Desigo Automation PXC4 controllers
enable "pandemic-ready" isolation rooms
at the touch of a button

usa.siemens.com/desigo-automation

SIEMENS

In Bangor, Maine, XL Automation Solutions has proudly served its customers for 20 years, helping to ensure the comfort and safety of building occupants with healthy environments and leading-edge building automation solutions.

As a Siemens Solution Partner, XL Automation relies on a range of field devices, including the newest generation of Desigo Automation controller: the Desigo PXC4.

XL Automation Solutions has been a leader in the Building Automation Industry since 2002.

According to Automation General Manager Nicole Niles, a project came up in 2021 for which the PXC4 controller was ideally suited. "We have a hospital customer that wanted to prepare 18 patient rooms to be 'pandemic-ready' isolation rooms at the touch of a button. And we found that only the PXC4 and its unmatched flexibility with expandable I/Os[1] would be able to meet the unique needs of this building," she says.

The hospital's engineering team had shared with XL Automation that optimizing healing environments to be as healthy, comfortable, and safe as possible was a key priority, which meant they needed to be able to convert to negative pressure rooms quickly to foster patient wellbeing.

Matthew Swan, XL Automation's Lead Programmer explains that this application is especially complex, requiring a high degree of customized sequencing, but that the PXC4 controller "provides all the necessary tools to streamline this process. We have four VAVs[2] on a single controller that work together in pandemic mode. It's something we just could not have accomplished with any other controller."

He goes on to say that by adding the PXC4 controller for this hospital also means that the entire system's functionality has improved, and that all controllers are more adaptable and flexible than they were before.

[1] Inputs / Outputs
[2] Variable Air Volume

About the Desigo Automation PXC4 BACnet controller

A compact device with 16 onboard I/Os that can be expanded up to a total of 40 I/Os, the Desigo PXC4 controller integrates with a full range of open building automation platforms to deliver high-performing buildings.

Niles says that, for this hospital's pandemic room application, the PXC4 controller not only provided XL Automation with the flexibility they needed to meet this project's requirements, but that it also will allow for future changes and modifications as the building's needs change. "The Desigo PXC4 helps us provide the safety, security, and comfort our clients need now and in the future at the level they expect, rather than being stuck within an application that can only get us so far."

She further outlines three key advantages of the PXC4 controller for solutions partners like XL Automation:

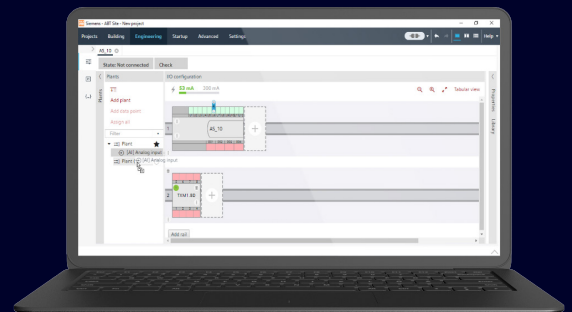| Advantage	Description
Faster block programing	Live data de-bugging while programming logic operates without interruption or system downtime.
Flexible, expandable I/Os	16 onboard I/Os can expand to 40 total I/Os, creating flexibility for a wide range of applications. As needs change, I/Os can be extended without replacing the device.
ABT Site Engineering and Commissioning Tool	One engineering platform saves time and streamlines processes, from startup and loading and device selection to application configuration and graphics creation.

Desigo Automation PXC4 controllers transform buildings into high-performance assets. PXC4s intelligently connect field devices, enabling quick and easy engineering and providing all the information necessary to manage a building. And, because they are designed with flexibility and security in mind, these controllers let you plan, engineer, install, commission, and operate highly reliable and efficient building automation systems.

> "
> The Desigo Automation PXC4 controller made [this project] a cinch. It's something we could not have accomplished with any other controller."
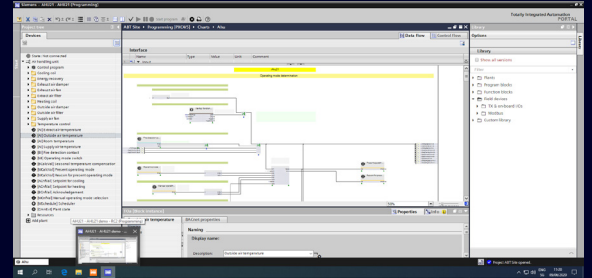
Matthew Swan, Lead Programmer
XL Automation

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When you're in the PXC4 programming workflow, it's all intuitive. The pre-built libraries and ability to save custom programs make for smooth and easy coding."

Matthew Swan, Lead Programmer
XL Automation

ABT Site facilitates easy programming and engineering of Desigo Automation PXC4 controllers.

Expanding hospital infrastructure while leveraging existing equipment with the Desigo Automation PXC4 controller

Niles explains that this customer prefers Siemens' devices and platforms for their automation system, which made the addition of the Desigo PXC4 controller a perfect fit for this application. "We support their air handling units, steam controls, and chiller plant controls. So, as they add a new wing to their hospital, for example, we're able to expand their infrastructure and leverage existing mechanicals by using the PXC4. It allows us to integrate those points along with medical gas and compressed air systems for control and monitoring," she says.

Swan also appreciates the robust nature of the PXC4 hardware and intuitive engineering. "When you're in the PXC4 programming workflow, it's all intuitive. The pre-built libraries and ability to save custom programs make for smooth and easy coding," he says.

The main takeaway, according to Niles, is that the PXC4 allows XL Automation to provide their customers with exactly what they need when they need it. "We are in the midst of a pandemic," she says. "And medical professionals in our area are confident it's not the last one. Because we're in a place where space is limited, we need to create flexible healthcare spaces that can adjust to people and volume. **With the Desigo PXC4, we can help this customer transform their space to any situation they face and care for more patients in a timely manner, without adding square footage or equipment."** And for XL Automation and its customers, that means **reducing upfront equipment costs by up to 35%.**
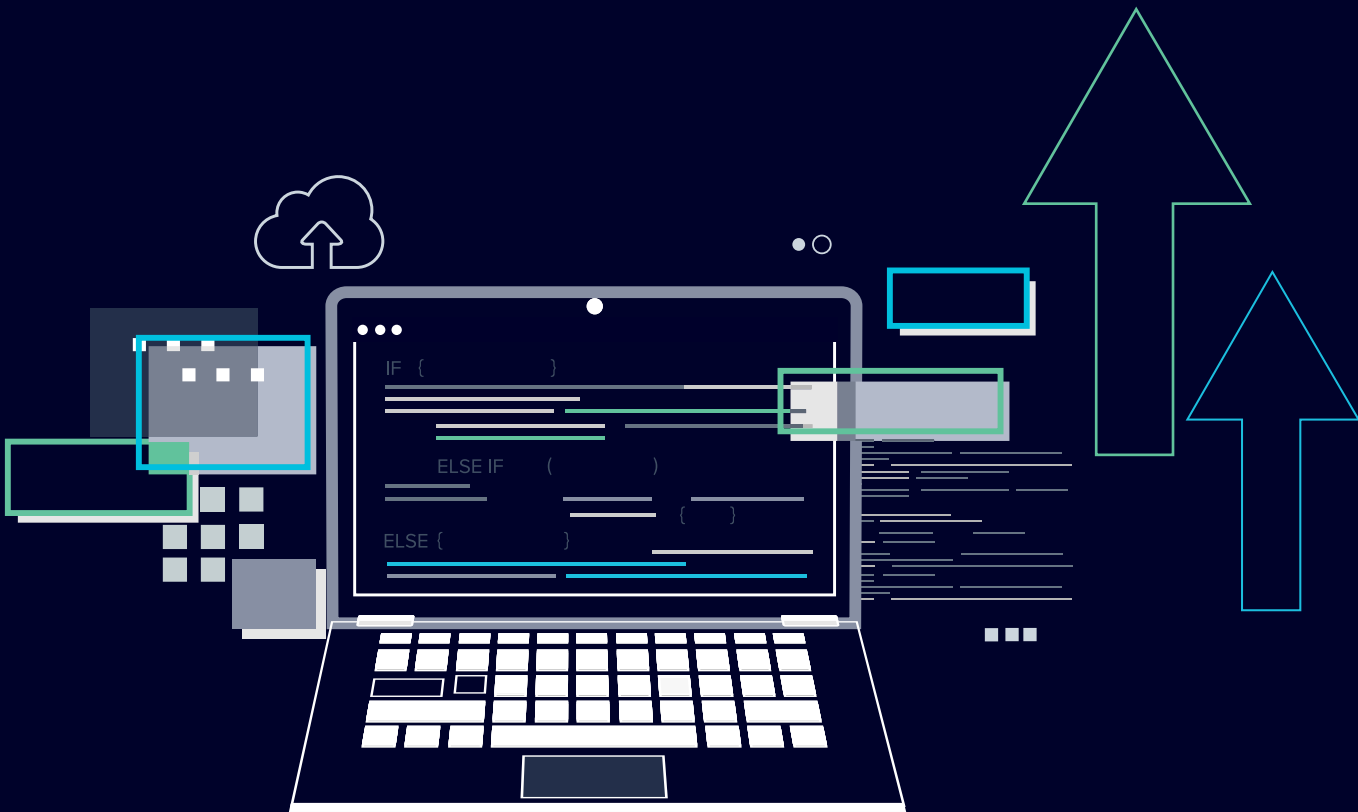
Optimizing hospital spaces with flexibility to meet future needs

The Desigo PXC4 controllers give XL Automation the freedom they need to efficiently tackle a wide range of building automation challenges and applications in ways that create IoT-enabled, high-performing buildings. The PXC4 controllers enable significantly faster and easier engineering via the ABT Site, according to Swan. Moreover, it also created greater transparency and visibility into building performance.

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There's more configurability with the PXC4 and expandable I/Os. As our customers need to make adjustments, we can do that within the line block programming and ABT Site, while still staying within their budget—we can do more with fewer resources, less engineering time, and lower costs. And, with better access to more data like runtime and other proactive parameters, we have the information we need to maintain the equipment better."
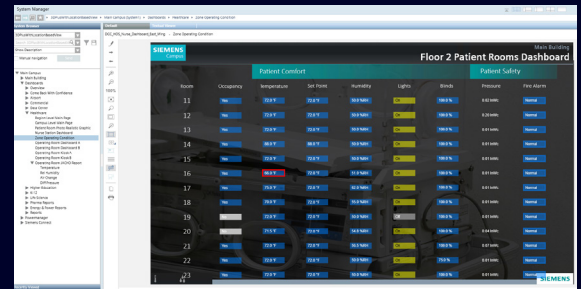
Nicole Niles, Automation General Manager
XL Automation

> We did make some mechanical changes that allowed our rooms to have the best airflow in order to protect our patients and our staff.

President
Leading Maine Healthcare Organization

For example, if the hospital needs to convert a ward from a typical VAV application to a very specific negative pressure application, having the PXC4 installed means there's no need to change out equipment. Likewise, creating higher tolerances are also possible thanks to the expandable I/Os.

From the hospital's perspective, the PXC4 means they're able to quickly convert over to 18 pandemic-ready rooms with the click of a button, without adding wings or depending on hospital tents. Now they can switch room settings with ease, creating comfortable patient care environments that also help to prevent the spread of disease. In the long run, this hospital is not only conserving funds, but they're also optimizing their space with flexibility to meet future needs.

When it comes to using the ABT Site, Swan says, "The web interface for the ABT Site is great. I can use engineering tools in the program editor while technicians can access the webpage and work on startup, check sensors, and stroke valves, all while I'm still working on the program. There's lots of flexibility and the built-in tools – such as balancing mode for VAVs – are a huge time saver."

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The future is bright for XL Automation

At the end of the day, Niles says that everyone at XL Automation values the relationships they have built with their customers and strives to not only meet but exceed expectations for every project. "It's a core value for our business and how we grow. Being a value-added partner for Siemens greatly affects our business and ability to grow—and the fact that Siemens has been the same type of partner for us that we have been to our customers is crucial. The PXC4 controller is one more part of this legacy that's growing our reputation and relationship with both Siemens and our customers. It's a game changer for us in the long-term, and we're excited for where it can go in the future," she concludes.
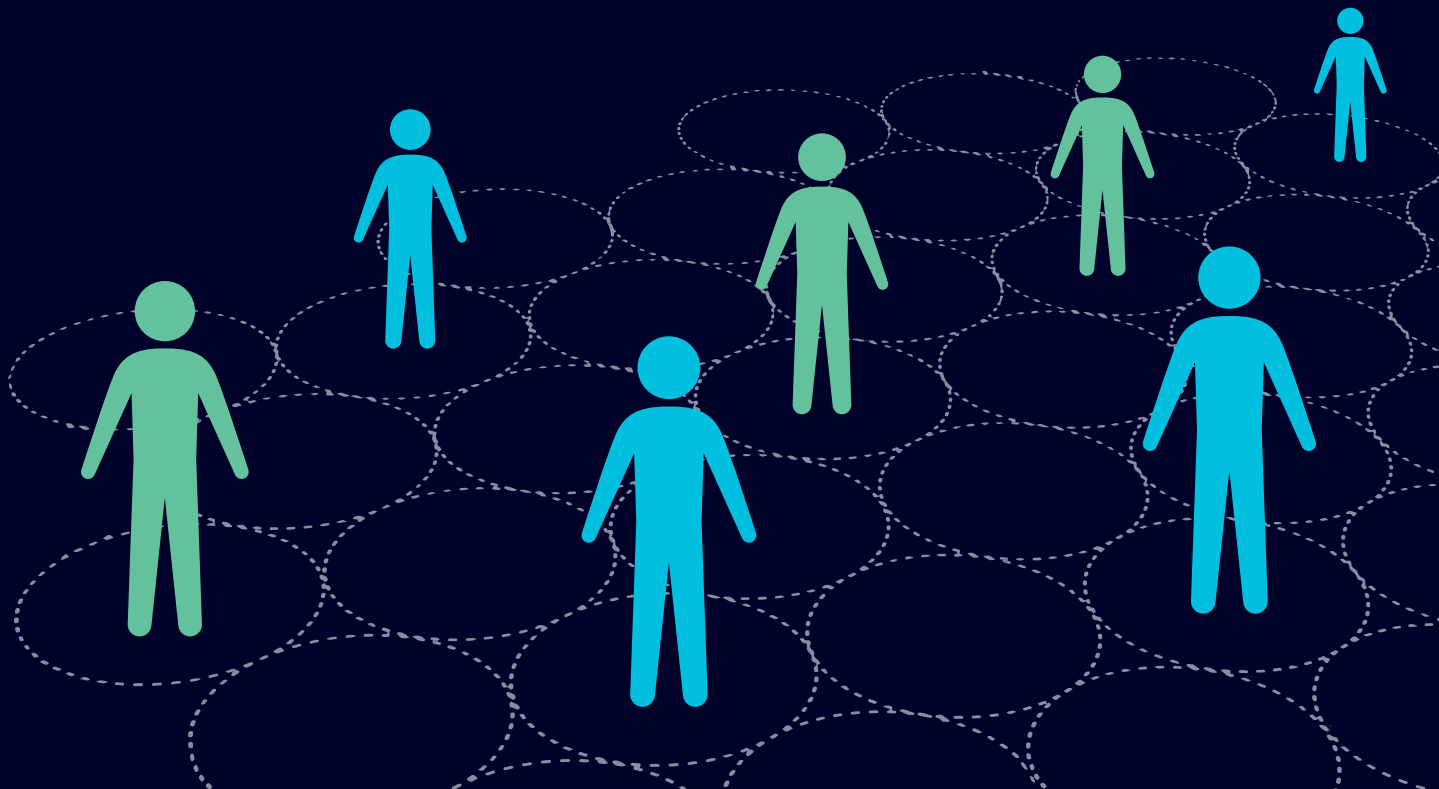
PXC4 Advantages for Healthcare Environments
Better control for patient care and healing
Ability to convert to negative pressure rooms quickly and easily with a click
Flexibility to expand this HVAC equipment control as the hospital expands and grows
Visibility into building equipment performance

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