Protecting Sensitive Engineering Data

Galaxkey's solution for Manufacturing & Engineering Companies

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POWERFUL DATA PROTECTION MADE SIMPLE

Share files with confidence

Communicate securely

Protect all your data

Safeguarding the Manufacturing and Engineering Sector's Intellectual Property and Reputation

As an engineering company, you have invested years in refining your product designs, manufacturing techniques and workflow processes. Your company value depends on these products, techniques, and processes; and that's likely to be your exclusive differentiator in the market. One day, a hacker manages to break into your network and makes all this sensitive information public – either leaking onto the internet or selling it to the highest bidder on underground markets. The impact of this loss of intellectual property is not just to your company value and reputational standing. It can also open the floodgates for litigations from your impacted supply chain or customers.

The above scenario is no longer hypothetical. Ferrari, Hyundai, Applied Materials, Lagan Contracting Group, Colonial Pipeline, Aramco and JBS Foods – all these majors and more have been in the news for cyber-attacks. According to IBM Security's 2023 X-Force Threat Intelligence Index, manufacturing was the most targeted sector for ransomware and the most extorted industry in 2022. A report released in January 2023 at the World Economic Forum at Davos indicated that nearly half of the critical manufacturing organisations were vulnerable to a breach.

Manufacturing and engineering are amongst the most crucial sectors for any country. In terms of total economic value, these accounted for 9.2% in the UK and 10.7% in the US in 2022. As such, they become the target of cyber criminals, ranging from nation state actors and hacktivists to petty cyber criminals. And in terms of threat vectors, ransomware and data theft continue to lead the pack.

This white paper highlights how Galaxkey solutions help engineering and manufacturing companies continue growing their business operations without compromising data security.

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The #1 Challenge: The Sensitive Nature of Engineering Data exchange

The data handled in the engineering sector is extensive and sensitive. It includes:

- Proprietary and exclusive product designs
- Process techniques and workflows
- Partnership and contractual information from the global supply chain
- PII from an extensive ecosystem of customers and suppliers

This is over and above the regular sensitive information that all organisations handle, such as HR, finance, legal etc.

The impact of losing this data can be massive – for example, if the proprietary product design of an engineering company is leaked into the public domain, it can lead to cheap replicas mushrooming in the market, taking away the competitive advantage of the company.

Total Economic Value in 2022

UK 9.2%
USA 10.7%

World Economic Forum

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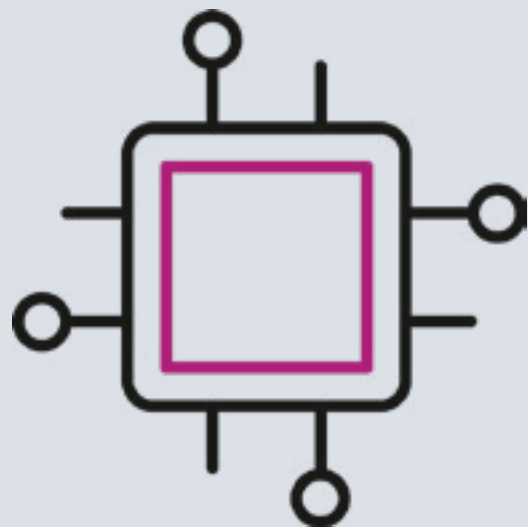
There are further challenges faced by manufacturing & engineering companies

#2 Wide Supply Chains with Data Traversing Geographical Boundaries

Engineering companies typically have a very wide supply chain and can comprise of multiple nations. For example, a British company can refine designs in Europe, source raw material from Africa, manufacture parts in China and provide customer support from India. This multi-national supply chain poses its own challenges in terms of retaining control of data and regulatory compliances across nations. And the challenge is only enhanced when your customer-base is global.

#3 Extremely Low Tolerance for Down Time

Engineering companies typically operate 24x7. So, if services are unavailable due to data being locked by ransomware, the downtime can have huge impact. Also, with interdependent and just-in-time manufacturing processes, the impact won't just be restricted to idling manpower and productivity. It can easily multiply with delays impacting final delivery schedules.

#4 Large Data Sizes

Engineering data files are typically very large in size. For example, a CAD drawing or a factory layout to support one manufacturing process can easily run in gigabits. This puts limits on using common sharing mechanisms like emails. And many common cloud-based file sharing platforms used as a workaround offer limited security features to retain control of data.

Increasing cyberattacks amplify these challenges

The magnitude of these challenges significantly increases in the event of a cyberattack, which has become increasingly frequent.

In the first quarter of 2023 alone, we saw ransomware attacks on automobile giants Ferrari and Hyundai, semiconductor companies MKS Instruments and Applied Materials, F&B major Dole, civil engineering firm Lagan Specialist Contracting Group ... the list goes on. And in the not to distant past, ransomware attacks have resulted in millions of dollars of direct and indirect losses, like in the cases of Colonial Pipelines, and meat processing giant JBS.

The recent industry reports clearly indicate that this problem is only going to grow, and many companies are not prepared to tackle this looming menace.

→ **Ferrari**

→ **Hyundai**

→ **MKS Instruments**

→ **Applied Materials**

→ **Dole**

→ **Lagan Specialist Contracting**

All suffered ransomware attacks between January and March 2023

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The Galaxkey Solution: Galaxkey empowers engineering and manufacturing companies with robust data security and compliance capabilities.

Strong NCSC certified encryption

At the heart of Galaxkey solutions is the NCSC certified architecture. Most other data protection solutions use 1 or sometimes 2 encryption algorithms, such as symmetric version AES or asymmetric version RSA.

Galaxkey utilises both symmetric and asymmetric algorithms, specifically AES 256 and RSA 2048, which are the strongest versions available. This double-locked data is further encrypted with an additional third layer using the user's password. This three-layer user-controlled encryption ensures that the underlying data is highly secure and only under control of the authorised users.

One platform serving multiple channels

Galaxkey's secure platform comprises solutions that protect data across multiple channels. This ensures that your data is secure no matter how you share and irrespective of the file sizes.

Galaxkey incorporates a set of features that greatly enhance user-friendly data sharing. Secure Workspace enables the direct sharing of large engineering drawings, even spanning multiple gigabits, via email. This capability introduces remarkable convenience and productivity. Secure Signing allows for electronic signing of contracts involving multiple suppliers. Notifications and copies of the signed contracts are securely shared through Galaxkey's secure email, ensuring end-to-end security for all sensitive contract discussions within a single platform. This comprehensive solution offers a seamless and secure environment for managing and exchanging confidential contracts.

The all-encompassing nature of the platform eliminates the need to purchase multiple security solutions. By investing in Galaxkey, you maximise your ROI as you gain access to a single solution that fulfills all security requirements.

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Secure Emails
- Encryption and policy-based control of sensitive email

Secure Files
- Encryption and secure sharing of sensitive files

Secure Workspace
- Sharing of sensitive files through a portal with access control, time restrictions, domain and filetype restrictions, and other control features

Secure Signatures
- Ease of document signing with in-built encryption, access control and local hosting

Secure Messaging
- LockChat is an encrypted, company controlled, auditable and locally hosted messaging platform

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→ Effective compliance management

Galaxkey prioritises data protection and control as its fundamental principles. As a result, Galaxkey complies with various government standards, ensuring that engineering and manufacturing organisations can meet global security requirements regardless of the type of data they handle. Some examples of the regulations and standards that Galaxkey addresses include:

- Data privacy regulations GDPR, CCPA, DIFC or similar
- Health data regulations HIPAA or similar
- Payment card standards PCI DSS
- ISMS standards like ISO 27001, ISO 27701, CMMC or NIST
- Data residency

By enabling compliance to these regulations and standards, Galaxkey offers a comprehensive solution that supports organisations in meeting their security and compliance obligations.

→ Flexible hosting

Based on your internal and supply chain requirements, you have the flexibility to choose between hosting your data in the secure Galaxkey cloud or within your own data center on your premises. This option ensures that even if your supply chain extends globally, you always maintain complete control over your data.
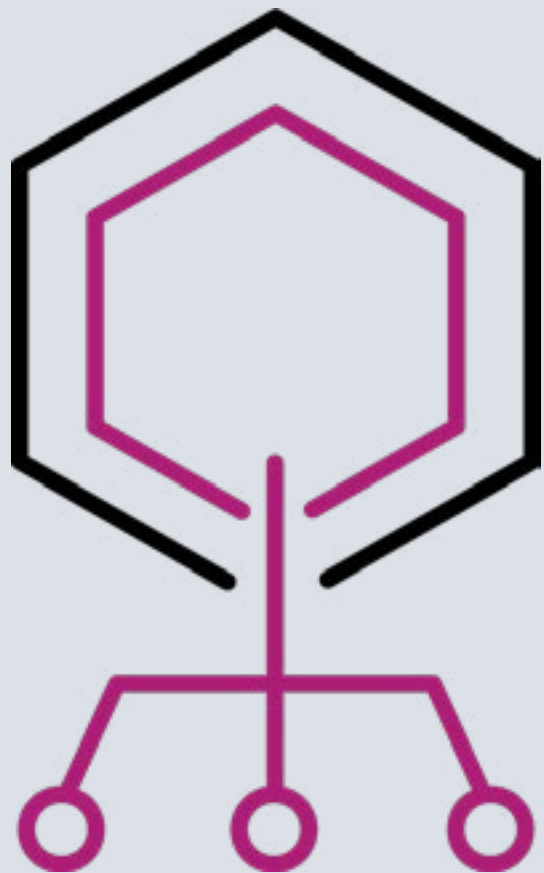
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→ Ease of use

Galaxkey solutions offer excellent data protection and compliance without imposing limitations on your IT or end users. The overall architecture and operation of the solution are designed to provide a seamless experience. Key features include:

Easy implementation
The solution is straightforward to implement, saving you time and effort.

Integration with existing IT architecture
Galaxkey integrates seamlessly with components of your existing IT architecture, such as Active Directory, network infrastructure, classification systems, and security monitoring tools.

User-friendly access
End users can conveniently access Galaxkey through desktop agents, mobile apps, and a user-friendly web portal.

Scalability
The solution is scalable to accommodate your growing data usage requirements, ensuring it can adapt to your evolving needs.

With Galaxkey, you can enjoy robust data protection and compliance while maintaining a smooth and flexible IT environment for your organisation and its users.

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Client Success Stories: Discover the remarkable value delivered by Galaxkey solutions.

Galaxkey solutions have established a strong reputation for delivering exceptional value to numerous engineering and manufacturing leaders worldwide. Here are some notable success stories that highlight the effectiveness of Galaxkey solutions:

→ An American energy technology company with a global presence

→ A British military bridging company that supplies armed forces worldwide

→ A major power company based in the UAE

→ Manufacturers of cotton specialty yarns and cotton sewing threads in India

While these organisations face similar challenges, each of our clients brings a unique perspective to data protection. We take great pride in supporting these entities across multiple countries, enabling them to safeguard their valuable information and maintain their competitive edge.

> "The best thing about Galaxkey is the ease of use. We install it, show people how to use it, and then that's it - they're away and running.
>
> Users don't need the same support as with some other applications."
>
> *Mike Curry, WFEL*

Would your business benefit from user-friendly, ultra-secure data protection?
To learn more about how Galaxkey can help you safeguard your data, contact
info@galaxkey.com

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