CUSTOMER B2B INTEGRATION SERVICES

Manufacturing Supply Chain Solutions for Optimal Efficiency





The Amkor eBusiness Team Works for You

Located globally at Amkor sales offices and factory sites, your eBusiness manager is a single point of contact dedicated to your business IT projects, eliminating the need to engage with individual factory sites.



Business-to-Business (B2B) integration with Amkor

The strength and foundation of Amkor's B2B architecture is a common and standard model that spans across our global factories, and a centralized database containing normalized manufacturing and business information for customer exchange.

We listen to our customer needs

The Amkor eBusiness management team is experienced with customer integrated manufacturing and business processes, and we understand what customers want and need:

- Visibility to assembly and test manufacturing processes and material inventory levels
- Seamless supplier integration with planning, logistics, finance and other critical systems to promote efficiency and decision making
- Flexible high-quality solutions that can be rapidly deployed

We are experienced in customer integration

Amkor ensures a comprehensive understanding of your project requirements through a single point of contact. We have:

- ► More than 50 years of manufacturing experience, with hundreds of successfully implemented integrations
- ► A team of eBusiness managers dedicated to personally facilitate your business-to-business integration needs
- ► A global Center of B2B Excellence supporting a reliable, centralized system and a single source of truth





Choose From a Variety of Integration Methods

Amkor chose the RosettaNet industry standard to provide a common e-Business language, aligning processes between trading partners with a global reach.

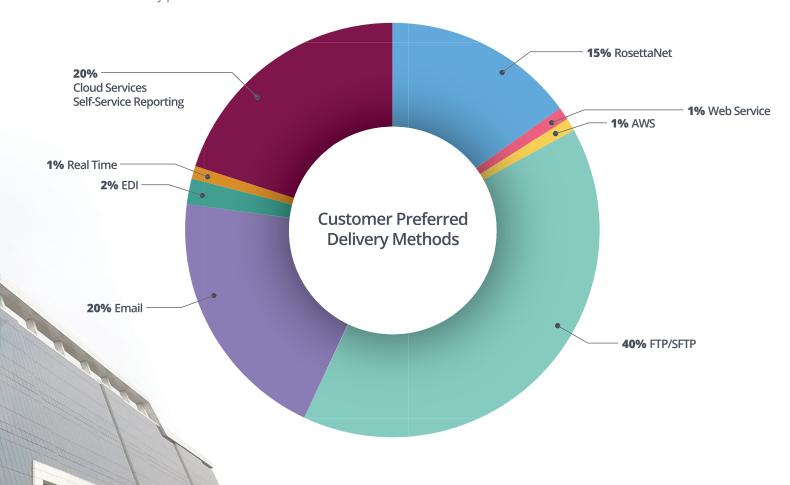
RosettaNet Partner Interface Processes (PIPs) and RNIF delivery protocol enable B2B transactions in a seamless, secure and near real-time manner. We developed a broad portfolio of PIPs to meet customer manufacturing and business integration needs. In addition, we support multiple message formats and delivery protocols.

Message Formats

RosettaNet PIPs, Delimited Flat Files, XML, EDI X12/EDIFACT, Excel and text based reports.

Delivery Protocols

RosettaNet RNIF, Secure File Transfer Protocol (SFTP), EDI (VAN and AS2), SOAP Web Services (HTTPS), MQ, JMS, AWS and Encryption.



Standard B2B Data Sets/Processes, Messages Formats and Delivery Protocols

DATA TYPE	PROCESS	FORMATS & DELIVERY PROTOCOLS
Purchase Order	Received from customer and distributed to factories for order fulfillment.	RN PIP® 3A4/3A7/3A8/3A9/3A19 SFTP • Flat File • XML EDI (VAN/AS2) • EDIFACT ORDCHG and ORDERS
Inbound Advanced Ship Notification (IASN)	Received from customer to notify Amkor of goods in-transit for auto receiving and pre-scheduling.	RN PIP® 3B2 SFTP • Flat File • XML EDI (VAN/AS2) • EDIFACT INVOIC
Shipment Receipt	Sent to customer upon physical receipt of goods at Amkor.	RN PIP® 4B2 SFTP • Flat File • XML
Material Status (Snap) and Events (Transactions)	Snapshot sent to customer for on-hand/on-order raw materials, such as lead frames and substrates, that are Amkor or Customer owned. Transactions sent to customer for material movements in Amkor factories.	SFTP • Flat File • XML Also available in Amkor Cloud Services Material Supply option.
Build Request (Work Order)	Received from customer and distributed to factories, to execute build instructions.	RN PIP® 7B5 SFTP • Flat File • XML
Lot Status (Snap) and Events (Transactions)	Snapshot sent to customer, showing all lots and their current location and quantity, from in-transit to Amkor through shipment to customer. Transactions sent to customer for lot movements in Amkor factories.	RN PIP® 7B1 SFTP • Flat File • XML Also available in Amkor Cloud Services Lot Status and Lot Event History options.
Lot Info Change	Sent to Amkor to update customer lot attributes.	SFTP • Flat File • XML
Assembly Yield Data	Sent to customer at the end of assembly, to identify yield loss and defect reasons.	RN PIP® 7C7 SFTP • Flat File • XML Also available in Amkor Cloud Services Yield option.
Tester Data	Test parametric data collected from Testers and sent to customer.	RN PIP® 7C8 SFTP • XML
Cycle Time Data	Lot cycle time performance data sent to customer, based Amkor standard definitions.	SFTP • Flat File Also available in Amkor Cloud Services Cycle Time option.
Drop-Shipment Request	Received from customer to request goods to ship from Amkor dropship to the end customer.	RN PIP® 3B12/3B13/3B14/3B19 SFTP • Flat File • XML
Outbound Advanced Ship Notification (OASN)	Sent to customer to notify of goods shipping out of Amkor.	RN PIP® 3B2 SFTP • Flat File • XML EDI (VAN/AS2) • EDI 856
Billing Invoice	Sent to customer for services rendered.	RN PIP® 3C3/3C4 SFTP • Flat File • XML EDI (VAN/AS2) • EDI 810
Early Receipt Settlement (ERS or Self Bill)	ERS self-bill invoice or remittance sent to Amkor to reconcile automated payment to the Amkor invoice.	RN PIP® 3C6/3C7 SFTP • Flat File • XML

Clould Services: Amkor's Self-Service

Customer Portal

Amkor provides easy access to customer manufacturing information through Cloud Services, a secure web-based application suite. Access at: cloudservices.amkor.com

With Cloud Services, customer data for all manufacturing sites can be accessed around the clock for near real-time reporting.

Amkor customers can create customized reports, controlling data fields, sorting and filtering, which can be viewed on-line or downloaded to Excel. Automated reports can be scheduled for daily, weekly or monthly delivery to an individual's email.

COL	Service Cloud	Feedback Dashboard My Downloads Change Password Log
☐ Calculators	Design Center	(<u>)</u> Performance Reporting
Package Selection and Design for Performance	Customer Design Rules Design Dropbox Package Outline Drawing Generator Vera GRIM	Cycle Time Data Yield
Site Administration	Status Reporting	
Customer User Directory Download File Management Service Cloud Account Request Service Cloud Honor Respect	Lot Event History Lot Status Material Supply Suppler Status Reporting	
	to minima upon Crisid Services and no graduit or other feature is implied feature.	Cloud Services Total Total

APPLICATION	INFORMATION DETAIL
Lot Status	Near real-time visibility to all customer lots and their current location and quantity, from in-transit to Amkor, through shipment to customer.
Lot Event History	Near real-time visibility to lot movements between milestone operations/locations, as they occur on the manufacturing line (up to 2 years of historical data is available).
Material Supply	Visibility to on-hand or on-order raw materials, such as lead- frames and substrates, that are Amkor or Customer owned.
Assembly Yield	Visibility to assembly yield losses, collected at QA gates, with reason codes.
Cycle Time Data	Visibility to lot cycle time performance based on Amkor standard definitions.



Standard Factory Specific Reports

Standard factory reports are available upon customer request. These reports are specific to individual factory sites, and are complementary to the standard data available from Amkor Cloud Services or Amkor Standard Solutions.

- Commercial Invoice
- ► Lot Traveler Card
- Packing List
- ▶ Ship Alert

Contact Us

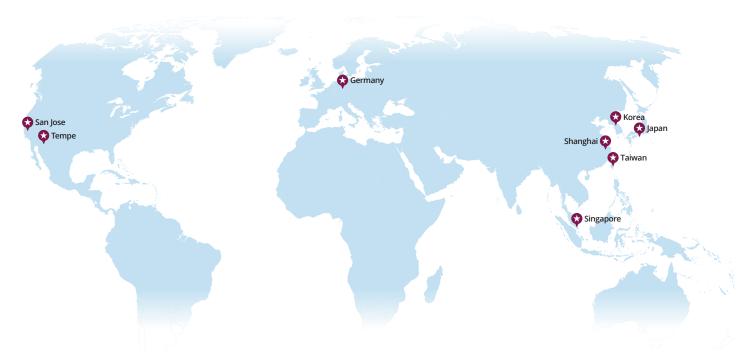
The Amkor global IT Service Desk provides monitoring of customer B2B services 24 hours a day, 7 days a week. Contact us at itservicedesk@amkor.com, or call +1-888-265-6716 extension 5555.

Amkor Is Committed to Your Success

At Amkor, we understand the importance of providing accurate, timely information and services.

Supported by a global offshore development and support center and governed by a B2B Center of Excellence, Amkor provides "follow-the-sun" production support and development.

Visit the Amkor Technology Customer Center at: <u>amkor.com</u> or contact your Customer Service Representative for more information and access to our full suite of eBusiness tools.



CORPORATE HEADQUARTERS

Amkor Technology, Inc. 2045 East Innovation Circle Tempe, AZ 85284 USA Tel: 480-821-5000 Fax: 480-821-8276

GLOBAL PRINCIPAL ENTITY

Amkor Technology Singapore Holding Pte. Ltd. 491B River Valley Road, #12-03 Valley Point Office Tower Singapore 248373 Tel: 65-6211-3333 Fax: 65-6211-3388

EMEA SALES OFFICE

Amkor Technology Holding B.V., Germany Werner-Eckert-Straße 8 81829 Munich Germany Tel: 49 089-1241498-40 Fax: 49 089-1241498-49

GREATER CHINA SALES OFFICE

Amkor Technology Shanghai Zhangjiang Hi Tech Park 2889 Jinke Road, Room #504 Bldg. E, Chamtime Square Pudong, Shanghai 201203 China Tel: 8621-5064-4590, ext. 2340, 4034, 4221, 4245 Fax: 8621-5048-2522

US SALES OFFICES

US MAIN SALES OFFICE

San Jose, CA 25 Metro Drive Suite 700 San Jose, CA 95110 Tel: 408-496-0303 Fax: 408-496-0392

Irvine, CA 16795 Von Karman Avenue Suite 260 Irvine, CA 92606 Tel: 949-724-9370 Fax: 949-724-8925

San Diego, CA 5465 Morehouse Drive Suite 210 San Diego, CA 92121 Tel: 858-320-6280 Fax: 858-622-1841

Boston, MA 105 Central Street Suite 2300 Stoneham, MA 02180

Tel: 781-438-7800 Fax: 781-438-8414 Austin, TX 8140 N. Mopac Suite 150 Austin, TX 78759 Tel: 512-953-0701 Fax: 512-953-0717

IAPAN SALES OFFICE

Amkor Technology Japan, Inc. Shibakoen Front Tower 14F 2-6-3, Shibakoen, Minoto-Ku Tokyo 105-0011 Japan Tel: 81-3-5425-2830 Fax: 81-3-5425-2831

KOREA SALES OFFICE

Amkor Technology Korea, Inc. Songdo 150, Songdomirae-ro Yeonsu-gu, Incheon 21991 Korea Tel: 8232-728-4114

TAIWAN SALES OFFICE

Amkor Technology Taiwan Ltd. 3F-1, No.1, Tai Yuen 2nd Street Zhubei City, Hsinchu County 302 Taiwan Tel: 886-3-598-2000 Fax: 886-3-560-1269



Visit <u>amkor.com</u> or email <u>sales@amkor.com</u> for more information.

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