

Service note

# ACS1000 Upgrade services

## The fast track to enhance your drive



**Benefit from various Hardware Upgrades in order to enhance the efficiency and reliability of your drive and to bring it to the latest level of technology. Our aim is to maximize long-term value for our customers.**

### Manage the life cycle of your drive

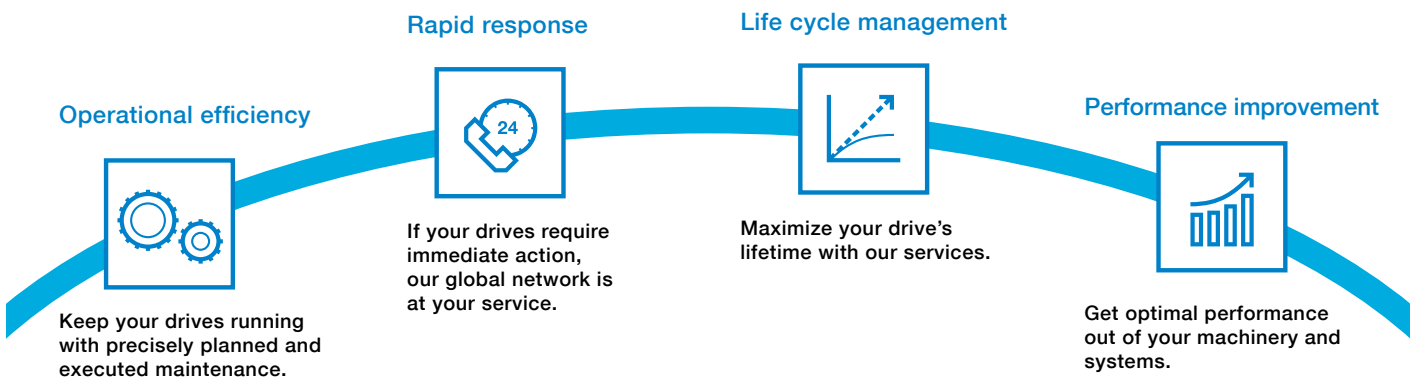
ABB drives product life cycle management model offers proactive services in order to maximize the availability and performance of medium voltage drives and improve overall efficiency. This model provides optimum support to end users and a smooth transition to a modern system when the operational life of the existing drive has reached a certain status.

### Migration to latest technology

ABB commits to apply all expertise and technology improvements to both new and matured drives. With Hardware Upgrades you can enhance the functionality of your drive, thereby providing the best possible return on investment by phased migration to the latest technology.

### The right time for the right service

It is time to consider a Hardware Upgrade if you are facing growing requirements or when a major maintenance activity is due. Hardware upgrades enhance your drive with new features at minimum costs when planned at the right time of the life cycle.



# The way to improved performance

Hardware Upgrades provide enhanced product features, ensure availability and raise the efficiency of your medium voltage drives throughout their entire lifetime. Extended product support and optimized maintenance costs will definitely pay off.

## Main Board upgrade

Along with the latest interface board INT2 and the main board AMC34, a new control hardware setup was introduced into the ACS1000 design. This upgrade of the main board forms the basis for further upgrades and options that will allow the capabilities of the drive to be adapted to today's increasing demands. The corresponding software provides improvements and features that were developed over the last few years. Furthermore, the main board upgrade enables the higher availability and lower acquisition costs of spare parts.

### Benefits

- Latest control design with all its software features
- Safe torque off and Emergency stop 1
- Ability to support “Black Box” to find root causes of failures
- Increased data collection for performance review and efficient troubleshooting

## Auxiliary power concept upgrade

In case of an auxiliary power loss, the ACS1000 is equipped with backup batteries that limit the power loss ride-through to one second. However, batteries have a limited life expectancy. To overcome these constraints, our new auxiliary power concept further improves the reliability and availability of the ACS1000 and is also available as an upgrade.

### Benefits

- Extended auxiliary power loss ride-through capabilities ensure reliable and continuous operation
- Easy installation

## Fast rectifier supervision upgrade

A supervision circuit for the input bridge checks the condition of diodes. If there is a fault in one rectifier or if the supply connected to a rectifier has a short circuit, the voltage supplied will be reduced. By installing the monitoring circuit in the ACS1000 input rectifier bridge, the control electronics is able to monitor any major alteration in the rectifier input voltages.

### Benefits

- Triggering of protection reaction (trip)
- Improved robustness of the unit means more safety
- Optimized protection of diodes and input isolation transformer reduces costs

## Arc Guard™ system upgrade

Optical sensors detect dangerous flash overs and the Arc Guard™ immediately interrupts the main power, protecting your personnel from injuries or your equipment from damage.

### Benefits

- Increased human and operational safety
- Reduction of downtime, shorter mean time to repair (MTTR)
- Scalable scope depending on the specific customer drive
- Compliance with IEC 62271-200 standard

## Pump redundancy upgrade

The existing single cooling pump (CM) can be upgraded to a double pump layout. The resulting redundancy guarantees the continuance of the concerned processes.

### Benefits





- No trips or production losses in case of pump failures
- Higher Mean Time Between Failures (MTBF)

## EC fan Upgrade

In order to fulfill CE Ecodesign requirements, AC fans should be replaced with electronically commutated (EC) fans. Thus, ABB recommends upgrading the AC fans originally supplied with the ACS1000 air-cooled drives to EC fans as part of regular preventive maintenance actions. The fan speed of EC fans is controlled and changes according to the amount of cooling required, which leads to additional benefits.

### Benefits

- Noise reduction by up to 10 dB
- Auxiliary power loss reduction
- CE conformity

				
Main Board upgrade	●	●	●	●
Auxiliary power concept upgrade	●			
Fast rectifier supervision upgrade	●			●
Arc Guard™ system upgrade	●			
Pump redundancy upgrade	●			●
EC fan upgrade	●		●	

For more information please contact your local ABB representative or visit:



[new.abb.com/drives/services/upgrades-and-retrofits](http://new.abb.com/drives/services/upgrades-and-retrofits)

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