



Amkor Technology

www.amkor.com

Industry

Manufacturing

Challenges

- Protect intellectual property
- Support highly collaborative processes among global teams

Solution

• Digital rights management
With Adobe LiveCycle Rights Management ES2 and LiveCycle PDF Generator ES2, Amkor is working together with its customers and suppliers in a more secure, highly regulated manufacturing process.

Results

- Improved security of sensitive business documents
- Increased customer satisfaction
- Integrated more secure collaborative processes into existing IT infrastructure
- Addressed government audit and regulatory requirements
- Established competitive advantage through faster, more secure collaboration

Systems at a glance

- Adobe LiveCycle ES2. Modules used include:
Adobe LiveCycle Rights Management ES2
Adobe LiveCycle PDF Generator ES2
- Adobe ColdFusion*
- Adobe ColdFusion Builder™

Amkor Technology

Leading provider of assembly and test services to semiconductor companies and electronics OEMs protects sensitive intellectual property using Adobe® LiveCycle® ES2

Pioneering secure collaboration

Digital rights management in the electronics industry—where fraud looms large—has gained a lot of attention in recent years. National security, not to mention millions, sometimes billions of dollars are at stake when confidential product information—such as technical specifications, patents, and reports—falls into the wrong hands. Complicated by the fact that customers, suppliers, and manufacturers need to work in a highly collaborative environment, IP in electronics manufacturing is a prime target for theft, particularly when documents are exchanged among stakeholders worldwide and with the emergence of underground markets for this type of information.

While some electronics operations practice basic measures of data loss prevention, it happens mostly at the firewall level. That's not good enough for Amkor Technology, one of the world's largest providers of contract semiconductor assembly and test services. Founded in 1968, Amkor pioneered the outsourcing of integrated circuit assembly and test and is now a strategic manufacturing partner for more than 200 of the world's leading semiconductor companies and electronics original equipment manufacturers (OEMs).

With operations that encompass production facilities, product development centers, and sales facilities across Asia, Europe, and the United States, Amkor assembles and tests around 7% of the world's semiconductors. To retain its market position and make it safer and easier for its global customer base to contract with Amkor, the organization is using Adobe LiveCycle Enterprise Suite 2 (ES2) solutions to protect its most valuable asset—information.

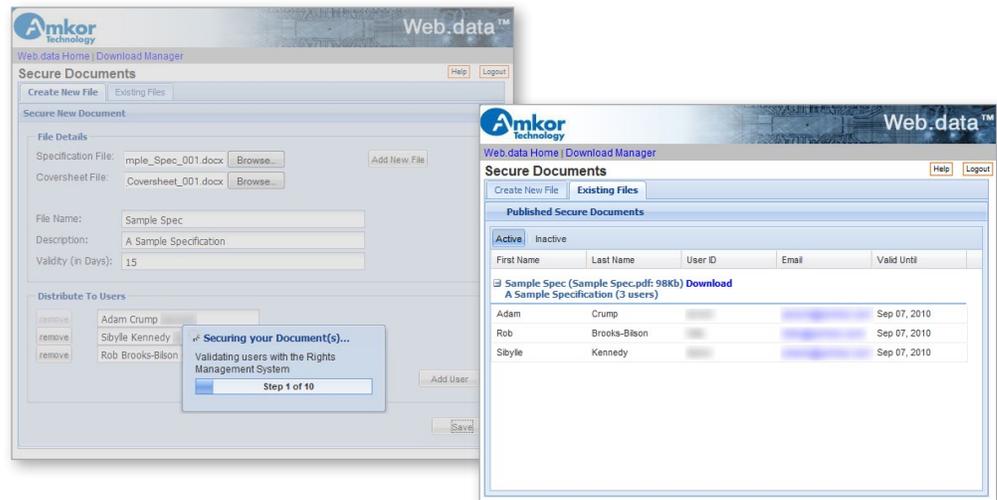
Amkor needed to better safeguard intellectual property in two ways. First, the firm is entrusted with specifications from its customers and vendors that require that their information not be breached. Second, Amkor must protect its own proprietary patents from the competition. Stakeholders were hesitant to share sensitive information because they lacked confidence in the exchange process, a barrier that impeded the collaborative workflows essential to electronics manufacturing.

Previously, document exchange was handled in person on paper. People would have to print out reports and travel either to an Amkor site or a customer site to provide reports. For example, employees would often hand carry designated reports to an automotive customer across the globe, present the information for audit purposes, and then take the paper away when they left. Travel was prohibitively expensive, telephone calls were unmonitored, and e-mails difficult to control. In addition, audit trails were weak. Increasingly, Amkor recognized the need to implement a more secure digital document exchange process to help prevent loss, make it more cost-effective to do business, and enhance collaboration.

Portal enables confidence in collaboration

According to Rob Brooks-Bilson, director of architecture at Amkor, adoption of more feature-rich digital rights management (DRM) solutions is relatively new in the semiconductor industry. "Several of our enterprise system providers are strategic partners with Adobe, so when we starting looking to layer DRM functionality into our infrastructure, Adobe LiveCycle ES2 was the obvious choice," says Brooks-Bilson.

Amkor secured access to sensitive information by replacing the costly, face-to-face exchange of documents on paper with its Secure Documents portal built on Adobe LiveCycle ES2 solutions. LiveCycle Rights Management ES2 is used to apply controls to the document—watermarks, expiration dates for opening, password protection, printing controls, and other restrictions.



“Using Adobe LiveCycle ES2 for DRM enables confidence in the collaboration process. It makes it even easier and more attractive for our customers and manufacturing partners to do business with us.”

Rob Brooks-Bilson
Director of architecture,
Amkor Technology

Eight months later, during which time a proof of concept and pilot implementation proved successful, Amkor launched the first phase of its easy-to-use, feature-rich Secure Document Access portal, where 5,000 internal and external users, including employees, partners, and customers, can work collaboratively in a protected environment. By leveraging Adobe LiveCycle Rights Management ES2 at its core, the portal has improved the overall quality and effectiveness of the company's collaboration efforts.

“An important benefit in using Adobe LiveCycle ES2 for DRM is that it enables confidence in the collaboration process,” says Brooks-Bilson. “It makes it even easier and more attractive for our customers and manufacturing partners to do business with us.”

The first phase of the implementation has already been a success. Several dozen Amkor technical program managers and product managers upload specification sheets in Microsoft Word, Excel, or PowerPoint. Adobe LiveCycle PDF Generator ES2 automatically converts the files to PDF and packages them into a single file, if necessary. Then, LiveCycle Rights Management ES2 is used to apply the needed controls to the document—adding watermarks, setting expiration dates for opening, password-protecting files, disabling printing, and other restrictions.

The audit feature in Adobe LiveCycle Rights Management ES2 adds another layer of security to the electronic collaboration process. Amkor can see exactly who opens every document and will be able to monitor each recipient's IP address. If a document is opened outside the normal IP address range, Amkor will know.

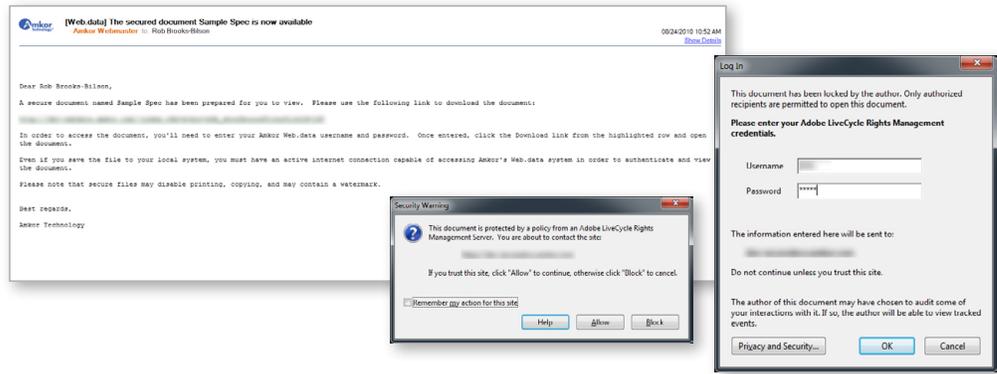
Already, the Secure Documents portal is available to more than 5,000 authorized users inside and outside of Amkor. Within the portal, users are granted reliable, more secure access to documents related to their projects. “The more documents our clients or partners can download as PDF files, the easier it is for them,” says Brooks-Bilson.

When users click to download, the system asks for authentication against the LiveCycle Rights Management ES2 server. Downloaded documents remain on a user's hard drive and then become disabled upon the expiration date set by the Adobe solution.

Self-service, simplicity, security, and compliance

Amkor first developed a basic customer portal in 1996. It was originally created and has been updated with Adobe ColdFusion and Adobe ColdFusion Builder. “ColdFusion has been a solid platform for us all these years because it enables such rapid development and results in applications that our customers find easy to use,” says Brooks-Bilson. “Now we've added a feature-rich rights management module in an integrated Adobe framework. That helps bring us closer to our goal of secure customer self-service in a protected, regulatory-compliant environment.”

With Adobe LiveCycle ES2 solutions, when users access documents on Amkor's Secure Documents portal and click to download, the system asks for authentication against the LiveCycle Rights Management ES2 server. Downloaded documents remain on a user's hard drive and then become disabled upon the expiration date set by the Adobe solution.



Now that the first phase of Secure Documents portal has been successfully rolled out, the Amkor team is ready to extend further collaborative workflows integrated into its Windchill product lifecycle management (PLM) system and SAP back-end structure; both of these systems come from companies that work closely with Adobe, helping ensure that the front, middle, and back end of the Amkor customer portal integrate seamlessly.

"We've just exposed the tip of the iceberg in terms of what we can do with Adobe LiveCycle ES2 solutions. Not only do they make it easier and more secure for customers to do business with us, it will help us meet international government regulations by giving us greater control over confidential IP," says Brooks-Bilson.

For more information
www.adobe.com/products/livecycle



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