

SOLUTION BRIEF

Internet of Things
Smart Digital Signage



SpinetiX™ Enables Telco Operators to Grow Revenue with Digital Signage as a Service for SMB Customers

New, end-to-end digital signage solution powered by Intel® architecture delivers highly secure visual communication experiences that are easy to deploy and maintain

“At SpinetiX, we are at the forefront of digital transformation. Thanks to our complete digital signage solution, we empower businesses to bring their story to life.”

—Francesco Ziliani, CEO, SpinetiX

Executive summary

Virtually every industry, business, educational organization, and government agency is digitizing in order to better communicate in our rapidly changing, data-driven economy. Over the last decade, digital signage has evolved at an astounding rate. What was once a medium for passively sharing static information with viewers has now become a dynamic and interactive platform to stream personalized content and offer near-real-time updates. But new needs are emerging, calling for more agile and dynamic solutions accessible to a wider range of businesses and industries.

SpinetiX™ and Intel are collaborating to deliver an integrated, highly secure, manageable digital signage solution designed specifically for small and midsize businesses across vertical segments, including telecommunications and retail. The comprehensive, end-to-end solution includes ARYA™, a cloud-based digital signage application, and DSOS™, developed for Intel® architecture and validated across the Intel® NUC product line to answer the demand of digital signage applications across a wide range of customer requirements.

With Intel architecture, SpinetiX can enable businesses worldwide to adopt digital signage to help improve their bottom line, streamline communication, and differentiate themselves from competitors.

Challenges

Digital signage has been shown to increase brand awareness and recall rates. However, communicating services, information, and solutions both internally and externally through a digital signage solution that truly supports business objectives—from security to manageability to quality—can be challenging.

Proprietary platforms are often incompatible with existing infrastructure and protocols, and assembling an interoperable solution from the diverse hardware, software, and services in the market can be difficult and costly.

With the acceleration of the internet of Things (IoT), businesses want solutions that integrate various products and technologies into one comprehensive media platform—offering total flexibility and the ultimate freedom to communicate evolving messages. And with convenience and simplicity becoming increasingly mainstream, customers want simple solutions that can function autonomously, without the need for constant updates and investment.

At the same time, users seek integration with both front-end and back-end systems, such as inventory and POS. Screens need to support multiple use cases, from up-to-date content display to training.

With security top of mind for today's businesses, increased connectivity raises security concerns for data and privacy, with added compliance requirements for many industries.

In sum, the complexity of ensuring digital signage as a value-add component of business strategy has prohibited many small and midsize businesses from gaining the competitive advantages it can bring.

Solution

For more than 10 years, SpinetiX has delivered plug-and-play, end-to-end digital signage solutions for industries and businesses worldwide. Its latest offering—featuring SpinetiX ARYA tailored to small and midsize businesses and powered by the Intel NUC product range thanks to SpinetiX DSOS—provides a rich range of digital signage capabilities. The comprehensive, integrated solution combines reliable Intel performance in a small form factor, along with the highly secure and dedicated SpinetiX digital signage operating system and the easy-to-use cloud-based application. It functions as a highly secure appliance, removing complexity and increasing reliability while laying the foundation to stream, manage, and customize data from nearly any source.

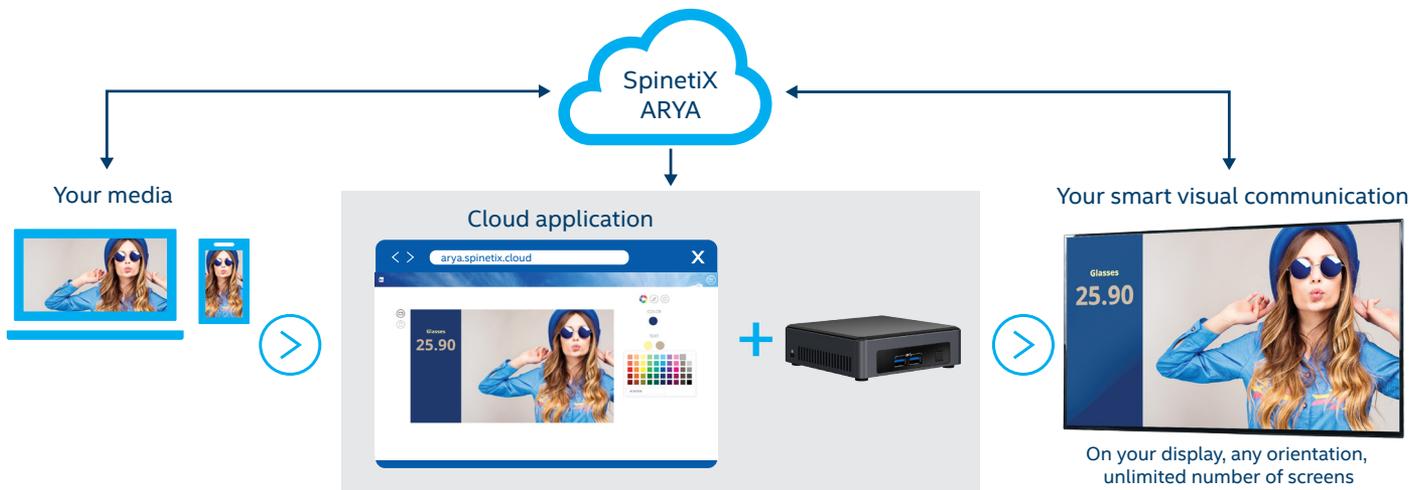
Solution components include:

- **SpinetiX ARYA**, the new cloud-based application for retail and small businesses.

- **SpinetiX DSOS**, the highly secure, reliable, and robust operating system dedicated to digital signage applications, designed for Intel NUC and supported by SpinetiX engineers.
- **Intel NUC**, a small form factor mini PC range of products supporting a rich combination of performances, features, and price.

With the solution, small and midsize businesses immediately get the benefit of SpinetiX's longstanding digital signage expertise and technology innovation, along with the enhanced security and manageability of the Intel® platform. The Intel NUC-based product is available at multiple price points to meet customer specifications. Packaged with ARYA and designed specifically for ease of use, the solution includes carefully crafted templates with animations and transitions making content creation fun, easy, quick, eye catching, and cost-effective with your own images, videos, logos, and color palette.

With SpinetiX and Intel, digital signage can be closely aligned to business processes and serve a more business-critical role for end users. Organizations can focus on developing and delivering relevant, high-quality content—rather than spending time and budget on complex integration, management, and maintenance.



The end-to-end solution includes SpinetiX's ARYA™ cloud-based application and the innovative digital signage operating system, DSOS™, powered by the Intel® NUC

Prioritizing security

With over a decade of expertise in digital signage, SpinetiX brings extensive experience in meeting the most demanding security requirements from a large range of customers, such as defense and the public sector.

ARYA customers benefit from the most advanced cloud security protocols to optimize reliability, improve service availability, and increase data protection and content delivery.

SpinetiX takes the protection of customers' sensitive data very seriously: on ARYA, the GDPR-compliance is reinforced with the best-in-class AWS BSI C5 certification. (Learn more about GDPR at eugdpr.org.)

Maximum network security and operational simplicity are top requirements in all SpinetiX products. To offer automatic and secure firmware updates, ARYA is also ISO/IEC 27001:2013 certified—helping to ensure shared information assets are secure.

Enhanced security is also integrated into the Intel® hardware at the chip level, as well as in the SpinetiX DSOS layer. Intel is fully compliant with GDPR, and the Intel® vPro™ technology platform includes an encryption engine to help protect data in flight and at rest.

Use cases

The SpinetiX solution running on the Intel NUC can be deployed for a wide range of diverse business customers and has the flexibility to support evolving use cases. More specifically, this new solution opens up new capabilities for retailers.

Retail

The SpinetiX and Intel solution gives small and midsize retailers a new, dynamic communication channel to better engage with customers. Designed for simplicity, the solution requires no learning curve to compose and schedule attractive, professional digital signage content in minutes. Step-by-step guidance allows users to create their own digital signage communications from their logos, images, videos, and brand visual style.

Now you can share digital communications on a display, including:

- Welcome screens in the shop entrance or windows
- Showroom and/or shop window screens to promote products and services
- Entertainment screens to celebrate your staff for what they do



Telecommunications

In addition to new capabilities for retailers, the latest SpinetiX and Intel solution brings new revenue streams for telecommunications operators. They can more easily deliver digital signage as a service (DSaaS) to their business customers. The integrated hardware, DSOS, and ARYA cloud-based application makes every installation plug and play, simplifying provisioning. It allows remote manageability via the Intel vPro technology platform, helping to reduce the risks and costs of on-site intervention.

Many cloud digital signage solutions require installing software applications on the Intel NUC on top of the Windows* or Linux* OS. Both OS and software applications are updated independently which increases the risks of service interruptions and onsite interventions. SpinetiX eliminates these issues.

With SpinetiX, a telecom operator can deploy a DSaaS as follows:

1. The customer, with the optional support of installers, will set up the network, the screen, and the NUC (this step requires connecting cables, and fixing and securing the screen and Intel NUC on the wall or in the shop window).

2. The telecom operator support center will make sure the Intel NUC is up and running with the DSOS. The NUC will be preinstalled, but if a problem arises, Intel vPro technology allows issues to be handled remotely.
3. Once ready, the screen will instruct the end user to create an account on ARYA and pair its screen. After this, the user is autonomous and can create content easily, anytime, anywhere, thanks to the ARYA application on the cloud.
4. The user does not need to do any maintenance. ARYA and DSOS work together, guaranteeing both are always up to date.
5. In case of issues, if troubleshooting from ARYA chat support is not possible, the telecommunications operator can use Intel vPro technology to offer remote support.

The solution helps increase monetization of telecommunications networks for new revenue streams with expanded features and services. Remote management features help improve uptime and provide usage metrics, and operating costs can be reduced by relying on robust technologies, such as the Intel vPro technology platform.



How it works in brief

The technology partnership between Intel and SpinetiX is making professional digital signage solutions accessible to a wide range of industries and businesses of all types and sizes.

SpinetiX ARYA

ARYA is an innovative cloud-based application tailored to fit the needs and expectations of the next generation of entrepreneurs. The application is designed to accelerate content creation and maximize the value of digital signage applications, without requiring any technical skills. It implements a secure and transparent pairing mechanism so screens connect easily and quickly to the cloud.

Templates are included to meet common digital signage needs, such as welcome screen applications displaying news, weather, menus, and hours. Animations and transitions are built into the templates and fully automated. A custom look and feel can be applied across templates to promote a consistent business brand and save content creation time.

ARYA includes a special scheduling feature, which creates intelligent playlists on the fly for preselected time slots.

The ARYA free tier service enables the user to gain hands-on experience with the cloud application on an unlimited number of screens. Users will have the flexibility on a monthly basis to continue with the free tier service or to review and allocate additional or fewer resources according to their evolving needs. SpinetiX ARYA allows users full control in managing their resources and in optimizing their costs.

In addition, SpinetiX ARYA:

- Allows fast signup and sign in with federated identities such as Google
- Provides users with assistance and guidance from a live chat support
- Uses the most advanced security protocols

Discover ARYA at spinetix.com/arya.

SpinetiX DSOS

The purpose-built SpinetiX DSOS runs on the Intel NUC and can be installed on selected, standard Intel NUC modules.

The comprehensive hardware and software integration means that both the application and OS are continually and automatically kept up to date by SpinetiX. This reduces the cost of maintenance while delivering a highly secure, reliable, and robust operating system dedicated to digital signage applications. DSOS updates can be scheduled automatically or scheduled to occur at times convenient for a particular business. In addition, SpinetiX ensures that the ARYA cloud-based application remains compatible with the DSOS installed on the Intel NUC. This flexible digital signage platform features stellar performance and responsiveness, along with quality, reliability, and security.

With advanced remote manageability features, telecommunications providers, retailers, and small to midsize businesses can develop reliable solutions that create the experiences customers want without overburdening their IT infrastructure or greatly increasing operating costs.

Intel NUC

The Intel NUC is a convenient, small form factor PC, popular for digital signage installations and available in commercial grade SKUs. Hardened video decode rendering capabilities in the latest generation SKUs enable power-efficient and high-performance display of new and legacy video content with ultrahigh definition (UHD) premium resolution.



The quiet, compact form factor is only four inches square. It delivers essential functionality to support the most demanding solutions, such as remote manageability, encryption, multiple displays, and 4K resolution.

The Intel vPro technology platform with Intel® Active Management Technology (Intel® AMT) enables remote management and display previews, while helping to increase data protection and security. Intel AMT enables best-in-class remote manageability and reduces on-site visits to help lower total cost of ownership (TCO). Intel® Software Guard Extensions (Intel® SGX) further validates the platform license to confirm that the server is talking to the correct screen.

SpinetiX support

SpinetiX Technical Support provides efficient assistance for your products and solutions. With online support services and engineers around the globe, you can rest assured that you'll receive assistance wherever you are, whenever you need it.

spinetix.com/support

The foundation for IoT

The SpinetiX™ solution is one example of how Intel works closely with the IoT ecosystem to help enable smart Internet of Things (IoT) solutions based on standardized, scalable, reliable Intel architecture and software. These solutions range from sensors and gateways to server and cloud technologies to data analytics algorithms and applications. Intel provides essential end-to-end capabilities—performance, manageability, connectivity, analytics, and advanced security—to help accelerate innovation and increase revenue for enterprises, service providers, government, and industries.

Conclusion

By integrating hardware, software, services, and support—powered by reliable Intel® architecture—in smart digital signage solutions, SpinetiX is enabling modern use cases for a breadth of organizations and vertical industries. With SpinetiX and Intel, timely, rich, digital, and visual communications can be an integral part of business models and service offerings.

As the digital economy continues to grow, SpinetiX and Intel offer a reliable, flexible foundation for evolving digital signage. With the combination of the latest ARYA cloud-based application and DSOS running on the Intel NUC, telecommunications, retail, and small and midsize businesses can gain the competitive advantages of advanced digital signage and streamline high-quality content delivery. These businesses will be well-positioned to increase customization, localization, personalization, and automation as digital signage evolves.

Learn more

For more information about SpinetiX, please visit spinetix.com or contact us at sales@spinetix.com.

For more information about Intel IoT Technology and the Intel® IoT Solutions Alliance, please visit intel.com/iot.

To find out more about the Intel NUC, visit intel.com/nuc.

About SpinetiX

At SpinetiX, we inspire businesses to unlock the potential of their story. We believe in the power of digital signage as a dynamic new storytelling platform to engage with people. For more than 10 years, we have been constantly innovating to deliver cutting-edge technology that helps our customers shine. Engineered in Switzerland, our comprehensive suite of solutions empowers businesses to realize their full potential. Whether you're looking for a plug-and-play solution to bring your story to life or a fully customized solution to captivate your audience, SpinetiX can help you successfully grow your business.



Performance results are based on testing as of January 2018 and may not reflect all publicly available security updates. See configuration disclosure for details. No product can be absolutely secure.

Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors. Performance tests, such as SYSmark* and MobileMark*, are measured using specific computer systems, components, software, operations and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products. For more information go to intel.com/benchmarks.

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