry, seismic recorder, broadcast mixing desk or recorder in the AV industry, robotic vacuum, and industrial machineries for food processing industries. These embedded systems and machineries come in all sizes and operate in varying conditions, hence the need for all kinds of form factors for Flexxon products – eMMC, SD/microSD, SSDs, CF/CFast card and the list goes on.

Agricultural machineries are required for many processes and the products that they normally require are memory cards, eMMC and mSATA.



Agricultural Machinery

Agricultural Machinery	microSD, eMMC
Autonomous Lawn Mower	mSATA
Harvester	mSATA

Automation is a rapidly evolving technology which automate the entire process with the focus to achieve cost efficiency, increase productivity and minimize the risk through smarter technology. Automation includes home automation/domotics, building automation, robotic process automation and industrial automation. All these automations have the need for memory cards, CF/CFast cards, SSDs and eMMC. They cover almost all form factors as the size of devices vary.



Automation

Building Automation	microSD, eMMC, USB
Home Automation/Domotics	microSD, eMMC
Industrial Automation & HMI	2.5" PATA SSD, 2.5" SATA SSD, microSD, CFast, CF Card
Marine Automation	USB DOM
Robotic Process Automation	2.5" SSD, microSD
Vertical Warehouse Automatic Machine	Half Slim

In **AV systems** where audio and visual files are the bulk of data, memory storage products are a must and they also come in a variety of form factors (eMMC, memory cards, SSDs etc.) This also applies to **music instruments** and **image capturing devices** (camera solutions).



AV System

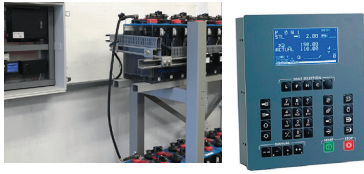
AI Speaker	eMMC
A/D Audio Converter	microSD
Broadcast Mixing Desk	microSD
High End Home Theater Sound Processing System and Audio Equipment	SD Card
Music Instruments	microSD
Network AV system	eMMC
TV Production	mSATA
Video Broadcasting	M.2 2280, eMMC, USB
Video Compressor	2.5" SSD
Video and Sound Recorder	SD Card, CF Card



Camera Solutions

IP blocks for video interfaces	eMMC
High End Digital Camera	eMMC, CFast, CFX
Camera Movement System & Drone for Filmmakers	microSD, SD Card

Great potential lies in **control and monitoring system** as people venture into IoT to replace manual work. This is an application that will definitely require storage products, especially form factors that are compact - eMMC, memory cards.



Control and Monitoring System

Battery Monitoring System	2.5" SSD
Electric & Water Metering monitoring systems	microSD, eMMC
Industrial Motor controller	eMMC, USB
Numeric Controller	CF Card, CFast
Oven Control System	CF Card, microSD
Power Control Solutions	USB, mSATA
Remote Monitoring	microSD

Control and Monitoring System - HVAC

Temperature Reading Control & Monitor System	microSD, eMMC
Thermal Imaging Camera	eMMC
HVAC Multimeters	CF Card
HVAC Controller	microSD, SD Card, CF Card

Embedded systems are essential in the performance of daily tasks and present in industrial machineries, one example is the controllers for heavy machineries. These embedded systems favour the use of eMMC, memory cards and mSATA that fits in sizes of the devices.



Embedded System

Bitcoin Wallet	microSD
CPU board	mSATA, eMMC, CF Card
Embedded Controller for Heavy Machinery	eMMC
Electronic Board for Drone	SD Card
IMX Module	eMMC

Data Storage and Acquisition System is very important especially in this era of big data. It helps to backup, protect and archive all the important data. These systems always equipped with huge storage capacity along with high performance products like 2.5" SSD and PCIe



Data Storage and Acquisition System

Real Time Recorder	PCIe M.2 2280
Removable Disk Storage	2.5" SSD, USB, PCIe M.2 2242

Fitness equipment and household applications commonly use the eMMC due to space constraint and the nature of usage require the memory products to stay in place rigidly. Another interesting application is dive computers, they require the 2.5" SSD.



Fitness Equipment

Dive Computer	2.5" SSD
Industrial PC Fitness	microSD
Wearable Device	eMMC



Household

Robotics Vacuum Machine	eMMC
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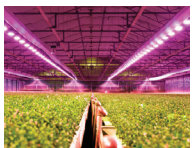
The F&B industry where mass preparation is made easy and swift by computerised equipment, memory cards and even PATA DOM are required in the systems.



Food & Beverage Machinery

Milking machine	PATA DOM
Commercial Cooking Equipment	microSD, SD card, eMMC
Frozen Treat and Beverage Equipment	microSD
Food Process Equipment	microSD

Lighting solutions, as unexpected by many, also require the use of memory cards like eMMC and memory.



Lighting Solution

Lighting Equipment & Control System	microSD, SD Card, eMMC
LED Horticulture	microSD
Outdoor wireless control system for street and roadway lights	SD Card

Machineries that cover industrial processes – drilling and welding and more, generate excessive vibrations, hence eMMC is preferred. Memory cards are also an option because memory card connectors are able to hold these products in place.



Machinery

Recycling Equipment	M.2 2242
Welding Machine	eMMC
Industrial Drilling Equipment	microSD, SD Card

Opportunities are abundant in **network and communication** systems because of the extensive coverage worldwide, the demand for these applications is always significant. This industry is worthwhile venturing into, some common uses for the memory cards are in gateways and optical communication systems.



Network and Communication Systems

Embedded Shelf Controller Blade	2.5" SSD, PCIe M.2 2280
Network Gateways and Radios	mSATA, microSD, eMMC
Optical Network Transport Solutions	microSD, SD Card, CF Card
PBX Box	SD Card
Security PC Switch	eMMC, M.2 2280, 2.5" SSD
Telecommunication Equipment	microSD, SD Card
VOIP Gateway	eMMC
Web Hosting Server	2.5" SSD

Network & Telecommunication – Performance Management Equipment

Network Performance Management System	microSD, SD Card, CF Card, eMMC
Telecommunications Testing System	M.2 2242/2280, 2.5" SSD, PCIe M.2 2242/2280, USB, microSD

Intelligent **parking terminals and meters** are increasingly required especially in urban area as it ensures the payment process to be more secure and time-saving. These parking terminals and meters require the memory cards for boot-up and storage purposes.



Parking Solutions

Parking Ticket Terminal	microSD, SD Card, CFAST
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Power solutions for marine, underground, and inland, in the form of relays, controllers and recorders are some of the devices that require the Flexxon products. In such operations where consistency and lifetime is a concern, Flexxon's reliability and long term supply is a preferred choice compared to what the other makers can provide.



Power Solutions

Arc Protection	eMMC
Charge Controller SBC	microSD, SD Card
Electrical Relay Current Tester	mSATA
Marine Energy Storage	microSD
Multi-Function Recorder	microSD, 2.5" SSD
Power Unit Controller	SD Card
Protection Relay	eMMC, SD Card



Printer is an essential piece of equipment in any business as well as industrial purposes. In printing applications, devices require SATA DOM and more common ones need eMMC, SSDs and memory cards.



Printing Solutions

Barcode and POS Printer	SD Card
Color Management Solutions	SATA DOM
Franking Machine	SD Card
High End Printers	eMMC
Industrial Printing Equipment	microSD, eMMC
Office Color and Commercial Printer	2.5" SSD, USB

Reliability of memory products is vital for **safe handling of petroleum equipment**. Flexxon has very good experience to serve this industry with power loss protection feature, it is the mandatory feature as they could not afford for power loss.



Safe Handling of Petroleum Equipment

Fuel Delivery System	microSD
Fuel Tank Control System	microSD
Petrol Pump POS System	microSD, CF Card
Fuel Management Systems	microSD, SD Card

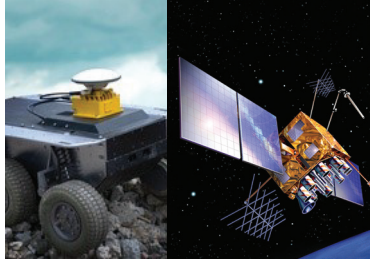
Rugged devices and computers are specifically designed to operate reliably in harsh environments and conditions, such as strong vibrations, extreme temperatures and wet or dusty conditions. Flexxon targets this area with our ruggedized solutions and ensure the smooth operation of these devices.



Rugged Device & Computer

Industrial Computers used by police and firemen	2.5" SSD, M.2 2280, PCIe
Rugged Computer	2.5" SSD, mSATA
Rugged Handheld Device	eMMC, microSD

GNSS (Global Navigation **Satellite Systems**) is the common name of global satellite-based systems for navigation, positioning and time transfer. GNSS receivers paired with robust Inertial Measurement Units (IMUs) to provide reliable, continuously available, position, velocity and attitude-even through short periods of time when satellite signals are blocked or unavailable. These systems require to operate under extreme wide temperature range and we are able to fulfil these requirements in our memory products.



Satellite Systems

Global Navigation Satellite System	eMMC
GNSS Receiver	Half Slim
Radar System	microSD

Seismic applications exist in most countries to do data recording using the seismic readers. One point to note is with all metering/sensing purposes, there is a need for memory products such as memory cards and eMMC to store the data. In order to save the power consumption, Flexxon could provide the customize firmware with auto shutdown mode within the required period of time.



Seismic

Seismic Recorder and Sensor	microSD, SD Card, eMMC
Wireless Seismic Acquisition System	microSD

Data storage is essential for **security applications** including surveillance purposes, alarms and access control systems.



Security System

Elevator Control	mSATA, microSD, eMMC, CF Card
Fire & Security Alarm	eMMC
Home Security System & Surveillance Camera	microSD, eMMC
Marine Safety	microSD
Phone call recorder & blocker	SD Card
Street Traffic Management	mSATA
Time Attendance & Access Control System	microSD, eMMC
Voting Machine	SD Card

Professional taximeter is designed to provide the accurate and reliable fare rates along with security payment system and they mostly use the microSD. Another application, weighing machine usually found in supermarkets are using NAND storage products like SSDs, memory cards and eMMC.



Applications

Professional Taximeter	microSD
Weighing Machine	2.5" SSD, Half Slim, M.2 2280, microSD, SD Card, eMMC, USB, CF Card

Terminals and scanners at ATM kiosks, EV charging station, self-service kiosks, library login terminal, and retail POS system are all require the use of memory products.



Terminal and Scanner

ATM Machine	USB, mSATA, 2.5" SSD
Electrical Vehicle Charging Station	USB, SD Card
Handheld Barcode Scanner	eMMC, microSD
Library Login Terminal	mSATA Mini
Retail POS Terminal	mSATA mini, microSD, eMMC, CF Card
Self Service Kiosk	2.5" SSD

Test and measurement equipment are different across industries – industrial, automotive, life sciences and so on. They use a wide range of form factors



Test and Measurement Equipment

Alternator Starter Bench Tester	microSD
Fluid Measurement and Monitoring Systems	microSD
Industrial Gas Measuring Instrument	microSD
Industrial Test and Measurement Equipment	mSATA, SD Card, USB, eMMC
Leak Test Equipment	mSATA
Mercury Analyzer	mSATA
Oscilloscope	mSATA, microSD, SD Card
Test Equipment	SD Card, mSATA
Test System Monitoring	2.5" SSD, SD Card
Wheel Balancer	SD Card

FLEXXON Top 5 Applications



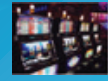
Medical Equipment

- Apnea Monitoring
- Cardiac Monitoring
- CPAP Machine
- Defibrillators
- Digital X-Ray
- Fetal Monitoring
- Life Science Laboratory Instrument
- Magnetic Resonance Imaging
- Medical Aesthetics Device
- Medical Wearable Device
- Patient Data Monitors System
- Ultrasound



Networking & Telecommunication

- Media Server
- Network Performance Management System
- Optical Network Transport Solutions
- PBX
- Routers / Gateways
- Streaming Server
- VPN / Firewall
- Web Server



Casino Gaming & Amusement

- Bar Top Gaming Machine
- Casino Gaming Machine
- Laser Tag Game
- Lottery Machine
- Pinball Machine
- Slot Game Machine
- Video Poker Machine



Security System

- Elevator Control
- Fire & Security Alarm
- Home Security System & Surveillance Camera
- Marine Safety
- Phone Call Recorder & Blocker
- Street Traffic Management
- Time Attendance & Access Control System
- Voting Machine



AV System

- AI Speaker
- A/D Audio Converter
- Broadcast Mixing Desk
- High End Home Theater Sound Processing System & Audio Equipment
- Music Instruments
- Network AV system
- TV Production
- Video Broadcasting
- Video Compressor
- Video & Sound Recorder





CONTACT US

Singapore

FLEXXON Pte Ltd.

28 Genting Lane, #08-07 Platinum 28,
Singapore 349585

 +65-6493 5035


 +65-6493 5037

 flexxon@flexxon.com

Hong Kong

FLEXXON Global Ltd.

13-08, 13/F, Block E, Wah Lok Industrial
Centre, Nos. 31-35 Shan Mei Street,
Fotan, Shatin, Hong Kong.

 +852-2711 5886

 +852-3011 3058

 flexxon@flexxon.com