



GE VERNOVA

DRIVE CONTROL MODERNIZATION SD7000 LCI

A well planned and executed upgrade by GE Vernova 's Power Conversion experts can save time and cost of an extensive system replacement and help you extend the life of critical power equipment.

PROVEN DRIVE CONTROL TECHNOLOGY

If you currently rely on vintage SD7000 drive controls like APC 620, 810, VME or Syconum drive controller, you cannot ignore the risk of obsolescence. A reliable and cost-effective upgrade can save you the time and expense of a complete drive system replacement.

This simple upgrade will modernize your control and data interfaces, substantially improving control capabilities and performance. Extensive diagnostics and comprehensive testing can make systems easier to maintain, with Power Conversion's outstanding drive services helping you get the greatest possible value from your MV drive control.

The external control interface - P80i Control System toolbox- is widely considered as one of the best tools for configuring, troubleshooting and maintaining legacy SD7000 drives and controls.

Touchscreen for operator control and maintenance

Replacing antiquated meters and push buttons with modern touchscreen control will immediately improve your ability to operate and maintain your SD7000 drives and enhance diagnostic management of your drive control.



Power Electronic Controller – Rxi-142

- Deterministic Ethernet
- 5 Ethernet ports 10/100
- Scalable CPU performance @ 1.6 GHz & 2.9 GHz
- 60°C ambient temperature
- Fanless operation
- Two or four PCI slots allows Profibus, reflective memory, Modbus, EGD, Ethercat, etc.
- Standard industry PC (Intel based chipset)
- VxWorks operating system - IEC1131 Compliant Function Block



Power Interface Board (PIBe Card)

- Modular construction
- Up to eight digital inputs and four outputs (24VDC)
- Up to eight analog inputs and four outputs (+/- 10VDC)
- Fast, deterministic EtherCAT interface from PECE





SD7000 UPGRADE

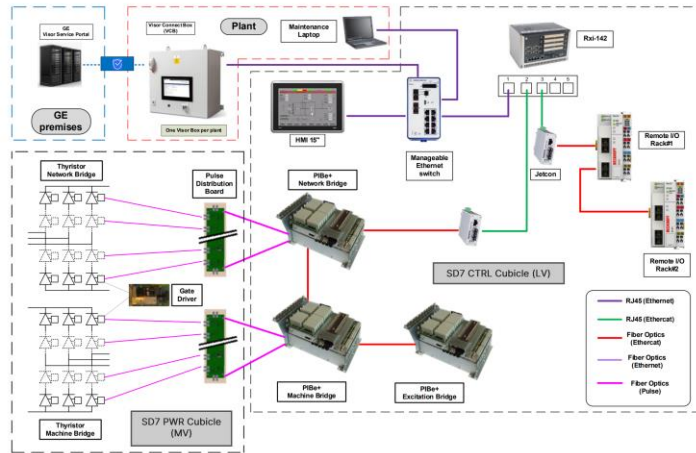
GE Vernova's Power Conversion business advantages

- Better spare parts availability and breakdown support with the new RXi controller
- Improved inventory control by upgrading multiple vintage drives to the same modern hardware and software
- Easy connectivity to Power Conversion digital solutions for remote monitoring, diagnostics and predictive analytics
- Phased upgrade options to suit customer schedule and maintenance plans
- Consistent and cost-effective project execution by Power Conversion experts
- Further options can be combined with proactive mini upgrades and cyber services to extend existing drive systems lifetime and improve operations

KEY CUSTOMERS BENEFITS

- Mitigating obsolescence of the controller system with latest hardware and software, reducing unplanned downtime due to non-availability of Spare Parts for the vintage Controller system
- OPEX reduction and increased drive availability with latest Controller generation
- CAPEX savings and reduced shut-down time versus a full new drive replacement

Typical upgrade architecture SD7



Cyber security solutions

The breakout of Stuxnet malware – the world’s first publicly known digital weapon – in 2010, dramatically changed how Operational Technology asset owners around the globe perceived cybersecurity.

Since that event, OT owners have recognized the need to effectively address rapidly evolving cyber threats to the industry. A successful cyberattack on the control system can result in mild to devastating consequences, including:

- Unplanned shutdown
- Remote Control of the plant process
- Production impact and financial loss

GEPC latest HPCi Controller has significant measures such as secure communication to protect against external threats & audit log and RBAC features to protect against internal threats and meets IEC62443-4-1, IEC62443-4-2 to SL1 & IEC 62443-2-4 to ML3.

The cybersecurity protective measures are intended to protect you on:

- Availability (of process and data)
- Integrity (of operation and data)
- Confidentiality (of data)



SD7000 CONTROL UPGRADE

Extend the life of your drives by migrating to GE Vernova's Power Conversion latest control technology

Digital connectivity

If you are looking for ways to reduce downtime and enhance the performance of operations and assets, our new controller with inbuilt digital capabilities can help (Digital ready).

Maintenance+ APM for drives

Maintenance+ asset performance management (APM) for drives is a cloud based analytic tool that analyzes key performance indicators (KPIs) with predefined algorithms to provide early warning information of potential failures and helping operators thereby, to reduce unplanned downtime.

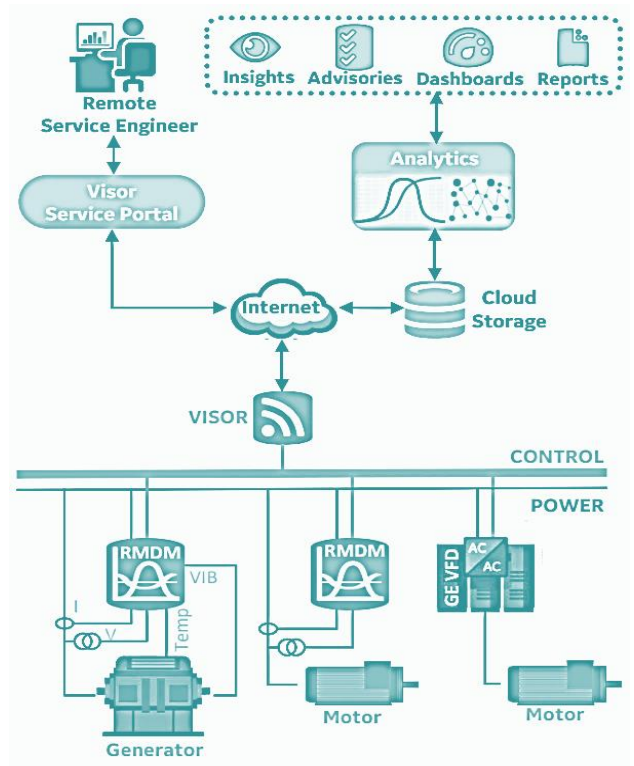
Services+ remote engineering

Visor remote monitoring & diagnostics (RM&D) system delivers on-tap expertise to remotely manage, update and check on the health of your assets.

Services+ cyber services

Enabling reduced exposure to cyber security vulnerabilities associated with software and connected systems.

Necessary I/Os and software configurations for VISOR upgrade will be installed and configured by GE experts during same shutdown along with controller upgrade.



Key Performance Indicators analyzed:

1. Electrical signal monitoring
 - Network side signals of the drive
 - Load/Machine side signals
2. Thermal signal monitoring
 - Machine side signals
 - Drive side signals
3. Mechanical signal monitoring



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SERVICES TAILORED TO YOUR NEEDS

Every industry looks to maximize productivity, reliability, and reduce costs. At Power Conversion, we understand that you need responsiveness and flexibility to help achieve your KPIs.

- Replacement of parts & repair services
- Preventive "performance" maintenance (Annual)
- Preventive "major" maintenance (once every three or five years)
- Long term service agreements
- Local field services & repairs
- Retrofits, refurbishments and upgrades
- Interactive trainings
- Remote support via VISOR

CONTACT US

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SERVICES BENEFITS AND FEATURES

- Experts that fully understand your industry and will match our drive features to meet your specific requirements
- Improved reliability and serviceability
- Replacement of all obsolete parts by Power Conversion new standard hardware
- Consistent and cost-effective project execution from start to finish
- Phased upgrades that fit your operating budget
- Improved process control resulting in lower operating costs
- Upgrade solutions for 3rd party LCI drives

