

WHITE PAPER

VELOCITY

Innovative AV Control

AV integrators and technology managers face a reality with traditional AV control systems: they are costly and time-consuming to install, program, and maintain. The Atlona Velocity Control System brings a whole new approach to AV control, making it faster, easier, and more cost-effective than ever to specify and integrate a commercial AV control system.

At the heart of Velocity is an innovative, IP-based system architecture that enables unprecedented reliability and scalability, plus remote management and monitoring from the cloud.



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Traditional AV control

It's a fact of life for AV integrators and technology managers: Despite being accustomed to working with traditional AV control systems for years, the reality is that they are costly and time-consuming to install, program, and maintain.

Even exchanging a display, or modifying a button function in a touch panel GUI may require a specialized programmer and a truck roll, costing the commercial integrator and end user time and money. If the integration firm doesn't have a programmer available on staff, it leaves the company relying on a third-party resource to get the job done, resulting in delays and inconvenience. Programming control systems usually requires extensive training and specialized certifications, which are barriers to entry for in-house AV/IT staff.

In addition, many of today's traditional control systems don't have built-in redundancies or fail-safes to ensure uninterrupted operation – an essential requirement for mission-critical applications as well as IT expectations for ensuring continuous system uptime. A control processor failure can bring a meeting, presentation, or class to its knees – leading to a negative technology experience for the end user.

Furthermore, traditional control systems lack remote, cloud-based monitoring and management capabilities that allow proactive servicing and maintenance, to ensure peace of mind for the end user.

Traditional control systems are not cost-efficient, scalable, or designed for continuous reliability. Yet, for decades, they have been the industry standard to control multiple AV devices in a single room or across a facility.

Innovative IP-based control with Atlona Velocity

With audio and video systems quickly migrating to IP-based distribution, the next step in AV/IT convergence is control of those systems over IP networks, plus extension to the cloud for remote monitoring and management.

Atlona Velocity, an innovative, IP-based AV control system platform, leverages the flexibility of IP networking and the power of the cloud, making it faster, easier, and more cost-effective than ever to specify, integrate, and manage AV systems.

To anyone using a modern conference room or meeting space, the Velocity user interface looks and feels just like a traditional control system. It even offers control through iPads® and other mobile devices for a familiar, user-friendly technology experience.

But to the AV/IT administrator or integrator, the Velocity experience is revolutionary, offering substantial advantages over existing platforms – including time and cost savings, built-in system redundancy for optimizing reliability and virtually eliminating downtime, unprecedented scalability, remote client and system management, highly intuitive and streamlined configuration, and much more.

Perhaps best of all, AV integrators and technology managers can learn how to set up a Velocity Control System through a brief online training session.

This white paper explores what makes Velocity so different, from fast setup, extensive remote monitoring capabilities, to control via virtually any device with a web browser – as well as Atlona's elegant Velocity Touch Panels.

As you read, you'll learn how you can dramatically reduce the time it takes to implement and manage a robust, thoroughly modern control system, meeting your clients' needs for reliability and scalability, while delivering a seamless user experience.



What is Velocity?

The Atlona Velocity Control System is a new AV control platform for very fast, agile control system configuration and deployment in any size or type of facility. Velocity features an innovative network-based system architecture with scalability limited only by the IT backbone, as well as full redundancy capability that prevents AV control downtime in any room.

Velocity also offers a powerful, centralized resource enabling integrators, AV/IT system administrators, and other technology professionals to easily manage all their AV control clients and site installations.

In spaces ranging from individual meeting rooms up to an entire campus or enterprise, Velocity simplifies control system setup and management to meet end-user technology needs, now and into the future.

Velocity standard features include system monitoring, notifications, intuitive and mobile-friendly GUIs, secure communications, analytics, multiple client and site management, and much more.

The Velocity Control System comprises three essential components:

Velocity Control Gateway: This is a IP and software-based control processor designed for several AV systems over a network. It's available as a server appliance or can be hosted on standard IT server infrastructure. IP control command converters are available for IR, RS-232, and relay control.

Velocity Touch Panels: Sleek, stylistic touch panels in 5.5" and 8" sizes, with a table mount available. Velocity also offers easy BYOD integration options for tablets, smartphones, PCs, and more.

Velocity Cloud: A centralized online resource to create and manage Velocity systems by client, client sites, and specific locations including floors and rooms. Velocity Cloud offers the opportunity to deliver timely, premium customer service from a remote location.

Read on to discover how Velocity will change the way you deploy and configure control systems in any commercial AV application.

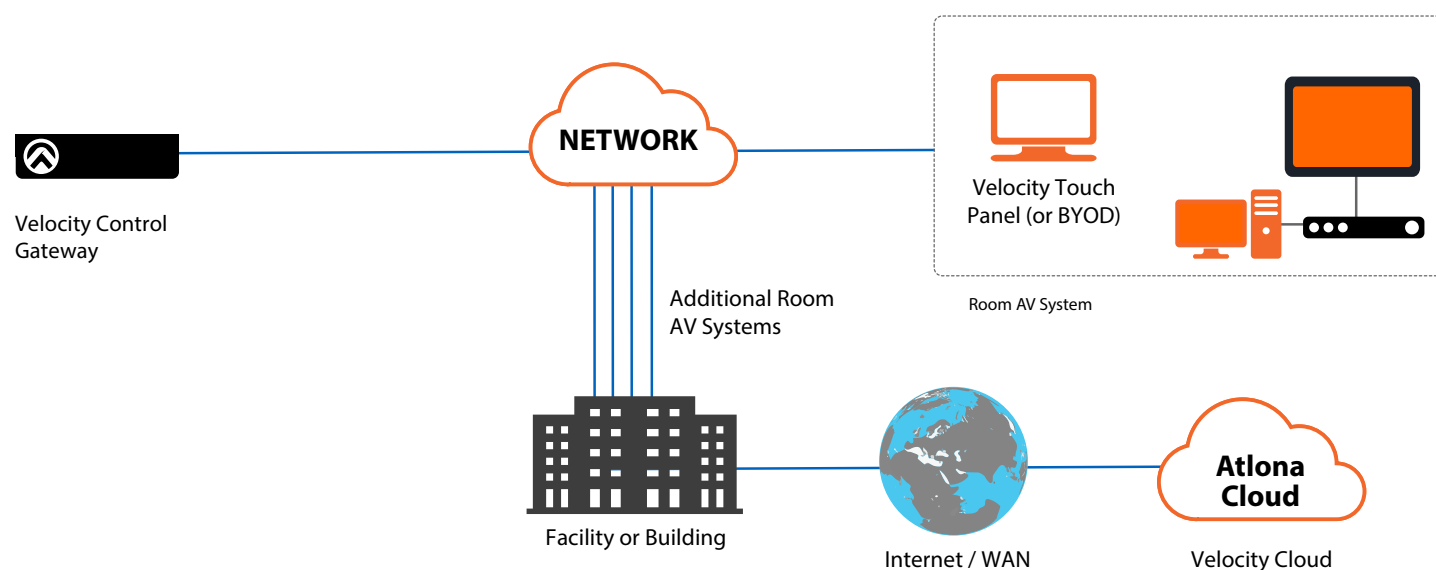


Figure 1. Atlona Velocity Control System components.

Velocity saves time: No special certifications or programming knowledge required

Velocity requires no specific programming knowledge or outside specialists to set up and deploy a control system. In fact, an online training session is all you need!

The interactions, flow, and visual elements of the Velocity setup screens look just like a modern web or mobile app, creating an incredibly user-friendly experience. Programming with a coding language is replaced by simple and straightforward mouse clicks and menu selections. All that's necessary for configuration is a web browser connection to the Velocity Control Gateway.

There's no need to compile or upload to devices, which saves substantial time during integration. All settings and configurations are pushed to devices as they're made by the user.

Velocity also saves time on large, multi-room installations, because you can easily duplicate configurations across devices, rooms, or entire facilities – all with just a series of mouse clicks.

Fast, streamlined setup and an easy-to-learn interface mean no specialized programming is required. Integrators and in-house AV/IT tech managers can vastly reduce the time spent on control system integration, saving time and money on every project.

Furthermore, Velocity is distinct from traditional control systems in that there's no need to own or maintain source code. This is an important consideration that often translates to considerable costs down the line when code needs to be modified or even rebuilt to accommodate system modifications.

Agile, IP and software-based infrastructure makes updates easy

Adding, removing, or changing devices on traditional control systems typically requires bringing in an outside programmer, or having someone on-staff with specialized certifications. Velocity makes it easy for anyone to make changes from a web-enabled device. Any changes you make are automatically pushed out to the Velocity devices over the network.

With Velocity Cloud, integrators can offer remote system modifications and updates for clients through a managed service plan, while saving time and money by eliminating the need for staff members to be present on-site.

Velocity offers affordable and unprecedented scalability

Velocity's all-IP platform delivers far greater options for scalability than any other AV control system.

Integrate several systems with a single processor and expand systems in minutes through the IP-based infrastructure plus user-friendly GUI and workflows. With the capacity to host 250 IP connections from one Velocity Control Gateway appliance, this control processor streamlines deployment in a wide range of facilities, including organizations with traditional conference rooms as well as numerous smaller meeting areas and open huddle spaces. Contrast this with a typical, traditional AV control processor, comparably priced to the Velocity Control Gateway appliance, but with capacity limited to serving just a single room. See Figure 2.

The virtual machine software version of the Velocity Control Gateway provides up to 5,000 IP device connections for the largest projects, eliminating the need to gang together multiple processors using complex, costly customizations, or specifying a dedicated processor unit for each room. Velocity's system architecture, scalability, and high reliability make it especially accommodating for newer educational and corporate installations with a large number of collaborative meeting spaces to integrate and manage. See Figure 3.

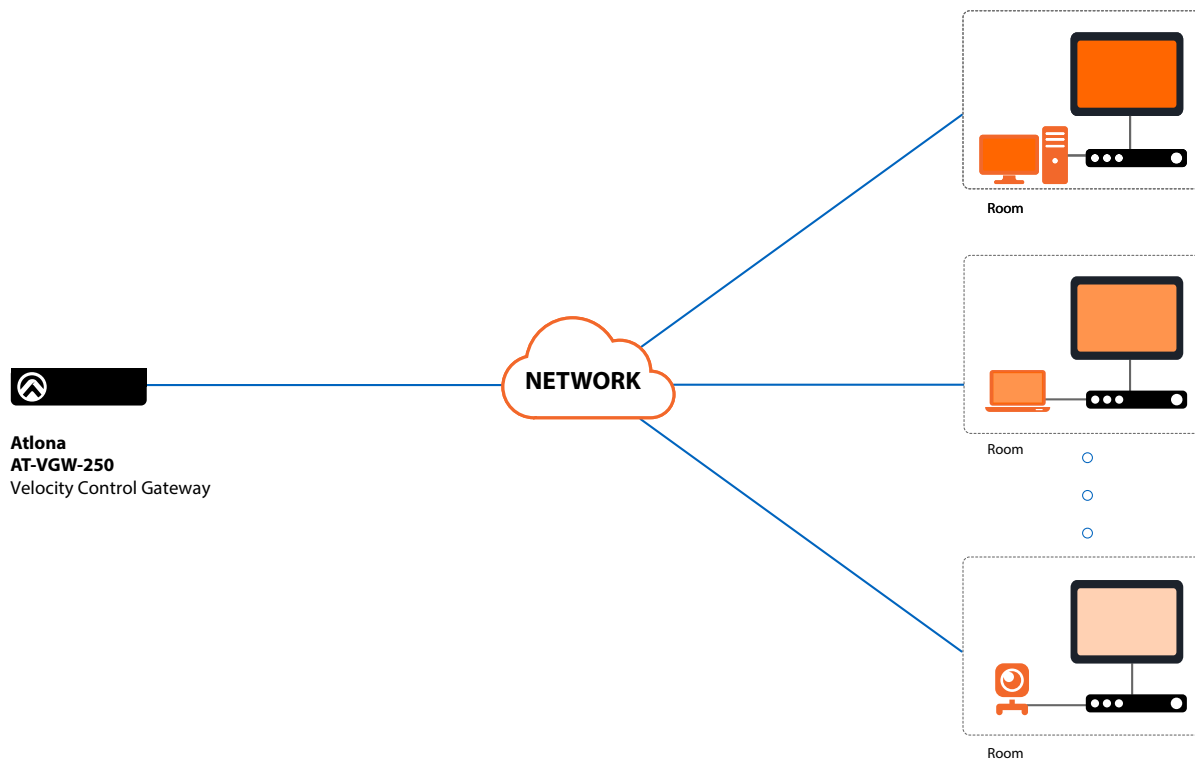


Figure 2. The Velocity Control Gateway appliance can serve several room AV systems with the ability to host up to 250 device IP connections.

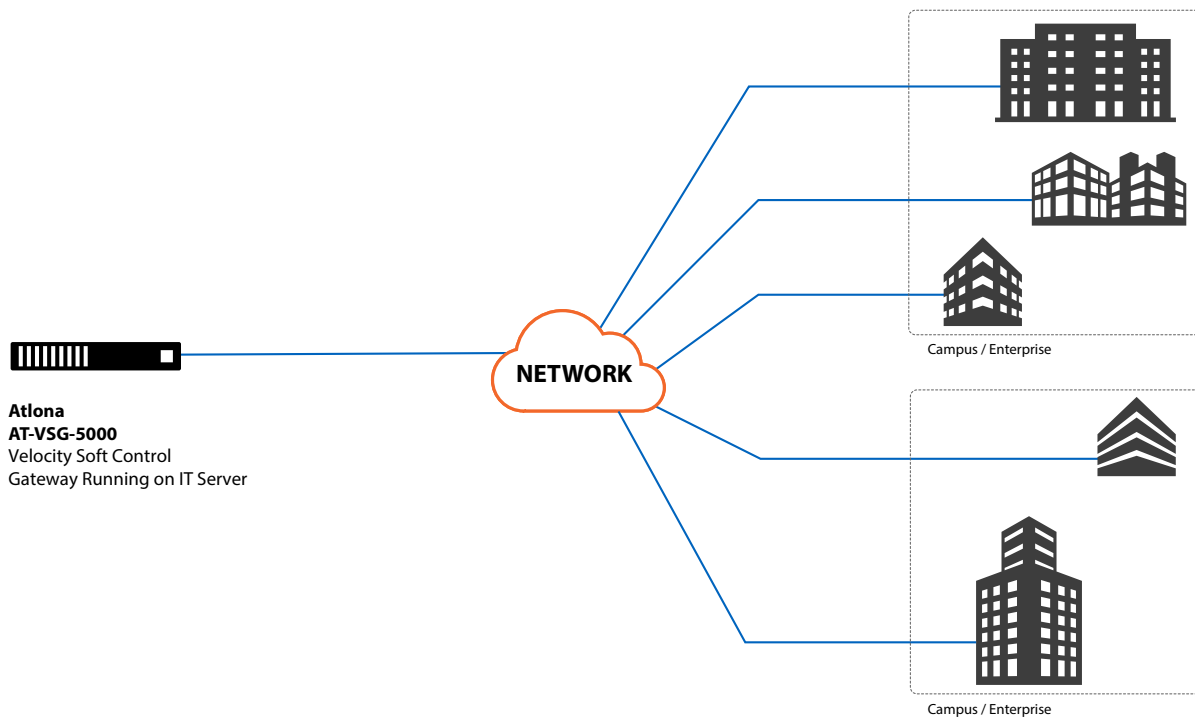


Figure 3. The Velocity Soft Control Gateway can be hosted on standard IT server infrastructure, with the processing capacity to serve up to 5,000 IP device connections for AV systems throughout a campus or enterprise.

Redundancy features eliminate downtime and provide clients peace-of-mind

Most users don't notice your technology – until it doesn't work.

Velocity is based on a unique systems architecture that can accommodate two fully redundant processors. If a problem arises in one processor, the secondary unit automatically takes over, and the control system recovers on its own, seamlessly and with virtually no user interruption. This gives you, your clients, and AV/IT staff members peace-of-mind, knowing the system will continue running with no downtime, and no user intervention necessary.

The redundancy works with two Velocity Control Gateway processors on the network, one assigned as the primary and other as the secondary. The secondary communicates with the primary unit every few seconds, backing up any changes to configuration settings, device usage reports, system logs, and other information.

If communication fails, then the secondary unit automatically takes over control AV system control functions until the primary unit is back online. See Figure 4.

Redundancy is available for software as well as hardware Velocity Control Gateways. See Figure 5. The same, continuous backup and automatic failover features apply to large-scale control processors serving multiple buildings or campuses.

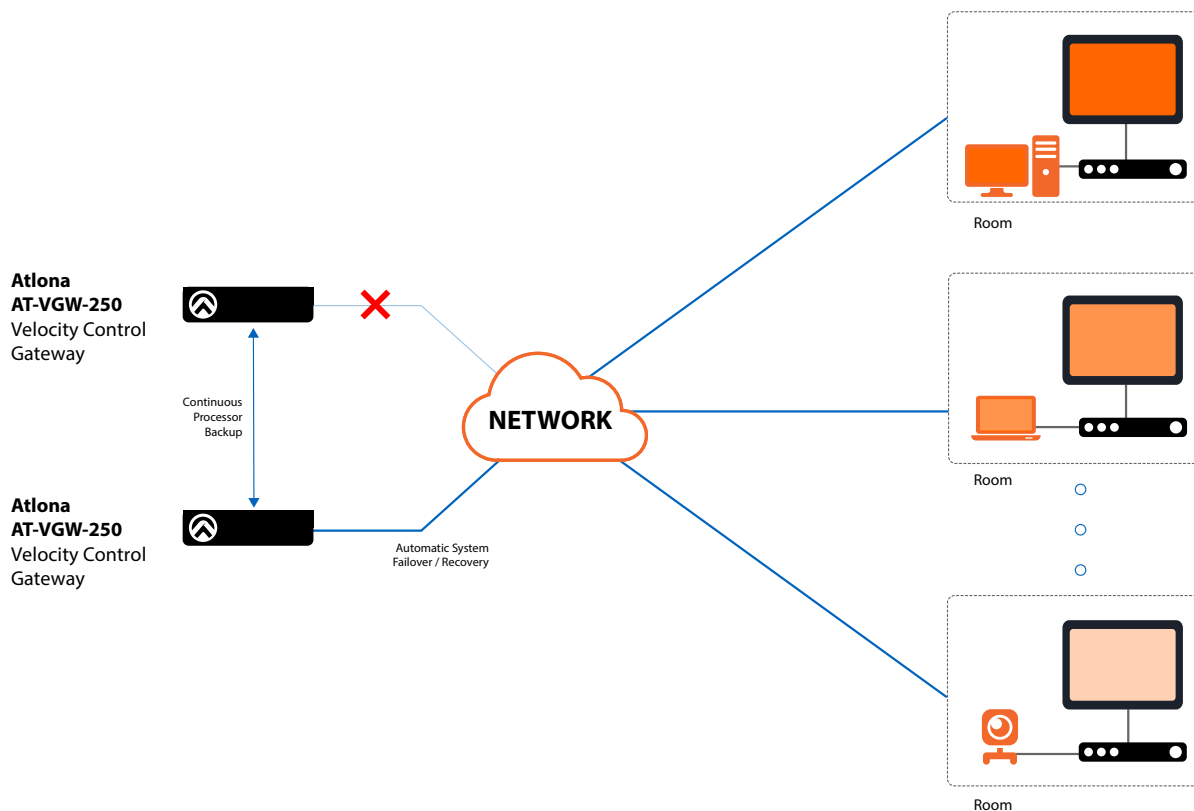


Figure 4. Velocity allows two fully redundant processors with automated, seamless system recovery in the event of a problem in one processor.

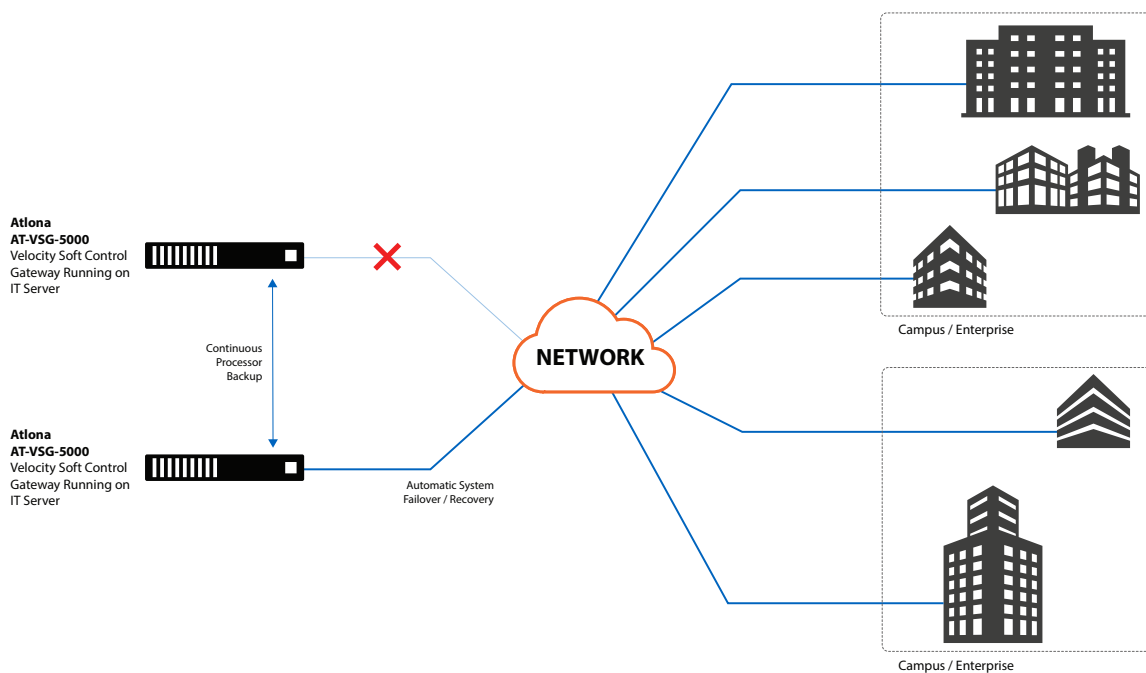


Figure 5. Velocity system redundancy can be applied to two running instances of the Velocity Soft Control Gateway on separate virtual and/or hardware machines.

Velocity is secure

The same, continuous backup and automatic failover features apply to large-scale control processors serving multiple buildings or campuses.

Built for security and client privacy, Velocity secures data communications between the Velocity Cloud, the Velocity Control Gateway, Velocity Touch Panels, Atlona AV devices, and web clients. It supports HTTP/2, HTTPS, IEEE 802.1x, and WebSockets with TLS and AES-128 encryption.

To further enhance system security and guard against user error, Velocity also provides conditional access features, including role-based accounts and LDAP integration (coming soon). Integrators AV/IT administrators have very wide-ranging flexibility in defining user roles and permission access levels for their staff members.

In addition to conditional access and secure data communications, the Velocity Control System can operate over a private isolated network. The Velocity Control Gateway appliance features a dual IP network architecture that allows IT/AV administrators to isolate a dedicated AV LAN from a facility or corporate network. The appliance only requires Internet connectivity for software updates and remote access from Velocity Cloud.

Monitoring and management on a single platform makes it easy to deliver a seamless technology experience

Velocity grants integrators, AV/IT system admins, and tech managers the opportunity to deliver a seamless technology experience to users, staff, and customers by monitoring and managing control systems on Velocity's web-based platform, whether locally on-premises or through cloud connectivity.

With Velocity Cloud, integrators can create, store, and logically organize multiple AV control projects by client and by clients' sites, such as buildings, all the way down to floors, rooms, and smaller spaces. For tech managers at universities and other organizations, Velocity Cloud allows centralized management and maintenance of AV control systems throughout one or multiple campuses.

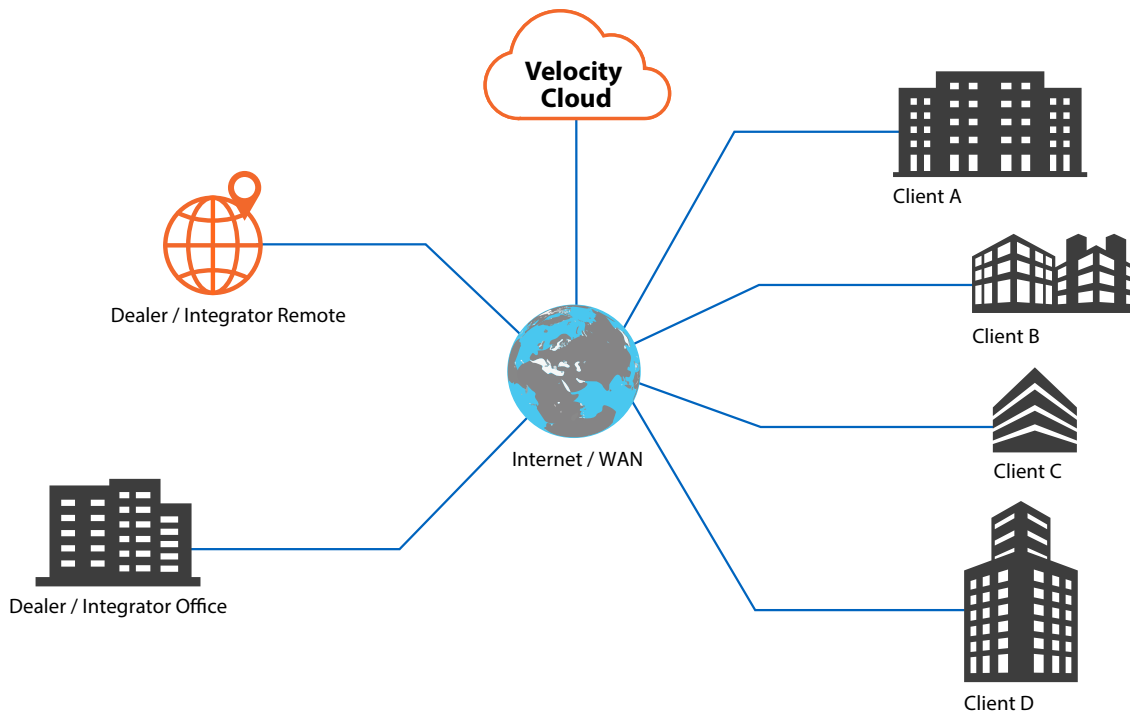


Figure 6. Velocity Cloud empowers integrators and dealers with the ability to remotely monitor, manage, and service Velocity system installations for their clients.

Exceed customer service expectations and increase recurring revenue opportunities

Velocity’s robust monitoring and alert notification capabilities – previously only available with expensive, dedicated network monitoring and management platforms – provide integrators with an opportunity to generate recurring revenue through managed service plans.

To better manage service within an organization, role-based accounts allow multiple integrator and AV/IT staff members to collaborate on large, complex AV control system projects, helping to ensure efficient scheduling and on-time completion.

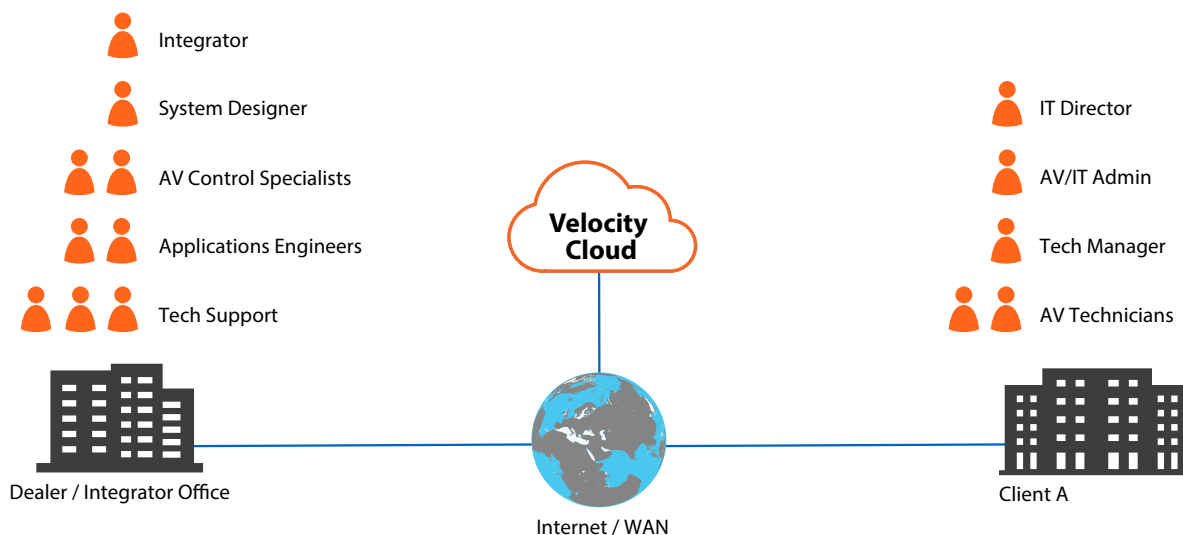


Figure 7. Velocity Control Systems and Velocity Cloud allow assignment of specific role-based accounts for integrators, dealers, and their customers.

Integrators can also assign accounts for dedicated technical support personnel to provide after-sale support and managed services from any location, further enhancing the customer service experience for clients. Customers can be proactively notified of any system-related issues, as well as critical software and security updates that need to be applied to their Velocity devices.

Velocity’s data-rich insights make asset management easy

Insightful analytics from Velocity Cloud help AV managers, facilities managers, and integrators collaborate to make the best decisions about building upgrades and technology add-ons. Which systems are users accessing most frequently? Which go ignored? Which devices tend to result in help desk calls – and under what circumstances? The analytics and data reporting available through Velocity Cloud provide deep insights into which rooms and equipment are used most often and most effectively. Usually available only through a separate asset management platform, these insights turn Velocity Cloud into a valuable resource to maximize total cost of ownership and help make informed decisions about when, where, and how to expand.

Facility managers can spend limited budgets wisely, while integrators can make the best case for upgrades based on personalized data and inside knowledge of how a facility operates and its unique technology needs. Perhaps most importantly, analytics can be used by an integrator to help reinforce client relationships with valuable information relevant to ROI and opportunities for future AV system planning.

Budget-friendly and cost-effective

For decades, AV control systems have been one of the most expensive line items for any project, although not necessarily the most profitable for the integrator. With overhead costs that include the equipment, training, and

Velocity Control System	Traditional AV Control Systems
Low cost of ownership	Significant cost of ownership
Training and certification are free and available online	Expenses for training and certification fees plus travel
Staff members can configure a system in as little as a few minutes	Specialized programmers may need to be hired at hourly rates
Cost-effective equipment – one control processor can serve several room systems	Higher equipment costs – one control processor needed per room system
System change requests can be expedited by onsite staff	A system modification may require hiring an outside programmer
No need to request source code modifications to accommodate system changes	Third-party programming expertise may be necessary to modify and possibly rebuild source code
Built-in scalability to support additional rooms or system expansion	Scalability more limited and expensive with the need to purchase additional processors
Each control processor includes BYOD licensing for 5 devices, affordable options available for additional devices	BYOD typically restricted with more expensive licensing

Table 1. Velocity delivers considerable cost and time savings compared to other AV control systems.

certifications or the added expense and potential inconvenience of hiring an outside programmer, control system integration can consume valuable time and budget dollars.

The Velocity Control System offers far lower cost of installation and ownership than any of its pro AV competitors, with easy IP-based system configuration and management. Velocity system solutions maximize savings in total cost of ownership compared to traditional systems, with significant CAPEX savings realized as a result of lower equipment costs, equipment costs, higher device control capacity, and much more. Velocity also delivers substantial OPEX savings with a much easier learning curve to build and integrate control systems, allowing integrators to expedite time-to-installation completion through configuration rather than programming.

Conclusion

The Atlona Velocity Control System brings a whole new approach to AV control, making it faster, easier, and more cost-effective than ever to specify and integrate a commercial AV control system. Velocity features an innovative IP system architecture that delivers unprecedented scalability and continuous reliability, as well as a powerful cloud resource for managing multiple clients and site installations.

Velocity provides fast, agile control system configuration and deployment, from individual meeting rooms up to an entire campus or enterprise. Integrators will benefit greatly from a much lower total cost of ownership than traditional AV control systems, in the form of lower equipment costs, higher device control capacity, a greatly simplified learning curve and onboarding process to configure systems, and much more.

The Velocity Control System provides benefits to a wide range of customers and users:

- Commercial AV integrators
- Heads of IT and facility managers (in schools, hospitals, and other organizations with their own AV/IT staff that implements and manages systems)
- AV distributors offering control programming services
- Traditional AV control programming companies
- AV system operators for houses of worship
- End users for bars, restaurants, and retail establishments

Simplify control today

To learn more about how Velocity can speed up your control system configuration and deployment to save time and money, while also creating new and exciting opportunities that include recurring revenue, visit atlona.com/velocity today.



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