

# Solution Brief

Device Management



## Bsquare Extends and Enhances Remote Device Management and Security

**OEMs and operators can enable new levels of remote device management and improve system security using the Bsquare SquareOne solution with Intel vPro® technology**

### BSQUARE

*“At Bsquare, we take a comprehensive approach to connected device monitoring and management. The SquareOne software solution is built on our decades of experience deploying and managing fleets of IoT devices, and we understand the complexity of large-scale device operations. Our secure, end-to-end solution provides equipment manufacturers with a credible, scalable, and intuitive way to address their customers’ operational challenges and to reduce the costs that are traditionally inherent in building a viable device management capability.”*

—Chris Wheaton, COO at Bsquare

Today, the world runs on billions of connections between people, devices, organizations, and ideas. These connections have created significant business value and opportunities for new revenue.

Organizations spanning a variety of industries can now offer innovative devices that engage and build loyalty among their customers. Self-check-in kiosks improve convenience for hotel guests. Digital signage provides personalized promotions to retail shoppers. Interactive learning experiences delivered via flat panel displays enhance the effectiveness of instructors. Personalized ATM experiences engage banking customers in new ways. The scope of potential business opportunities created by fully connected devices is endless.

Bsquare developed the SquareOne solution to meet the challenges companies face as they continue to add more connected devices to their operations and need a way to manage, update, troubleshoot, and better secure them. Leading OEMs are seeking better and more integrated remote management capabilities and system visibility. By building the right features into their offerings—such as those offered by the SquareOne solution—OEMs empower customers, third-party service organizations, or their own service team with better and more scalable means to manage devices in the field.

### **Challenge: Exponential growth of connected devices makes fleet monitoring, operational cost management, and security both complicated and essential**

IoT and connected devices are an extension of a business, and their performance is key to a company’s success. With businesses and organizations now expected to monitor, manage, and service hundreds—if not thousands—of connected devices on their networks, every minute they’re down for updates, upgrades, or security issues means loss of revenue and a tarnished customer experience.

To help organizations combat these challenges, manufacturers need to integrate a management platform into their devices that works for end user operators from the moment the equipment rolls off the production line. The platform must provide at-a-glance, centralized visibility and deep control from anywhere. This platform can then be used by the customer’s own operational team, by the manufacturer as part of a service agreement, or by a third-party service organization. Ultimately, connected visibility and control of devices help organizations to solve issues faster and ensure a seamless customer experience.

## Solution: A consolidated approach to remote device management

Bsquare's SquareOne with the Intel vPro® platform provides device manufacturers and organizations with a new approach for realizing the full potential of their connected devices. This approach views the devices as part of the operational solution, equipped to participate in their own monitoring, management, and recovery.

Through one centralized dashboard, the SquareOne solution empowers OEMs, their customers, or third-party service providers to remotely control and better secure all connected devices, no matter their location or operating system. That core functionality has been enhanced through the integration of the Intel vPro platform—a hardware-based management foundation included in Intel® Core™ processors. The Intel vPro platform extends SquareOne's capabilities even further by providing the ability to power down or reset devices remotely, even in the event of a low-level OS failure, such as a blue screen.

### From SquareOne's centralized interface, IoT device operators can:

- Remotely access and control all devices
- Perform over-the-air updates of applications, operating systems, and content for an entire fleet of devices—or for one targeted device
- Access device telemetry to monitor device health and use near-real-time data to gain operational insight
- Use version control and event logging to identify issues and roll back updates when necessary
- Maintain security through regular health checks and anomaly detection

With SquareOne, the Intel vPro platform can be installed and configured remotely in minutes—eliminating the need for costly technician visits.

## How it works

The deployment of SquareOne in a device fleet begins with certificate-based device registration, allowing for quick provisioning of devices while simultaneously ensuring system access only to approved devices. Once deployed, the solution captures operating data in real time to monitor and manage all devices—no matter if there are 10 or 10,000 devices or if they're running on Linux, Windows, or Android operating systems. A REST API allows integration with existing systems and full access to all data for creation of custom visualizations or reports.

From a single interface, SquareOne provides a consolidated view of device data so users can make more-informed decisions for their business or for their customers. As an IoT fleet grows and the rate of device deployment increases, SquareOne will grow with them. The solution's built-in



## About the Intel vPro® platform

The Intel vPro platform is an integrated device management platform supported by Intel® Core™ processors that offers built-in features for performance, security, manageability, and stability. It enables powerful remote hardware management via Intel® Active Management Technology (Intel® AMT), making it an ideal addition to Bsquare's SquareOne solution.

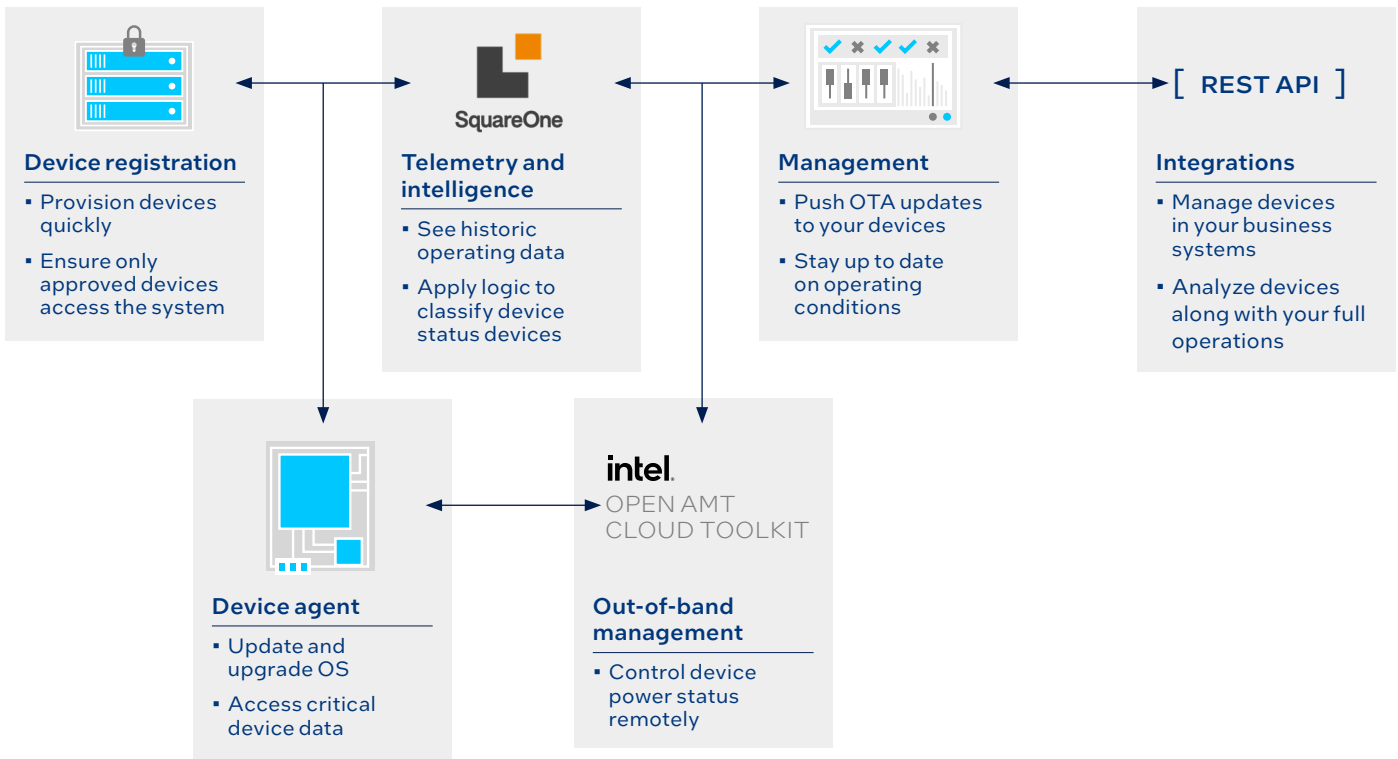
The Intel vPro platform provides flexible, scalable device coordination and management for organizations managing their own devices, for device makers fulfilling a service agreement, or for a third-party operator. With the out-of-band management capabilities that come standard with the Intel vPro platform, devices can be managed and repaired even when the device is powered off or the OS is unresponsive.

### Available for both new and existing SquareOne customers, Intel vPro technology extends SquareOne's current features to enable users to:

- Expand remote management capabilities with the ability to reset unresponsive devices, even in the event of OS failure
- Restart remote equipment after a power failure
- Improve system security with the ability to isolate compromised devices

logical device grouping features allow for segmentation of devices for easier management when scaling up.

Once it's time for an update or upgrade, SquareOne provides robust options to push updates to all targeted devices more securely and quickly. If there's an unplanned outage or a technology failure or if a device begins showing indications of compromise, users can count on centralized device telemetry and automated notifications to stay informed and act quickly to resolve the issue. Through the integration of Intel vPro technology, critical actions can be taken immediately and easily, including isolation of devices. Convenient remote access and control of an entire fleet of devices allow for nearly all repairs to be performed remotely, eliminating the wait and downtime typically associated with dispatching a technician to the field.



## Key benefits of the joint solution

SquareOne with Intel vPro Technology provides equipment manufacturers with enhanced remote device management and improved security capabilities. Manufacturers, their customers, and third-party service providers can use SquareOne to realize powerful business benefits:

### Reduced service costs

Avoid costly truck rolls by using the Intel vPro platform to power-cycle devices, even in the event of OS failure, and by using SquareOne to update and upgrade system and application software.

### Improved customer experience

Support customers quickly with built-in secure remote access, including screen sharing.

### Accelerated security responsiveness

Regularly deploy best-practice security standards to connected IoT devices, and rely on network visibility and automated notifications to elevate the organization’s security stance. Use integrated Intel vPro capabilities to identify and isolate suspicious or misbehaving devices to help make the network safer.

### Optimized device coordination

Streamline operations by integrating devices into business systems through SquareOne APIs and distributed management capabilities.

### Expanded services and revenue

Develop new revenue streams and extend customer service with continuous and reliable device management.

## Conclusion

The demand for engaging, innovative end user experiences delivered via connected devices will only continue to increase. These growing demands have created the need for device manufacturers to integrate comprehensive remote management capabilities and operational visibility into their products. These solutions will empower customers, third-party service organizations, and service delivery teams to manage and better secure devices in the field.

In a single solution, Bsquare’s SquareOne provides the simplicity, hardened security, and operational flexibility that device makers need to address these demands. Integration with the Intel vPro solution provides deeper device visibility and management to enable cost-effective, more secure, and reliable device management for a fully connected world.

## Get more information

### Bsquare SquareOne

The Bsquare SquareOne solution delivers operational flexibility and device coordination for all devices in a single system, leading to dramatically reduced costs and downtime and increased security.

[Learn more >](#)

### Intel vPro platform

The Intel vPro platform delivers performance, built-in security features, and remote management capabilities to help ensure uptime for critical connected devices.

[Explore Intel vPro platform >](#)

### About Bsquare

Bsquare is a global provider of software for connected-device solutions. For more than 25 years, the company has designed and delivered technology that allows companies to realize the full potential of a connected world. With our connected-device solutions, our customers can design, manufacture, deploy, and operate products that are securely configured, can recover from a failure or a breach, and are easily updated and reliably upgraded.

[bsquare.com](https://bsquare.com)



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