For more information on available spare parts visit our website, or speak to your Siemens Process Account Manager or Siemens Certified Solution Partner for pricing and availability.

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APACS+ Lifecycle Solutions

Over 30 years of proven success





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The good news is that Siemens still maintains an experienced staff of both internal engineering experts along with certified solution partners that bring decades of experience to help you support your systems. In addition, Siemens consistently works with our Process Automation User Community to solicit input on migration tools and products. These tools help reduce the need for customization, improve safety and security, and enhance the user experience, all while reducing the installed and lifecycle costs as compared to other systems.

Our in-house APACS+ experts can determine the best approach to meet your future automation needs.

Since the acquisition of Moore Products in 2000, Siemens has dutifully continued to develop, manufacture and deliver the hardware and software for the award-winning APACS+ control system. In 2010, APACS+ was announced "mature" along with a long-term plan to support the 20-year-old product through September 2020. Siemens support will not end abruptly on October 1, 2020; however, due to external third-party suppliers Siemens cannot guarantee service past that date.

Modernization options

Over the past 20 years, Siemens has invested significantly in R&D to develop APACS+ migration tools that best fit customer budgets and schedules. Bulk engineering tools are designed to seamlessly migrate HMI graphics, convert IO in seconds and effortlessly interpret your 4-mation configuration (*.mbr) to support the automated conversion of your 4-mation code. This enables you to minimize your downtime and preserve your intellectual property, reducing the risk and engineering effort to modernize your control strategies.



Graphic Conversion Service

Leveraging 30 years of APACS+ experience, Siemens has the experts to help convert your legacy graphics (e.g. ProcessSuite/Wonderware, APS) and update them into the latest Siemens distributed control system (DCS) to increase operator acceptance and lower transition costs. In addition, your plant will be ready to take advantage of enhanced visualization along with Advanced Process Graphics (APG) that will help identify and operate within your KPIs, increasing safety and profitability.

Operator Station Migration

Modernize your Operator Stations (OS) online without an interruption to production, while still operating your existing legacy HMI system to help your operators get acclimated with the new system. Since 2003, the PCS Distributed Control System APACS+ OS DCS HMI upgrade has helped users extend the life of their installed APACS+ system while improving their experience.

Improvements with OS HMI

- Faster & personalized navigation enhances operator effectiveness
- Alarm management tools compliant with ISA \$18.02 reduces operator stress
- **High-performance graphics** helps keep your operators focused on KPIs
- Industrial cyberecurity compliance certified to international cyber standards (IEC 62443)
- Windows, web clients, web UX or virtualized architectures - more options for visualization
- OPC connectivity included increased integration

- Integrated Process Historian and Reporting cost-effective and simplified implementation
- · Optimized connectivity between 4-mation and the HMI – tighter integration ensures communications

As your trusted partner over the past three decades, we understand your process control needs and the support you've grown accustomed to.

Enhancements with the SIMATIC AS-410 Controller

The new SIMATIC AS-410 controller removes the limitations found with APACS+ CPUs such as controller capacity, single scan rate and remote IO integration.

- The AS-410 Controller provides for a larger capacity (500 IO vs 3500 IO)
- More flexibility for your logic and IO (multiple scan rates as fast as 10ms vs. a single scan rate)
- · Global standards-based communications (Ethernet on-board with high-speed PROFINET networks for electrical, instrument, and IO vs. slow proprietary networks)

Future-Proof Your Distributed Control System

As your automation needs increase, consider investing in your future with the SIMATIC AS-410 controller. You will have a common HMI for the APACS+ and PCS 7 helping with operator adoption. The AS-410 and APACS+ ACM controller will talk peer-to-peer via Ethernet. You will already have the core PCS 7 configuration tools as they are included in your PCS 7 APACS+ OS HMI software bundle. The AS-410 offers you cost-effective, seamless adoption by operations and a building block toward the future.

Controller Code Conversion Strategy

Siemens can document your 4-mation code, including soft list parameters, saving time and money while reducing risk as you modernize to the latest DCS. Only the Siemens DCS can offer you the Advanced Process Library (APL) that provides the best form, fit and function replacement for your APACS+ 4-mation code, while improving your future automation experience.

Distributed Control System Improvements over APACS+

Now that you are using the native Siemens DCS libraries, you can efficiently visualize key process data including interlocks, first-out, sequences, control loop performance, asset management and model predictive control.

APACS+ IO Migration to SIMATIC ET 200SP HA IO

This solution offers you the ability to reuse the existing cabinet and preserve the APACS+ MTA and APACS+ IO cable, supporting a field cutover in seconds to new IO.

The AS-410, using a fully redundant PROFINET IO Bus with redundant capable ET 200SP HA IO is the perfect replacement for APACS+ Controllers and IO. To speed the transition, an innovative solution has been developed that allows the ET 200SP HA IO to be installed into the existing APACS+ cabinets retaining the APACS+ backplane with the existing APACS+ IO cable in place and untouched. This preserves the current APACS+ IO cable connection to either the APACS+ MTA or standard field terminal blocks.

The new IO and termination assemblies are designed and tested off-site to be an optimized fit for your installation. As an added benefit, the ET200SP HA IO modules give you easy access to all the extended data and diagnostics provided from HART, where the APACS+ IO modules (SAM, EAM, VIM, etc.) did not.

To cut-over your system, just install your new IO rails on-site and the APACS+ migration takes seconds – just remove the old APACS+ modules, install the pretested ET 200SP HA IO and connect to your existing APACS+ IO cable connector. Your new IO is now connected and 16 or 32 channels have been migrated in a very short time period.

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SIMATIC Logic Matrix takes the proven cause and effect diagram approach that was originally developed for QUADLOG and is now available for the Siemens DCS to simplify interlock functionality.



Spare Parts Options

Siemens wants to help you keep your APACS+ process control or your QUADLOG safety system running at its full potential. If you're still undecided about your modernization strategy, Siemens is still the only manufacturer that can offer "new" in-house manufactured spare parts to increase your APACS+ performance or capacity.

Increase Your System Performance

- Improve the performance of your M-NET network by upgrading to Ethernet with an Industrial Ethernet Module (IEM).
- Improve the performance of your APACS+ controller with an upgraded CPU allowing for a faster scan rate with an ACMx Module (or CCMx for your QUADLOG safety system).

Increase Your System Capacity

- Not only does the ACMx module have more memory than previous versions, but the overhead code needs less of it, thereby freeing up the extra memory for your configuration. The extra memory can be used to support your larger configuration or expanded IO capacity.
- Before deciding on a migration path forward, you may need to expand your plant. New APACS+ or QUADLOG IO modules are available for the new process area in your plant.
- When adding a new area to the plant, you may require more than just I/O modules. Whole integrated APACS+ controllers (racks, ACMx, power supplies and IO) are also available.
- One of the key components of your APACS+ system is the 4-mation software, used for re-configuring the controller or to reset parameters and other values. If you're running on XP or older PCs, stay secure and move up to a Windows 7 or Windows 10 LTSB 2015 version of the "Control CD." This CD comes with 4-mation supporting Windows 7 and Windows 10 LTSB 2015 as well as other utilities to keep your system fresh.
- Other components like power supplies, Modulrac fan assemblies, and batteries wear out over time. Start thinking about refreshing them in order to keep your system running reliably.

The new SIMATIC ET 200SP HA IO offers an industry-leading density by supporting up to 56 IO modules within a single rail to reduce the system's overall footprint. In addition, Siemens offers APACS+ to ET200SP HA wiring solutions to minimize system cutover risk.