Commercial Real Estate

Infrastructure to Support Adapting Technologies in Hybrid Workspaces

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infrastructure for a connected world

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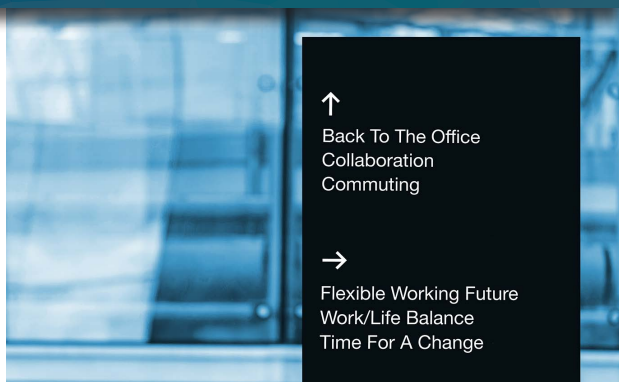
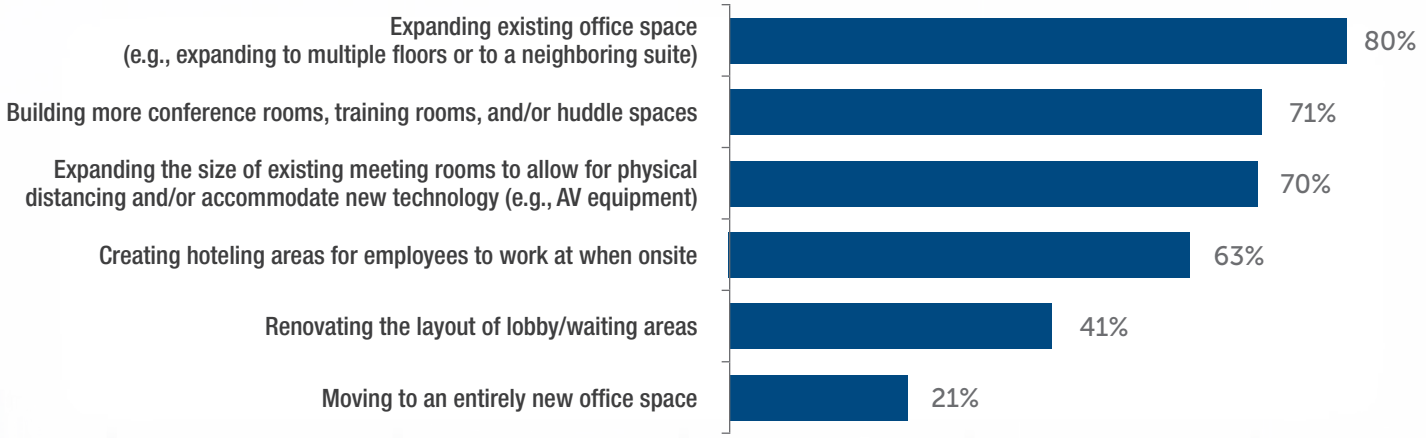


It's no secret that employers and employees alike have embraced the opportunity to work from home during the COVID-19 pandemic. As organizations look beyond today, many are adopting a hybrid approach to bringing employees back to the office: some days in the office and some days remote. Gallup reports that 53% of employees in the United States are expected to have a hybrid work experience in 2022 and beyond.

This hybrid approach is viewed as a win-win: employees will reap the benefits of face-to-face collaboration with colleagues, with exposure to corporate culture, while at the same time reducing the time and expenses of commuting and enjoying an improved work-life balance.

To accommodate a hybrid approach, commercial real estate developers are planning infrastructure changes to better support companies that are adopting hybrid work plans for their employees. In a recent survey conducted by IDG for Panduit, 80 percent of respondents said they plan to expand their office space, with 70 percent planning to add collaboration spaces and 71 percent planning to expand existing meeting rooms to support the expected focus on collaboration while employees are in the office. These changes are expected to create an environment that is conducive to collaboration and development of corporate culture, while at the same time creating an environment where employees want to be.

PHYSICAL WORKSPACE CHANGES UNDER CONSIDERATION



3. Which of the following physical workplace changes are being considered over the next 12 months are already underway for your organization? (Please select all that apply.)

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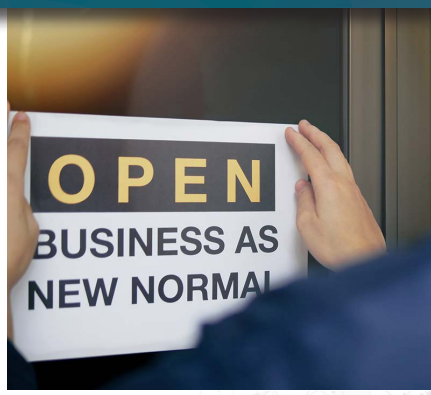
Key technologies and applications that infrastructure should support in the reimagined office:

- Collaboration spaces
- Digital signage
- Ethernet-enabled building solutions
- Wireless connectivity
- Power over Ethernet
- Space optimization

Collaboration Spaces

Many business leaders see face-to-face collaboration as the primary reason for employees to return to the office. There are multiple aspects to consider when looking at conference rooms, meeting rooms, huddle spaces, and training rooms:

- Touch-free solutions that allow groups to filter in and out of conference rooms without worry of sanitizing equipment between uses
- BYOD capabilities so users can easily share content from their personal device
- Video conferencing that supports participants who are in the room and those who are remote
- Room scheduling systems that connect with scheduling software and provide up-to-the-minute transparency into room usage
- Robust wireless capabilities that support wireless connectivity for multiple devices for everyone in the room

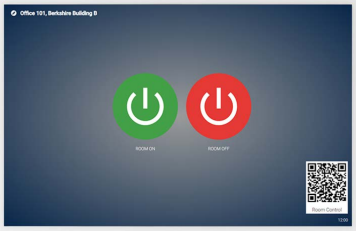


Touch-Free AV:

As businesses return to a “new normal”, many have guidelines to protect employee health and safety. The need to sanitize surfaces presents unique challenges for office and meeting environments. Of obvious concern is the typical AV system that utilizes a touch panel, keypad, or other physical user interface to control equipment and room computers, or cables that provide connections to the system.

To address these issues, Atlona, a Panduit company, has a number of AV and control system technologies that eliminate or minimize users having to touch shared technology components while collaborating.
These include:

- Touch-Free AV – Fully automated meeting spaces without touching anything but your personal laptop or mobile device
- BYOD AV Control – Harness the power of a touch panel control system from your personal mobile device via an embedded QR code within the touch panel GUI
- Wireless Presentation – Allows screen mirroring from a laptop or mobile device without the need for a separate app
- Automatic Input Selection – Selects active input when sources are connected or if there is a change in source power status
- Automatic Display Control – Automatically changes display power state based on active or standby mode of the switcher
- Bring Your Own Cable – Only touch your own cable when you absolutely, positively need a physical connection to the AV system

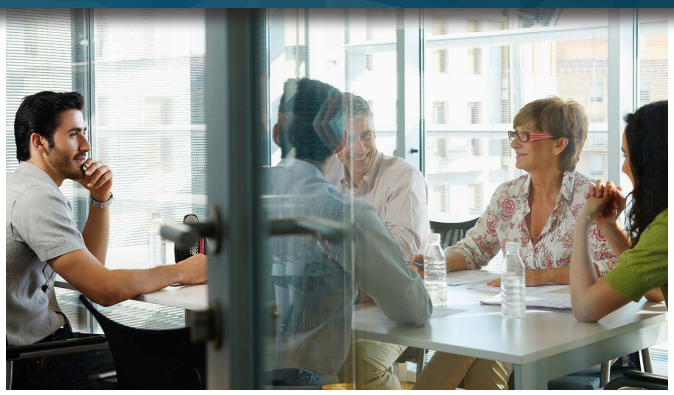


QR Code for Touch-Free Option

Solutions for Touch-Free AV:

Atlona offers many solutions that meet the criteria of touch-free AV from wireless BYOD products and switchers with built in automation to AV Control systems that almost seem to anticipate meeting participant’s needs. Select products are below and more information can be found at: www

	Part Number	Description
	AT-OME-MS52W	5×2 Matrix Switcher with USB and Wireless Link
	AT-VTP-800	Velocity System 8" Touch Panel
	AT-VGW-HW	Hardware Gateway for AV Control and Management plus Room Scheduling



BYOD:

End users in huddle rooms and meeting spaces of all sizes simply want to connect their presentation devices and share content with everyone else. Increasingly, these devices are also providing the unified communications (UC) platform to facilitate the meeting itself with remote team members, whether it be Zoom, Skype® for Business, Microsoft® Teams®, Cisco® Webex®, or others. Simple and seamless connection to the AV system in the room and network is critical to prevent meeting delays or presenter frustration.

The Atlona Omega™ series of AV switching, extension, and video processing solutions are loaded with features and technologies designed specifically for today's meeting and gathering spaces. Omega offers universal AV format connectivity for user-furnished devices supporting USB-C, DisplayPort, and HDMI. Simple AV and USB connections to the host PC mean users can quickly get their in-person meeting or web-based conference started. For ease of installation, most Omega series products feature compact form factors for easy mounting under surfaces, behind displays, and in walls or lecterns.

Key Features:

- Simple User Operation – Connect and present (no button to press)
- Universal AV connectivity for USB-C, HDMI, and DisplayPort
- Video Conferencing Hub – USB interfacing for PCs, cameras, speakerphones, and soundbars
- Built-In automation with auto-switching, display control, and more
- Easily adaptable system designs for a facility, organization, or enterprise

Solutions for BYOD:

Atlona provides an entire collection of solutions designed to simplify meeting scenarios where teams bring their own devices and meeting apps in environments ranging from small, open gathering areas to huddle rooms, conference rooms, classrooms, and more. Select products are below and more information can be found at: www

	Part Number	Description
	AT-OME-EX-KIT	Extender Kit for HDMI with USB
	AT-OME-MH21	Two-Input Switcher for HDMI and USB-C with USB Hub
	AT-OME-PS62	6×2 Matrix Presentation Switcher with USB

Key Features:

- Ready for your preferred UC Platform – Enhance collaboration and productivity with Zoom, Skype for Business, Microsoft® Teams®, Cisco® Webex®, BlueJeans, GoToMeeting™, and more
- Universal AV Format Compatibility – Whether HDMI, DisplayPort, or USB-C, the OME-MS42 has you covered
- Hands-Free, Zero UI Operation – Connect and forget – the OME-MS42 takes care of the rest
- Enterprise-Grade PTZ Camera – Designed for use in video conferencing and other applications

Video Conferencing:

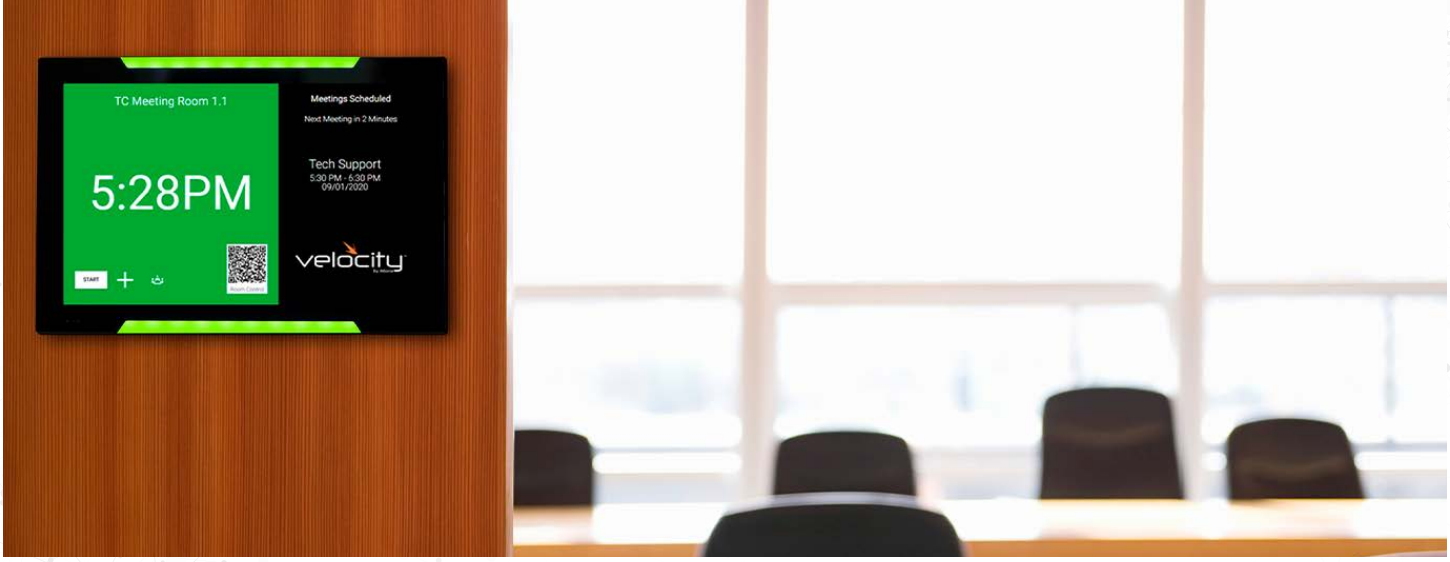
Meeting spaces provide a chance for people to collaborate – sharing divergent designs, plans, and viewpoints. Adding video conferencing capabilities allows teams to be spread over geographical distances. A single display is often no longer enough to accommodate the demands of presenting from multiple sources, or simultaneous display of shared content and remote participants. These days, AV technology must accommodate multiple inputs and outputs in a way that's cost-effective and easy to use.

Atlona's series of matrix switchers provide two or more outputs which can display either the same or independent content. This matrix capability is crucial for viewing two sources simultaneously, such as when evaluating different ideas, or during video conferencing when presentation and participant gallery views are required. For the benefit of remote collaborators, PTZ cameras make the difference in feeling part of the meeting, allowing remote participants to see whiteboard collaboration and in-room participants. The Atlona AT-HDVS-CAM delivers professional-grade video that is superior in image quality to a conventional webcam. Motorized pan, tilt, zoom, and preset support allows precise framing and recall for various meeting configurations.

Solutions for Video Conferencing:

Atlona provides a wide variety of products designed for meetings and video conferencing. Select products are below and more information can be found at: www

	Part Number	Description
	AT-OME-MS42-KIT	4×2 Matrix Switcher with USB and HDBaseT Receiver
	AT-HDVS-CAM	PTZ Camera with USB



Room Scheduling:

Even in the best of times, meeting spaces for in-person collaboration can be tough to find. Rooms may be reserved in the scheduling application a company uses but that won't keep ad hoc collaboration teams from grabbing a room for a quick standing meeting. As we get back to the office, room blocking will be even more important for individuals and teams to work in safe, socially distant spaces.

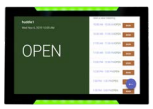
Atlona Velocity™ is an IP-based platform for AV control, plus room scheduling and AV asset management. Velocity brings together a unique set of capabilities resulting in easy system scalability and a low cost of ownership. Built in to Velocity is a room scheduling server for Velocity touch panels compatible with Google Workspace™, Microsoft® Office 365™, Microsoft Exchange® 2016, and Astra Schedule. Velocity's scheduling capability can be used alongside AV control in a room, or as a standalone touch panel installation.

Key Features:

- IP-based platform for AV control, plus room scheduling and AV asset management
- Compatible with popular scheduling platforms – Google Workspace™, Microsoft® Office 365™, Microsoft Exchange® 2016, and Astra Schedule
- No programming necessary – Configure, deploy, and modify control systems in minutes

Solutions for Room Scheduling:

Velocity's IP-based system architecture allows a single, networked processor to serve multiple AV systems simultaneously, leading to overall AV system control and scheduling efficiency. Select products are below and more information can be found at: www

	Part Number	Description
	AT-VGW-HW	Hardware Gateway for AV Control and Management plus Room Scheduling
	AT-VSP-800	Velocity System 8" Scheduling Touch Panel
	AT-VTP-1000VL	Velocity System 10" Touch Panel

Collaboration Space Connectivity

AV systems can make or break collaboration spaces, but other factors are equally important in keeping employees connected and safe. Lighting, ventilation, and window coverings are among the systems that can be automated for a touch-free experience. These systems can be Ethernet-connected, so they can communicate with each other and adjust automatically based on occupancy levels, light levels, or the power status of the AV system. An added bonus for Ethernet connectivity is the ability to power sensors and systems via Power over Ethernet, eliminating ongoing battery maintenance throughout the life of the sensor.

HDBase-T AV systems, such as Omega, perform best on shielded copper cabling for the point-to-point connections within the room. Other systems, including wireless access points, connect to the unshielded copper cabling system used throughout the building for data and communications.

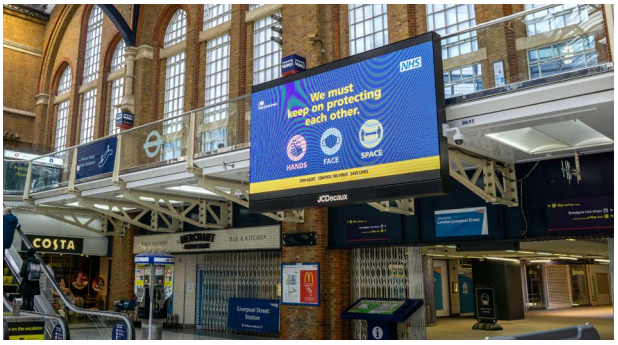
Digital Signage:

With employee health and safety top of mind as employees return to the office, office managers anticipate an increased need to communicate crucial health and safety information. Strategically placed digital signage can help deliver key announcements or provide wayfinding. Digital signs throughout a building can direct employees to temperature-check stations, provide contract tracing information, or reminders on workplace protocol, and are all easily configured, managed, and updated from a central point.

An AV over IP solution is the best means to enable a flexible, scalable building- or campus-wide digital signage application. OmniStream™ by Atlona delivers the performance and dependability of traditional AV distribution, plus scalability and cost efficiency of integrating over data networks.

Key Features:

- Simple to integrate – Intuitive, powerful network resource with web-based GUI lets you configure AV routing with ease
- Fast network switch configuration – Integrate with popular, industry leading managed network switches via an Atlona Certified Switch configuration file
- Scalability – Distribute AV signals to an entire campus as easily as to a single room



Solutions for Digital Signage:

	Part Number	Description
	AT-OMNI-112	OmniStream™ Dual-Channel Networked AV Encoder
	AT-OMNI-121	OmniStream™ Single-Channel Networked AV Decoder

Ethernet-Enabled Applications

Today, it seems the world runs on Ethernet. Even as more and more connectivity occurs via wireless, an Ethernet backbone connects the devices that deliver that wireless connection. When systems and devices are Ethernet-enabled, those systems can communicate with each other, making buildings and processes smarter.

As employees return to the office building, new systems that are Ethernet-enabled can include wellness technology and building systems. With wellness top of mind for tenants and their employees, these solutions are vital to peace of mind. Temperature tracking stations, contact tracing platforms, and tools that measure population density in specified areas, along with building automation systems that ensure air circulation, all contribute to a healthier workspace.

These spaces all rely on Ethernet to connect and communicate. Copper cabling systems provide the Ethernet connection to these systems. Future-proof these systems with Single Pair Ethernet, which enables TCP/IP communication to the last sensor on the network with a single twisted pair cable and connector.

Key Features:

- Simplify – Reduce or eliminate gateway conversion of data from serial protocols
- Faster, further, more powerful – SPE delivers 10Mb/s for distances up to 1km and PoE-like power to end devices
- Data Collection and Analysis – An Ethernet connection simplifies access to untapped data
- Support legacy technologies and enable migration to the future

Solutions for Ethernet-Enabled Applications:

	Part Number	Description
	SP-SFCS1BL-CEG	Shielded Single Pair Copper Cable, 18/7 AWG
	SP-1LSA22BL	Shielded Modular Plug for field termination of 18 AWG single pair cable



Wireless Connectivity

The need for reliable wireless connectivity has never been more critical than it is today. As workers return to the office, the focus on collaboration means employees will spend more time in conference rooms and huddle spaces, where wired connections aren't present. The wireless capacity in those spaces needs to support multiple devices for everyone in the room. Additionally, employees need stable data and cellular connections as they move about the building.

State-of-the-art Wi-Fi requires Category 6A cabling infrastructure, and best practices suggest running four cables per access point, to prepare for both expansion and upgrade at a later date. Category 6A Vari-MaTriX HD cables are an ideal choice to connect wireless access points, delivering the highest levels of Category 6A performance in a Cat 6-sized cable, and the industry's best thermal properties for Power over Ethernet.

In-building wireless systems are important for cellular access inside buildings where cellular signals are weak. This can occur due to distance from cell towers, the use of energy-efficient building materials, or even lack of capacity due to a concentrated number of users within a space. Panduit works with a number of wireless integrators and Distributed Antenna System (DAS) equipment suppliers to provide the robust reliable infrastructure needed for an in-building wireless deployment. These systems can ensure cellular coverage throughout a building or campus.

Key Features:

- Performance – Whether you're looking for Category 6A copper systems for Wi-Fi, or fiber to connect antenna systems for in-building wireless, Panduit cabling and connectivity is guaranteed to deliver
- Size Matters – Vari-MaTriX HD is the industry's smallest Category 6A cable, meaning you can upgrade from Cat 6 and use existing pathways
- Field terminable connectors make installation quick and easy, directly connecting access points to horizontal cable runs, eliminating the need for plenum-rated boxes, jacks, and patch cords in the ceiling

Solutions for Wireless Connectivity:

	Part Number	Description
	PUP6AHD04BU-G	Category 6A Vari-MaTriX HD Copper Cable, 0.230" diameter, UTP, plenum
	FP6X88MTG	Category 6A UTP field term plug
	FC-ICCP0.5MBU	Category 6A UTP FieldCord Connector
	Multiple	See our In-Building Wireless suggested bill of materials here.

Power over Ethernet

Power over Ethernet (PoE) is the new power grid in buildings, delivering power and bandwidth to a myriad of devices, among them security cameras and access points. Many health and safety systems that are being installed to help protect employees can benefit from PoE, which is powering both sensors and the systems themselves.

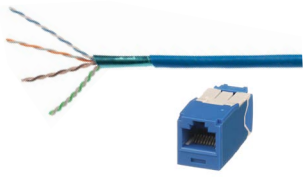
With sensors, PoE has the added benefit of eliminating the need for batteries, which require routine maintenance and replacement throughout the life of the sensor. The beauty of PoE lies in its simplicity: the same cable that is delivering data also delivers power to connected devices.

Panduit's Vari-MaTriX HD cables are an ideal choice for PoE, with improved thermal capabilities to manage the heat rise that naturally occurs with PoE.

Key Features:

- Improved Thermal Properties – Panduit Vari-MaTriX HD cables feature an integral tape that dissipates heat that occurs with PoE
- Arcing Support – All Panduit RJ45 jacks feature integrated arc suppression that moves naturally occurring arcing within the jack away from contact point to ensure long-lasting performance

Solutions for Power over Ethernet:

	Part Number	Description
	PUP6AHD04BU-G	Category 6A Vari-MaTriX HD Copper Cable, 0.230" diameter, UTP, plenum
	CJ6X88TGBU	Mini-Com® Category 6A UTP RJ45 TG Jack Module

Space Optimization

Every piece of technology deployed in the building puts another piece of equipment in the telecommunications room. Make that space more functional with small diameter and high-capacity solutions that optimize the space.

Over the past several years, TRs have felt the squeeze, as building owners and managers added intelligent building solutions to buildings. New technologies require new equipment, plus more ports and larger and higher density network switches. At the same time, building owners want to limit the amount of space dedicated to TRs. Now, with more systems becoming automated, and health and safety systems being added, that space crunch becomes even more critical.

With space-saving cable management and connectivity solutions from Panduit, you can decrease your equipment footprint, lower material costs, reduce installation and maintenance time, and prepare your building for the future.

Key Features:

- Space-Saving – PatchRunner™ 2 Enhanced Vertical Cable Managers include the option for Zero RU patching – moving patching into the cable manager to preserve RUs for equipment
- Size Matters! – Panduit 28 AWG patch cords are less than half the size of traditional patch cords, but deliver the same performance, making them the ideal solution for simple installation and maintenance and improved cable routing
- High-Density – High-density angled patch panels make the most of rack spaces, routing cables to the sides, and allowing 48 ports in a single RU for maximum density

Solutions for Space Optimization:

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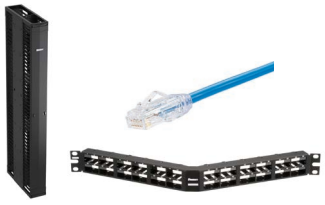
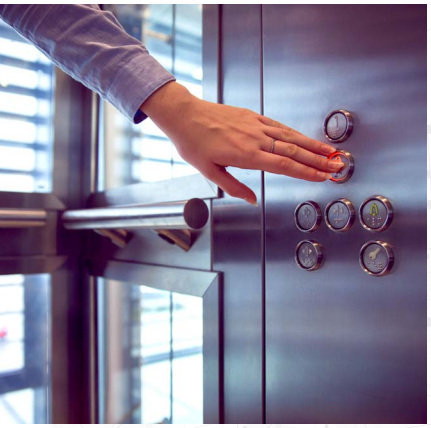
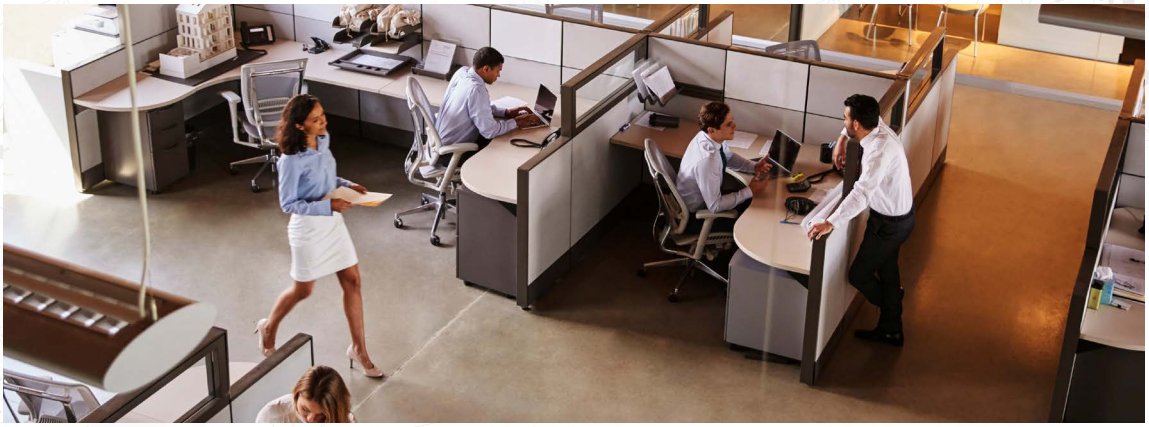
	PE2VD08	PatchRunner™ 2 Enhanced Vertical Cable Manager
	UTP28XBU7	Category 6A 28 AWG patch cords
	CPPA48HDWBLY	Mini-Com® Angled High-Density Patch Panels





We're Ready to Help

Whatever steps your tenants are taking to address returning their workforce to the office, chances are, your building will function differently than it did previously. COVID-19 accelerated the move to a distributed work force and a hybrid work force is here to stay for many companies. You and your tenants will likely work together to determine what the best solutions are to support on-site employees. And, once those decisions are made, Panduit and Atlona are here to help with the robust and reliable infrastructure and AV solutions that make it work.

Whether you are renovating an existing space to respond to changing workplace dynamics, or are embarking on the development of a new office space, there are many ways that technology can improve the office experience for your tenants. Learn more about how we can support your changing buildings at: www

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