![Acumatica - The Cloud ERP]

Automate Digital Supply Chains with a Modern Cloud ERP Business Platform Featuring Embedded EDI

DISCOVER A BETTER WAY TO COLLABORATE WITH CUSTOMERS AND SUPPLIERS

Electronic Data Interchange (EDI) is the digital exchange of business information, such as sales orders, shipment data, invoices, and purchase orders between companies in a standard format. EDI can overwhelm small businesses with ever-changing standards, cryptic document formats, and varied customer and vendor trading requirements.

Smaller businesses often need more resources to implement EDI, a requirement for conducting business with larger organizations. Further, EDI requirements change over time, requiring constant fine-tuning of settings to avoid business disruption and costly fees for non-compliance. It is also challenging to keep pace with customer and vendor trading requirements.

For example, Kroger requires different EDI documents than 7-Eleven. To complicate matters, Kroger does not require EDI testing and uses AS2 as a connection method. In contrast, 7-Eleven requires EDI testing on the specific EDI documents and connects with vendors using a value-added network (VAN).

Keeping track of customer and vendor requirements is difficult enough without disparate systems. That's why modern ERP software like Acumatica provides embedded EDI capabilities to streamline collaboration with customers and vendors from a centralized business platform. With Acumatica and SPS Commerce, data flows seamlessly from the core business system into the correct format for transmission to customers and vendors. Likewise, inbound EDI documents are processed automatically into Acumatica using predefined maps with notifications when errors occur on any inbound or outbound EDI activity.

This eBook helps retailers, distributors, and manufacturers understand EDI. It discusses trading partners, transaction types, standards, mapping and translation software, and document transmission protocols. Readers will learn how modern ERP applications simplify EDI with real-time insights to streamline collaboration for improved profitability.

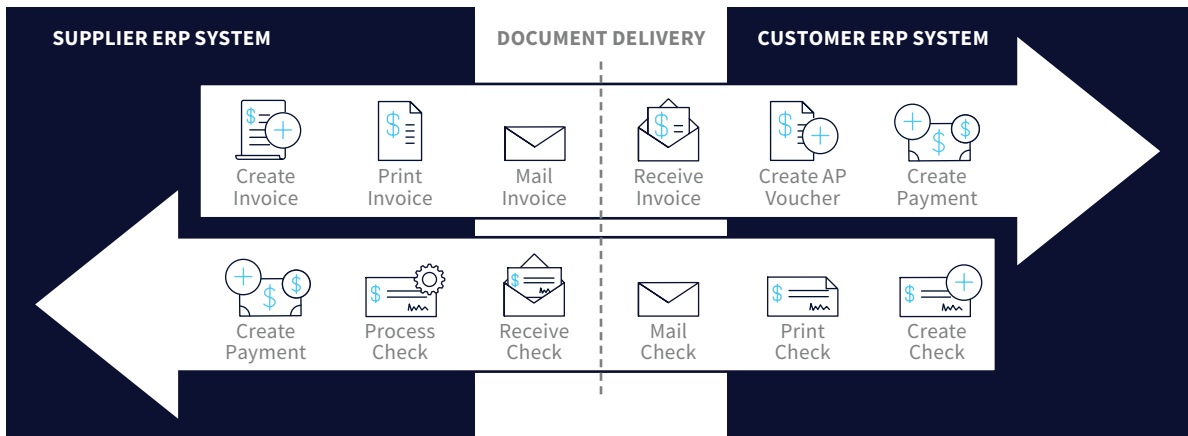## SIMPLIFY EDI COMPLIANCE WITH A MODERN CLOUD ERP PLATFORM

What is EDI?

Electronic Data Interchange (EDI) is the digital exchange of business information between companies in a standard format. EDI digitizes and automates manual, paper-based business processes such as customer invoicing and supplier purchase orders.
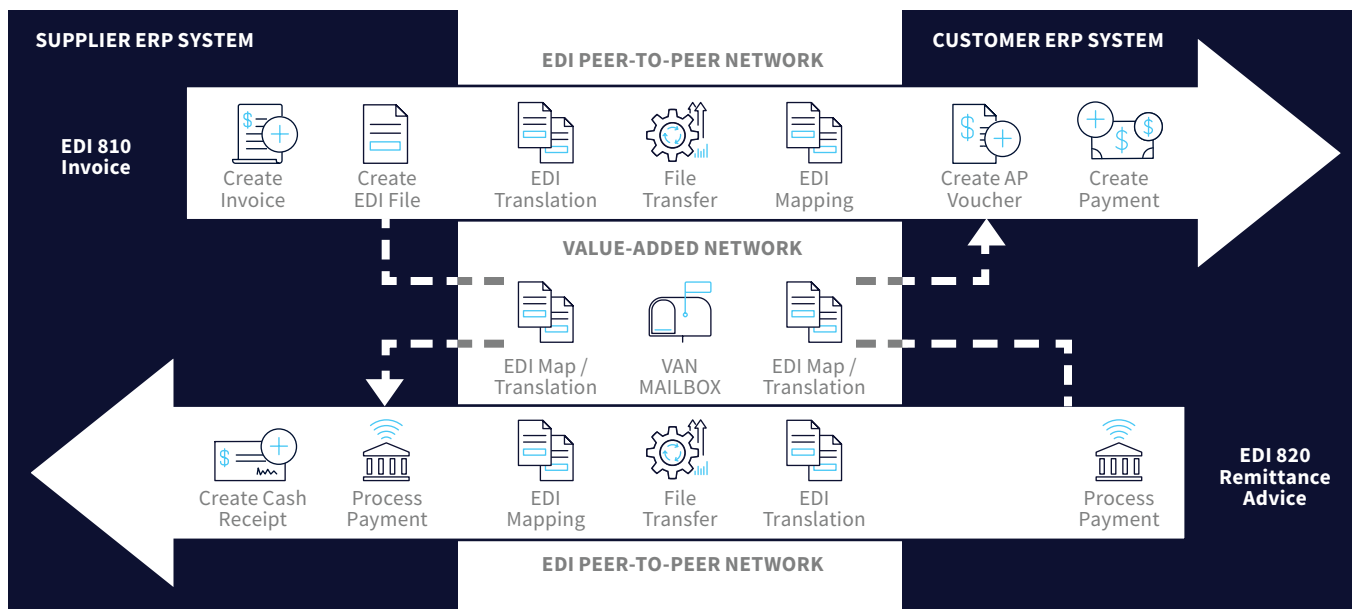
TRADITIONAL PAPER-BASED WORKFLOW

A supplier creates, prints, and mails a customer invoice from their ERP system in a paper-based invoice process. The invoice is transmitted via postal service to the customer who receives it, enters the information into their ERP system, and creates a paper check that they mail back to their supplier. The supplier gets the check and records the payment in their ERP system to settle the account balance.

SUPPLIER ERP SYSTEM			DOCUMENT DELIVERY	CUSTOMER ERP SYSTEM		
Create Invoice	Print Invoice	Mail Invoice		Receive Invoice	Create AP Voucher	Create Payment
Create Payment	Process Check	Receive Check		Mail Check	Print Check	Create Check

AUTOMATED EDI WORKFLOW

In an automated EDI workflow, data files are created and delivered between companies digitally. Files can be sent directly between systems in a peer-to-peer scenario. Some companies use mailboxes on value-added networks (VAN) where 810 EDI Invoice files are generated from the ERP data, translated into an EDI format, and uploaded by the sender to an online VAN mailbox. The receiver can then access the file, map the data to their ERP system, and process the accounts payable transaction within their ERP application. Sometimes, the customer may send an 820 EDI Remittance Advice document to authorize payment. The 820 is not the payment itself. Instead, an 820 includes authorization and details the supplier needs to complete the payment process via EFT, ACH, or credit card transaction on their end.

SUPPLIER ERP SYSTEM		EDI PEER-TO-PEER NETWORK			CUSTOMER ERP SYSTEM	
EDI 810 Invoice Create Invoice	Create EDI File	EDI Translation	File Transfer	EDI Mapping	Create AP Voucher	Create Payment
		VALUE-ADDED NETWORK				
		EDI Map / Translation	VAN MAILBOX	EDI Map / Translation		
Create Cash Receipt	Process Payment	EDI Mapping	File Transfer	EDI Translation	Process Payment	**EDI 820 Remittance Advice**
		EDI PEER-TO-PEER NETWORK				

EDI Benefits

There are many tangible benefits for companies that use EDI. These include time savings, data entry error reduction, and shorter business process cycles for intercompany financial, sales, and supply chain transactions. Further, smaller companies that do not implement EDI cannot do business with larger businesses that require EDI.

"All of our supply chain data is linked, so there are no gaps in our data. We know the second we go from a purchase and invoice to needing to transfer a SKU to a different warehouse, to its receipt at a warehouse, when it's shipped to the customer, and even the shipping and tracking data. It's all in one place so there's no risk for any data integrity issues."

– JAMES DAY, CO-FOUNDER AND OPERATIONS DIRECTOR, MOUS

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LARGER SALES OPPORTUNITIES

Large companies like Amazon, Walmart, Home Depot, Costco, and Kroger require customers and suppliers to use EDI. EDI is prevalent in most industries, including retail, distribution, banking and finance, manufacturing, healthcare, services, and construction. Companies that cannot conduct business via EDI cannot capture more substantial sales opportunities, resulting in slower growth and considerable investments in sales and marketing.

FASTER CYCLE TIMES

Paper-based processes such as customer invoicing can take weeks or months from the time the invoice is created to the time the customer's check arrives in the mail. EDI's digital process can shorten business cycles to days or even hours. These cycle times apply to all transactions, including purchasing, shipping, manufacturing, and logistics.

DECREASED ERRORS

Manual data entry results in errors. Once configured, EDI processes automate data capture from digital files and standardize processes for data sharing with customers and vendors.

IMPROVED EFFICIENCY

Manual data entry and processing paper documents for mail takes time. EDI applications streamline data transfers digitally, eliminating data entry and paper-based processing.

REDUCED COSTS

EDI is not free. Companies invest significantly in software and transaction fees, implementation, and consulting services. However, businesses realize significant cost savings by avoiding paper, postage, printing costs, and reduced labor with substantial improvements in cashflow and access to working capital.
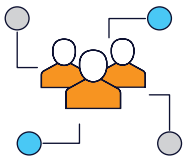
INCREASED SECURITY

Printing and mailing information between companies is risky. EDI provides significant security controls, especially for sensitive customer data and financial information.

BETTER CUSTOMER EXPERIENCES

Customers and vendors appreciate business partners who conduct business digitally. EDI saves trading partners time, reduces costs, improves security, and increases efficiency. Companies are more inclined to expand business relationships with partners who implement EDI.

SUSTAINABILITY

EDI processes reduce the use of toxic printer toner cartridges and wasteful paper and postage materials. Further, digital processes eliminate carbon emissions and pollution caused by vehicle transportation of documents between geographically dispersed organizations.

Trading Partners

Every EDI transaction involves at least two trading partners. These partners are most often customers or vendors, but they may also include transportation and logistics providers, financial institutions, or other organizations.

In many cases, documents and files may be inbound or outbound. For example, a company may receive inbound 850 purchase orders from customers and transmit outbound 850 purchase orders to their vendors. In other cases, trading partners may assume two different roles. For example, a company may be both a customer and a vendor. It is important to understand trading partner relationships and which types of transactions are available to automate business processes for your organization.

"With Acumatica, we can manage inventory at a minute level. That was helpful during the pandemic because we could see purchase orders, processes, inbound freight from China, freight costs, and purchase price variants, which was important when something a year ago might have cost $8 dollars now cost $12. That causes profit erosion, and we are doing a much better job at managing that with full visibility into operating supplies."

– BILL FERRON, DIRECTOR OF INFORMATION TECHNOLOGY, PORTACOOL LLC

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EDI Transactions

The most common EDI transactions include sales orders, advance shipping notices (ASN), invoices, payment order remittance advice, purchase order acknowledgment, and functional acknowledgments. However, there are many others, including industry-specific transactions.

Below is a brief list of common EDI transactions. This is a partial list across varied industry segments. Support for each transaction varies across EDI and ERP platforms. Make sure to discuss each transaction specifically with technology providers and understand which transactions are supported natively or through custom development. Other EDI transaction details are available on the SPS Commerce **website**.

Code	Transaction	Description
180[1]	RMA	Retailers use EDI 180 documents to notify their suppliers that a return has been authorized.
810	Invoice	The EDI 810 is an electronic invoice. Sellers send this to buyers to ask for payment for the products they deliver.
812[1]	Credit/Debit Adjustment	Buyers and sellers use the EDI 812 to communicate with each other about order adjustments. It can be used both to request and notify partners about modifications or billbacks that will be made.

[1]Transactions are not natively supported by the SPS Commerce for Acumatica Integration. However, transactions may be added with additional consulting and development or via import and export scenarios.

Code	Transaction	Description
820[1]	Payment Order / Remittance Advice	EDI 820 confirms that the buyer has sent an invoice of payments or multiple payments. It communicates to the seller the date and time they are being paid. The critical elements of the notification include account information, payment amount and date, the type of currency, and related reference numbers.
832[1]	Price/Sales Catalog	A supplier uses EDI 832 documents to deliver product categories to trading partners. These e-catalogs provide detailed data about their product offerings, including item attributes, product description details, packaging attributes, pricing, and descriptions.
846	Inventory Inquiry Advice	The EDI 846 document keeps retailers and suppliers updated on inventory levels and is required for dropship or direct-to-consumer types of fulfillment models. In most cases, it is used by retailers who inquire about current and future inventory available for their stores and warehouses.
850	Purchase Order	The EDI 850 document allows buyers to place orders with sellers electronically. It contains initial order request details and is the first step in the ordering process.
852[1]	Product Activity Data	Sellers and buyers use the EDI 852 to share sales and inventory details. Suppliers can stay updated on their products' performance to improve their sales and inventory.
855	Purchase Order Acknowledgement	The EDI 855 allows sellers to communicate the status of an order to a buyer. The seller can confirm, reject, or report any changes or issues with the order to the buyer. It provides retailers with delivery status information to share with consumers for drop-ship orders.
856	Advance Ship Notice/Manifest	A supplier typically sends the EDI 856 to provide information about a shipment to a distributor or retailer. Details about what has been shipped, its size, what carrier is moving the order, when it was shipped, and the estimated delivery date are all included.
865	Purchase Order Change	Sellers use the EDI 865 document to change a purchase order. Sellers can request changes to purchase orders and respond to changes buyers have sent. Information from the original purchase order is shown, as well as the changes that are being made or requested.
997	Functional Acknowledgement	The EDI 997 acts as a digital receipt for delivery information. Trading partners can then confirm that they received the delivery information and see if there were any data or formatting errors. This is a notification to supply chain partners that information has been seen and accepted.

[1]Transactions are not natively supported by the SPS Commerce for Acumatica Integration. However, transactions may be added with additional consulting and development or via import and export scenarios.

"Now that everyone is using Acumatica, it's one place to go to do their job. It's made a big improvement having all that information in one platform, no more digging around wondering if the data is correct."

– LESTER YUEN, VICE PRESIDENT OF OPERATIONS AND FINANCE
   TIMEBOMB TRADING INC

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What are EDI Standards?

Human communication relies on a mutual understanding of language and syntax. Each party must agree on which language and dialect they will use. Similarly, EDI standards define the format, codes, identification values, message designs, and syntax for EDI file transmission between organizations. There are many EDI standards and variants across industries. However, the most common standard in North America is ANSI.

The automotive supply chain relies heavily on EDI. Some standards, like EDIFACT, are used globally, while other automotive standards, like ODETTE in Europe, VDA in Germany, or TRADACOMS in the UK, are more common in smaller geographies.

Other industries rely on different standards. For example, HIPAA is used in the healthcare sector, RosettaNet by the electronics supply chain, SWIFT for banking and finance, and VICS for retailers.

There are different versions of each standard as well. Trading partners must agree on which version to use and when to implement new versions. Further, some companies modify standards to meet their needs. These changes must be communicated between trading partners. Lastly, not every EDI or ERP provider supports every standard. Talk to technology providers to identify which standards are available.

"I love to recommend Acumatica, but not to any of our competitors. Acumatica has transformed our business, given us access to real-time stock information, and given us the confidence that we can just keep on growing."

– COLIN GILHESPY, CO-OWNER AND MANAGING DIRECTOR, CAVE DIRECT

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ANSI ASC X12

The American National Standards Institute (ANSI) is a private, non-profit organization that oversees the development of standards for products, services, processes, and systems in the USA. ANSI represents the US in interactions with ISO, IEC, and IEF. Business documents are often referred to by their ANSI codes, such as 856 for ASN, 810 for Invoice, and 850 for Purchase Order.

UN/EDIFACT

United Nations/Electronic Data Interchange for Administration, Commerce, and Transport (UN/EDIFACT or EDIFACT) is the international EDI standard developed under the United Nations. It is popular in Europe for automotive, logistics, retail, healthcare, and manufacturing industries.

ROSETTANET

RosettaNet, a subsidiary of GS1 US (formerly the Uniform Code Council), is a non-profit consortium that defines standards for the computer, semiconductor, and electronics supply chain.

EANCOM

EANCOM is a subset of UN/EDIFACT standards governed by GS1. It links order information with the physical flow of goods through the supply chain. It is popular in Europe among retail and consumer goods businesses and has growing use in healthcare and construction industries.

HIPPA

The Health Insurance Portability and Accountability Act sets standards for electronic healthcare transactions and national identifiers for providers, insurance plans, and employers. The standards are based on the ANSI ASC X12 standard.

SWIFT

The Society of Worldwide Interbank Financial Telecommunication (SWIFT) manages EDI standards for the finance and banking community. SWIFTNet is the infrastructure used to exchange documents. FIN, InterAct, and FileAct are used to encode SWIFT documents for transmission.

EDI Mapping and Translation Software

Data in a company's ERP database must be converted into the EDI file format using translation software. The file is then sent to the receiving trading partner directly or through a value-added network, where they use mapping software to decipher it and move the data into their ERP application.
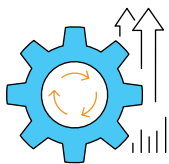
Below is a portion of a sample EDI file. It includes sections that define the transaction date, invoice and purchase order numbers, currency, vendor, quantity sold, price, and item code. These segments are mapped to the corresponding fields in the receiving trading partner's ERP database.

```
                          Date       Invoice #      PO Number
             BIG*20240123*00760052**00230524
Currency     CUR*BY*USD~
             REF*BM*56345678901~
             N1*BT**11*359014552~
Vendor       N1*ST*Acme_Inc.~
             N1*VN*Seller Name*1*SENDER~
             DTM*022*20240123~
             IT1*95060*150*EA*211.60**UP*55394567904*LG*DOG-COLLAR*PO*5544220394~
                          Quantity Price        UPC Item Code
```

"SPS Commerce Fulfillment for Acumatica offers the cloud-to-cloud integration to our ERP, but more so they became our EDI department taking on the staffing, best practices, and troubleshooting so that we didn't have to. As a young organization, handing off our EDI to SPS freed us from the complexities of EDI and the need for in-house expertise."

– ADAM FERGUSON, IS MANAGER, KORPACK

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EDI Document Transmission

EDI files are transmitted between companies in numerous formats. Sometimes, the chosen standard determines the format requirements. In other cases, the EDI VAN or trading partner may select the file format. Files are commonly formatted in comma-separated values (CSV) flat files, extensible markup language (XML), JavaScript object notation (JSON), intermediate document (IDOC), or other formats.

Files are transacted using varied transmission protocols for security and encryption. Popular protocols include file transfer protocol (FTP), hypertext transfer protocol (HTTP), file transport protocol secure (FTPS), secure file transfer protocol (SFTP), applicability statement 2 (AS2), and Odette file transfer protocol (OFTP). Data may also be exchanged using a representational state transfer (REST) application programming interface (API) for tighter data integration between disparate systems.

Connecting EDI with Your ERP Application

Entry-level accounting systems and legacy ERP software are often disconnected from EDI applications. This disconnect forces busy IT personnel to waste time manually formatting files and moving them between applications. Modern cloud ERP platforms like Acumatica provide embedded EDI to receive and send data directly from the ERP application, saving countless hours while avoiding data formatting and entry errors. Embedded EDI offers significant advantages for small and growing businesses, as outlined below.

> "I have been working with SPS and Acumatica for over 2 years. SPS has been a solid partner, helping with all questions and support issues. Top notch!"
>
> **– ERIC MIZRAHI, DIRECTOR OF OPERATIONS & IT, GLOBAL BEAUTY CARE**

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REDUCED TRAINING

Users familiar with the ERP system require minimal training to use embedded EDI apps like SPS Commerce for Acumatica.

FASTER DOCUMENT PREPARATION

Embedded EDI solutions streamline outbound file preparation and automatically convert inbound documents into ERP data, saving time and eliminating errors.

TURNKEY SERVICES

Acumatica partners with SPS Commerce for EDI because they offer turnkey services designed for smaller businesses. SPS Commerce manages the EDI implementation, updates document maps to support thousands of annual changes, performs end-to-end trading partner testing, and proactively monitors the system with 24-hour support every day of the year.

SPS Commerce is embedded inside Acumatica cloud ERP providing retailers, distributors, and manufacturers with a connected solution to transact business digitally with customers and vendors.

Simplify EDI Transactions and Compliance with SPS Commerce for Acumatica Cloud ERP

ABOUT SPS COMMERCE

SPS Commerce is the world's leading retail network, connecting trading partners around the globe to optimize supply chain operations for all retail partners. We support data-driven partnerships with innovative cloud technology, customer-obsessed service, and accessible experts so our customers can focus on what they do best. To date, more than 120,000 companies in retail, grocery, distribution, supply, and logistics have chosen SPS as their retail network. SPS has achieved 92 consecutive quarters of revenue growth and is headquartered in Minneapolis. For additional information, contact SPS at 866-245-8100 or visit **www.spscommerce.com**.

SPS COMMERCE
INFINITE RETAIL POWER™

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Common EDI Mistakes

EDI mistakes can easily happen with so many interconnected systems and processes. Errors cause inefficiencies, confusion, and costly fines for non-compliance. The good news is that modern ERP platforms with embedded EDI streamline and error-proof EDI processing with updates to comply with ever-changing standards.

COMMUNICATION FAILURES

Avoid communication errors with rigorous testing and define processes to monitor communication networks with alerts when failures occur. You can often implement acknowledgments to verify that trading partners received data. Schedule periodic meetings with trading partners to plan for system upgrades or changes, such as upgrades to new EDI standards or changes to value-added networks.

FILE TRANSLATION AND MAPPING ERRORS

Data translation and mapping errors are easily avoidable with proper testing. Connected EDI and ERP systems enable companies to properly configure trading partner files and data maps. Testing and oversight from turnkey EDI providers like SPS Commerce ensure that required data elements are included in the correct sequence.

STANDARDS UPDATES

Develop standard procedures when upgrading to new EDI standards. Even minor updates can wreak havoc on pre-established processes. Collaborate with trading partners to determine which standards will be updated and when each organization will be prepared to implement the changes. Coordinate with your ERP consultant and EDI provider to reconfigure system settings to support the new standards.

TRADING PARTNER ERRORS

You can do everything right with EDI and still need help with issues if trading partners are making mistakes on their end. They may need more training to map files correctly into their systems, or they may transmit documents that contain errors. Collaboration with trading partners is essential to ensure high-quality transactions. Work with trading partners to test files you have sent and notify trading partners when you encounter errors.

LACK OF VISIBILITY

Disconnected EDI applications create barriers to information, such as file transmission or formatting errors. Companies are unsure if files were transmitted, resulting in duplicate transactions that frustrate trading partners. Connected systems like Acumatica and SPS Commerce provide visibility to identify issues with automated notifications and flexible reporting to drill down into EDI transactions directly from the ERP application.

MANUAL PROCESSES

Manual EDI processes are prone to data entry and formatting mistakes. Minimize errors by automating EDI file creation directly from the ERP system with predefined maps to streamline inbound and outbound files. Automation provides efficiencies, enabling companies to do more with fewer resources while improving partner experiences.

Discover Why Modern Supply Chains Rely on Acumatica for Digital Commerce
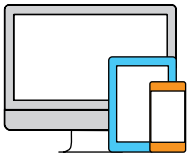
RETAILERS >   DISTRIBUTORS >   MANUFACTURERS >

EDI Feature Checklist

Acumatica provides a **general ERP feature checklist** with standard accounting requirements. Similar checklists are available for **retail**, **distribution**, **construction**, and **manufacturing**. The checklist below provides a consolidated list of features business leaders should expect to find in modern business platforms that provide embedded EDI functionality.

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FEATURE	BENEFIT	PRIORITY	Acumatica		
Embedded EDI	Users can process inbound and outbound EDI transactions within the ERP platform.		✓		
Turnkey EDI Services	The EDI vendor provides turnkey services, including system configuration, trading partner testing, and ongoing maintenance and support.		✓		
Trading Partner Support	The EDI provider supports transactions with existing and future trading partners.		✓		
Translation and Mapping Software	The EDI provider offers translation and mapping software to create EDI files and convert files for synchronization to the ERP database.		✓		
Industry Expertise	The EDI provider has experience working with trading partners in your industry. For example, fashion, home goods, grocery, or automotive.		✓		
Geographic Coverage	The EDI provider's network includes domestic and international customers and vendors in the markets you serve.		✓		
Value-Added Network (VAN)	The EDI provider offers a secured online VAN for document delivery and receipt.		✓		
Open APIs for Web EDI	The ERP and EDI applications offer open APIs to develop peer-to-peer connections for web-based EDI transactions.		✓		
Standards Compliance	The EDI provider supports and maintains all standards required by trading partners.		✓		
Document Support	The EDI provider supports all general and industry-specific documents that current and future trading partners require.		✓		
Protocol Support	The EDI provider supports all required EDI protocols, including FTP, FTPS, HTTP, IDOC, SFTP, and AS2.		✓		
WMS and Shipping Connections	EDI connects with warehouse management and shipping solutions for shipping carrier activities.		✓		
Automation	EDI processes may be automated for outbound file preparation and transmission and inbound file retrieval and data mapping into the ERP database.		✓		
Reporting and Analysis	Users can access reports and business insights within the ERP platform for EDI transactions and errors with notifications when issues require human intervention.		✓		
Total Cost of Ownership	The EDI solution is affordable to license with low costs for implementation and ongoing transaction fees.		✓		
Reliability and Support	The EDI platform is reliable, with established performance levels, dynamic resource scaling, and 24/7 support.		✓		
Encryption and Security	Data may be encrypted with multiple levels of security.		✓		
Training and User Documentation	Documentation is provided within the application with classroom and personalized training options.		✓		

Simplify Omnichannel Sales with Acumatica's Embedded EDI from SPS Commerce

EDI success is only possible with the right partners. Small organizations need more resources to manage the EDI system, onboard and test transactions with new trading partners, and stay abreast of changing standards. Disconnected systems and manual processes result in confusion, non-compliance fees, and unhappy trading partners.
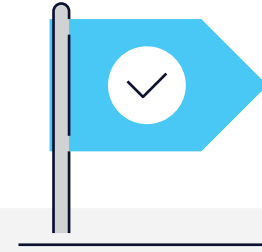
A more dynamic and digital world demands a connected and collaborative business management platform with embedded EDI to automate and streamline customer and vendor communication and collaboration.

For over a decade, Acumatica and SPS Commerce have partnered to deliver EDI capabilities that are fully embedded within Acumatica, giving businesses the agility to take advantage of the native power of Acumatica and full-service EDI expertise.

With Acumatica and SPS Commerce, retailers, distributors, and manufacturers capture more substantial revenue, improve efficiency, mitigate errors, reduce costs, and streamline sales, purchasing, shipping, transportation, and financial business processes.

With fully embedded EDI from Acumatica and SPS Commerce, you can access a dedicated team of experts to provide the staffing, expertise, and ongoing monitoring to ensure your success.

Together, we are driven to continuously seek out better ways to work so that we can redefine business management software and trading partner relationships for everyone.

"We're also looking to do direct integrations with suppliers, with vendors, and potentially with international partners . . . I would definitely recommend Acumatica to other businesses. It covers the full ERP functionality, it integrates with other products well, and it's cost-effective."

– DEREK SZABO,
   MANAGING DIRECTOR

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Acumatica Cloud ERP is a comprehensive business management solution that was born in the cloud and built for more connected, collaborative ways of working. Designed explicitly to enable small and mid-market companies to thrive in today's digital economy, Acumatica's flexible solution, customer-friendly business practices, and industry-specific functionality help growing businesses adapt to fast-moving markets and take control of their future.

For more information on Acumatica, visit www.acumatica.com or follow us on LinkedIn.