



EDI, B2B, EAI, ETL integration and process management platform

TradeXpress Enterprise

by Generix Group





TradeXpress Enterprise, Pragmatic integration

New demands in the business world are bringing new challenges to information systems, which have to provide new competitive advantages to ensure corporate development, success and competitiveness.

The new challenges are many: ensuring the system is open as part of a collaborative entrepreneurial approach, setting up e-commerce applications, providing flexibility and responsiveness, facilitating inter-application collaboration and federation, allowing the integration of new applications, businesses or companies, offering users management and control solutions for their business processes, complying with key technological standards such as those to build SOAs (service oriented architectures), etc.

TradeXpress Enterprise

In this context, integration requirements in the information system have greatly increased in recent years. They involve electronic data interchange (EDI), Professional Electronic Exchanges, enterprise application integration (EAI), data extraction, transformation and loading (ETL), remote inter-point collection or distribution of files, management of business process modelling (BPM) or even the integration of electronic trade applications (eEAI or B2B integration).

To meet these challenges, Generix Group is the first editor to offer an all-in-one software integration platform: TradeXpress Enterprise.

TradeXpress Enterprise offers a flexible and robust integration framework to communicate all types of applications and align support with corporate growth within B2B collaboration approach.

TradeXpress Enterprise B2B targets companies and local government offices of all sizes with plans for various types of integration projects as part of a global or regional context, using a pragmatic approach to ensure a fast return on investment.

TradeXpress Enterprise offers a flexible and robust integration framework to enable all types of applications to communicate and to accompany corporate growth in its B2B collaboration approach.

TradeXpress Enterprise supports integration in Dataflow, Processflow or Workflow mode by allowing human interaction to play its part in the process. It functions independently of data sources and models (flat files, EDI standards, XML Schema, DB tables) and provides various types of intra-company or intercompany conveyance: file transfer, message-oriented Middleware, Web Services, etc.

Platform users frequently voice their satisfaction with respect to the ease of interface or process implementation and deployment (a few days), the robustness and performance of the system, and its wide functional coverage.

TradeXpress Enterprise deals with EDI, B2B, EAI or ETL integration challenges.

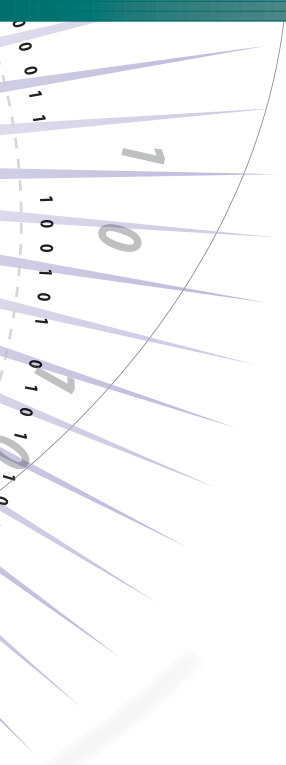
- **Business process and technical process management:** modelling and execution of corporate processes in line with business requirements,
- **Electronic Data Interchange (EDI):** exchanging between the company and outside partners: local authorities, banks, customers, suppliers, logistics providers, carriers, etc., whatever the exchange format (EDIFACT, Gencod, Tradacom, XML, etc.) or communication protocol (Ediint AS2, Etebac, FTP, O-FTP, SMTP, X.400, etc.)
- **B2B integration (or eEAI):** information system integration with Web-type applications: e-procurement, market places, trade sites, electronic catalogues, tracking, etc.
- **Enterprise Application Integration (EAI):** data or file integration between company management applications (vertical and selective software, CRM, ERP systems, SCM, etc.), enterprise repository sharing, etc.
- **Data extraction, transformation and loading (ETL):** synchronization of data between several DMS sources, form feed for datawarehouse or decision-taking software, etc.
- **Data collection and distribution:** secure data interchange between the information system and remote site applications: points of sale, retail outlets, subsidiaries, etc., process deployment, centralized handling.

With over 15 years' experience in the integration business, Generix Group publishes the software and proposes an on-demand user service or SaaS, called HubXpress. The Generix Professional Services offer covers integration, development, deployment and training services provided by Generix Group integration teams. Larger projects are put in place by means of partnerships with major market integration firms enjoying the necessary TradeXpress experience and skills.

TradeXpress Enterprise is installed in 1600 operations across almost 30 countries. It is supported by Generix Group and its subsidiaries linked to a distributor and integrator partner network.



TradeXp



TradeXpress Enterprise, in the field of intercompany integration, addresses the requirements of intra-company integration projects: interfacing between specific software or ERPs; interchange between heterogeneous databases; repository synchronization; data collection and distribution; file transfer or information system urbanisation, etc. Using an all-in-one platform, TradeXpress Enterprise offers wide functional coverage: modelling of business and integration processes, format conversion, exchange and process monitoring, conveyance (data, files, messages, Web services), interchange security, etc.

TradeXpress Enterprise

TradeXpress Enterprise is underpinned by a wide range of components in line with the type of project

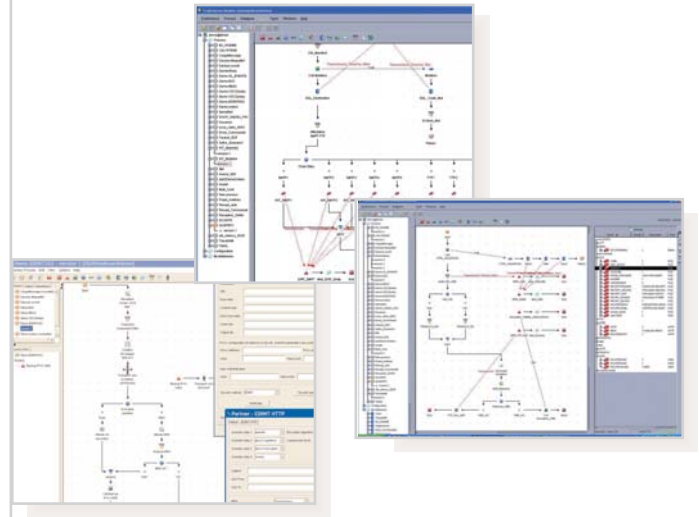
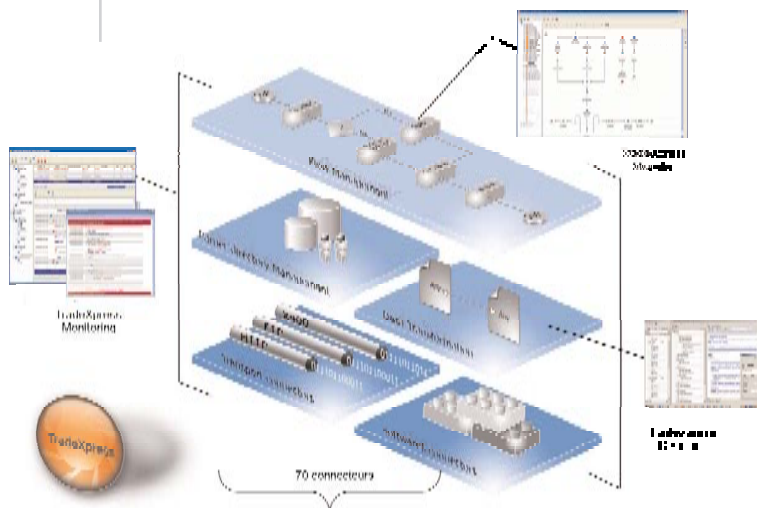
- **TradeXpress Modeler**, a process modeling and execution shop,
- **TradeXpress Monitoring**, a unified exchange control and supervision system, associated with TradeXpress BAM, a Business Activity Monitoring solution.
- **TradeXpress Administration**, a system administration platform.
- **TradeXpress Backbone**, TradeXpress connect, urbanisation solutions (file transfer, MOM, WS),
- **TradeXpress Designer**, a shop for interface development (DMS, EDI and XML files) and repository management,
- A library with one hundred connectors in various fields: EDI and XML languages, communication protocols, ERP or DMS integration, technical, security and even connectors ensuring compliance with certain legal restrictions.

The software offers a multi-environment management system that is especially appreciated by B2B operators, user communities, hosted service suppliers and major companies wishing to federate the applications of several entities. The technology arranges server use to fall in line with the selected user option: by type of project (EDI, EAI, etc.), by entity (company departments, group subsidiaries, VAN subscribers, etc.) or even by technical field (development, testing, handling), etc.

The platform uses Java and C languages allowing coordination of tasks and mass processes, a great capacity for maintainability and open-endedness, an object approach (Business Logic Component) and a very high performance level.

Its architecture enables it to publish its main functionalities in the form of service and to be considered a service-oriented architecture (SOA).

The software technical architecture is designed for application with very high availability level using clustering, load-balancing or replication. The communication process nodes are dissociable and can be increased in number.



Business process and integration modeling TradeXpress Modeler

TradeXpress Enterprise's integration components are all controlled via TradeXpress Modeler. This acts as a coordination engine addressing customer requirements: routing messages, checking and enriching data, translating files, applying business rules, managing each business process work flow, conveying data, etc.

The user can thus easily build functional or technical integration scenarios: EDI or B2B commands integration, collaborative process management (GPA, Rosettanet, etc), in-house After-Sales circuit, inter-application synchronization.

TradeXpress Modeler offers an array of objects (Business Logic Components) compatible with BPML language in order to parameterize functional rules (choice, switch, synch, until, while, etc) to be applied at each process. The user can also add and develop new Java objects by using the development kit (framework).

External corporate players or components can make requests via the request management system to databases, inter-applicative messaging, Web Services and Workflow.

TradeXpress Modeler manages complex alert or backup scenarios (multi-level alerts, alert routing mode, data processing with data replication, etc.) and reacts to each event or non-event assigned to it for supervision.

Triggering of processes is achieved conditionally in accordance with most current modes: input of files to an internal or external protocol, input of messages to a queue, directory polling, SQL request, DMS trigger, BAL EDI polling, calendar scheduling, launch by external scheduler, API of some ERPs such as SAP R/3 RFC or tRFC, Web Service, etc.

It has an LDAP-compatible directory in which the characteristics of external partners (EDI, B2B), in-house databases, ERPs, Web Services to be invoked, etc., are listed.

Lastly, TradeXpress Modeler simplifies maintenance and process development through the readability of its graphic interface, comprehensive documentation generated at each process, versioning management, process libraries and reusable components.

TradeX

Exchange control and supervision: TradeXpress Monitoring

TradeXpress Monitoring is the central interchange monitoring and tracking tool. IT operators and business users are offered true exchange situation platforms. So, a user can supervise the execution of a business process in real-time and interact with it at the same time (restart, stop, wait, etc.). For each executed process, TradeXpress Monitoring presents the tracking items that offer "start to finish" vision: status of every process step, display of data throughout their process phases, decrypted file display (for instance, pdf or XML), state of awaited acknowledgements (EDI, networks or applications), etc. Querying is carried out via a dynamic request Web interface or via predefined filters.

TradeXpress Monitoring consolidates on a single platform all TradeXpress Enterprise environments currently in production, whether local or offset on other platforms.

TradeXpress Monitoring also brings together numerous tools developed on basis of user feedback: process reprocessing, debugging, purging and conditional filing, report generation (e.g.: statistics), etc.

In addition to being attentive to business users' needs, it is possible to build fully customized monitoring tools in terms of form (colour management, visual identity guidelines, etc.) and content (tracing business items, internal references, etc.) using Web Access technology for TradeXpress.



Reporting, Business Activity Monitoring: TradeXpress BAM

Along with TradeXpress Monitoring, the TradeXpress BAM solution supplies the user with real-time access to business performance indicators without falling back on specific developments. Within the TradeXpress Enterprise architecture, TradeXpress BAM integrates the data collection reporting and analysis engine of a world-class BAM publisher.

TradeXpress BAM offers a series of parameterizable management charts and activity reports that are automatically produced and edited on demand. These reports provide information, for instance, on the number of messages received; the number of connected remote applications; they enable reaction to a business event and display system information (state of disk, process, etc.).

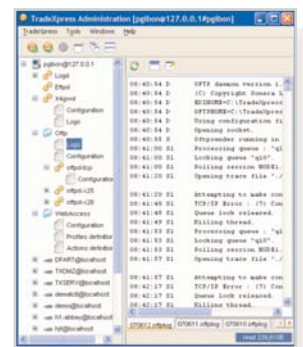


* Soon available

Integration platform system administration: TradeXpress Administration

TradeXpress Administration brings together all the system and user administration tools and programs:

- system parameter management (daemon, process, environment variables, CPU management, etc.).
 - Management and creation of TradeXpress Enterprise environments,
 - user management (profile creation, user allocation, login/password management)
- TradeXpress Enterprise users are identified by a login / password supporting the LDAP protocol and the SSO* standard.



Transformation, data conversion: TradeXpress Designer

Since it was designed, TradeXpress Enterprise has developed its own language: Reliable Transaction Engine (RTE), to assure the functions of format transformation and data handling.

This fourth-generation language designed for EDI or EAI integration challenges is one of the platform's key advantages, providing fully functional open source capability and a very high performance level, unequalled by generalist market languages such as XSLT, Javascript or VBScript.

The language is made up of around one hundred programmatic instructions used as objects to allow simplified processes (time, date, digit, character modifications) or very complex ones with combined rules, interleaved on several levels (transcoding table management, character chain processing, mathematical functions, data extraction, file splitting or grouping, coherence management, etc.). Several functions (XML, pdf, FTP, LDAP, SQL, etc.) also provide the connection function with corporate heterogeneous environments. When required, the user can also integrate programs or functions designed with other programmatic technologies (C, C++, shell, script, executables, some Java classes, etc.) and can design its own RTE objects.

Designed to meet the performance requirements of the largest organizations, the language compilation capability is based on the production of a C/C++ source program. Benchmarks performed by users frequently reveal a much higher level of performance than that achieved by their colleagues (e.g.: data processing rate of 30 Mb per minute on a low level Linux server).

SUPERMARKET AND DISTRIBUTION CUSTOMERS

Autodistribution, Bricorama, Camif, Carrefour, Casino, CDiscount, Conforama, Decathlon, Etam, Fnac, Intermarché, Leclerc, Manutan, Metro, Relay, Rexel

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Integration with applications and databases: ERP and SGDB connectors

TradeXpress Enterprise is interfaced with a few hundred different applications, either by implementing one-off interfaces or by using more or less complex connectors.

TradeXpress Enterprise thus ensures cutting-edge format transformation functions, supports the functional rules described in applications, manages integration monitoring functions and interfaces main batch or transactional ERPs with APIs.

The main ERPs are currently interfaced with TradeXpress Enterprise: Generix Collaborative Enterprise, INFOR ERP LN (Baan), JD Edwards, Lawson M3 (Movex), Oracle Application, MBS, MFGPRO, SAP R/3, etc., and also vertical and regional software (SCM, CRM, etc.), sectorial software (food industry, car industry, advertising, hospitals, healthcare, etc.) and with numerous applications. It is certified by SAP AG.

In the DMS field, TradeXpress Enterprise ensures integration via its JDBC, ODBC and Oracle connectors with most market databases.

Interchange urbanisation

In order to support companies to "urbanise" their information systems, TradeXpress Enterprise offers cutting-edge solutions in the fields of file transfer, integration to databases, message-oriented Middleware or Web Services. TradeXpress MOM provides the interchange service in "as and when" mode and the management of inter-application publication-subscription functions.

Using **TradeXpress Backbone or TradeXpress Connect**, it is also possible to offset integration agents (SGDB, ERP, file and conveyance connectors) to execute certain sensitive integration or conveyance operations in decentralized mode. Monitoring, start to finish tracking and maintenance of these TradeXpress Connect agents remain centralized on the all-in-one TradeXpress Monitoring platform.

PUBLIC SECTOR AND SERVICE CUSTOMERS

Bouygues Telecom, BNP-Paribas, Hospitals, Tax department, Finance department, Modernisation department, EDF, France Télécom, La Poste, Lagardère, Labour department, MG, TF1, Suez, Société Générale.

TRANSPORTATION AND LOGISTICS CUSTOMERS

Bolloré, Cat, Chronopost, Daher, DHL, Easydis, Gefco, Port of Le Havre, Port of Marseille, Schenker Joyau



Data securisation: security connectors

Other TradeXpress Enterprise connectors ensure data security. Depending on the type of partner or data to be exchanged, it is possible to parameterize the required level of security (encryption, electronic signature, etc.) and to respect standards such as RNIF, PRESTO or EDIINT. By integrating several market cryptware toolkits (Open PGP, Open SSL, etc.), TradeXpress supports numerous security algorithms: RSA, triple-DES, AES, IDEA, SQUARE, MD5, SHA-1 and interfaces with various types of equipment and additional software (files on USB keys, card readers, etc.). It supports the LDAP protocol ensuring it has an interface with public key infrastructures (PKI) and proposes an internal database for certificate management (certificate database management for TradeXpress, certificate import, validity date maintenance and revocation list consultation, etc.).

Compliance with certain legal requirements

TradeXpress Enterprise complies with technical and legal requirements with respect to the tax dematerialization of invoices and remote tax returns (tax bundles, VAT, social contributions, etc.).

The software was certified by the French General Tax Office in 1997, by EDIFICAS (association for data exchange standards) in 2001 and by Sesam Vitale for CPAM (National Health) payments in 2007.

WEB-EDI, B2B portal

In association with J2EE B2B portal applications developed by Generix Group, users can offer their partners WEB-EDI type applications or portals. Key business processes are integrated in our customer or supplier portal offerings: orders, order receipt acknowledgements, consignment notes, label issuing, collection of product information, invoices, etc.

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The use of this language does not, however, require high levels of IT development skills: the RTE code is automatically generated by the graphical development shop, TradeXpress Designer, operating in "click and map" mode. TradeXpress Designer can be used for all mapping scenarios: EDI/XML structure to applicative file structure or database (and reverse), XML structure to XML structure, applicative structure to applicative structure and database structure to another database. The software ensures the import of target or source structures for the inter-mapping of structures: database model, XML schema or XML DTD, EDI messages, ERP files or specific software. TradeXpress Designer also consists of a vast library of EDI languages (more than 20 standards, such as: ANSI X.12, B2, UN/EDIFACT, EANCOM, FIBEN, GALIA, GENCOD, HPRIM-HL7, LIDIC, ODETTE, NOEMIE, TRADACOM, VDA, etc.) or XML frameworks (CXML, EAN UCC, EBXML, ROSETTANET, XCBL, etc.).

It takes care of maintenance, allows the design of EDI/XML subsets and the generation of message implementation guides. Lastly, TradeXpress Designer provides numerous additional functions, such as documentation production, "RTE" program re-engineering, generation of testing sets or even management of an enterprise repository (XML storage).



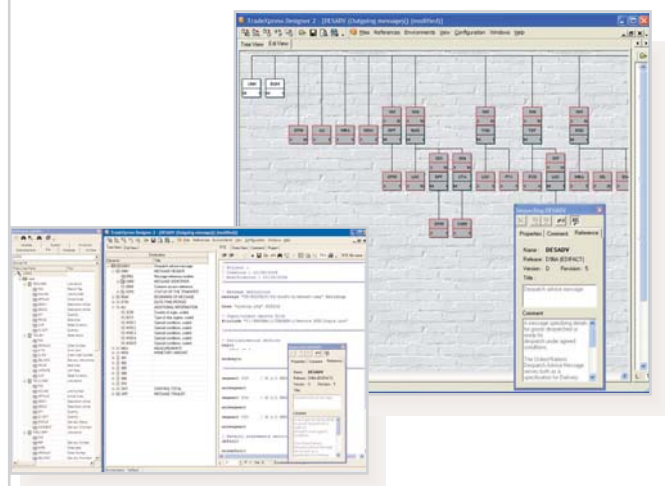
INDUSTRIAL CUSTOMERS

Acome, Airbus, Armor, Dassault Aviation, Filtrauto, Legrand, Liebherr Aerospace, Safran, Sanofi, Schneider Electric, Sandan, Somfy International, Thomson, Toyota, Zodiac



FOOD INDUSTRY AND CONVENIENCE GOODS CUSTOMERS

Adidas, BMG-Sony, Bonduelle, Bongrain, Fromageries Bel, Grand Marnier, Hachette Livre, Lactalis, LDT, L'Oréal, McBride, Narac, Royal Canin, Saupiquet



Data conveyance: protocol connectors

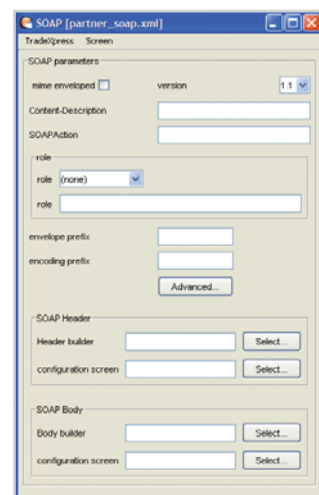
The leader on the EDI and B2B integration market from the outset, TradeXpress Enterprise supports the main inter and intra-company synchronous and asynchronous interchange protocols and has connectors compatible with most communication middleware used in information systems.

Some thirty or so protocols are thus guided through TradeXpress Enterprise for various utilizations: file transfer (FTP, E-FTP, E-FTPS, FTP-S, Secure FTP, PeSIT HS, etc.), EDI VAN or point to point (Allegro, Dillicom, O-FTP, X.400 P1, X.435 or Pedi, X.400 P7, Tedeco, etc.), exchanges with banks (Etebac 3, Etebac 5, G-COPE, PeSIT HS), Internet (Ediint AS1, AS2, AS3, HTTP, HTTP-S, POP3, RNIF, SOAP, SMTP-MIME, S-MIME, etc), Web Services, sectorial protocols (RosettaNet RNIF, HL7 Messaging, Presto, ebXML Messaging Service, CPAM, etc.)

Furthermore, TradeXpress Enterprise is the first European platform certified by the Drummond Group for its respect of the Ediint AS2 protocol and for its inter-operability (certified on 3 occasions).

TradeXpress Enterprise also complies with technical requirements and manages the collaborative processes of certain "protocols" such as ebXML (ebXML schemas, CPP-CPA, eb Messaging Services, etc) or Rosettanet (XML, PIP, RNIF 1 and 2 schemas).

TradeXpress Enterprise proposes connectors with messaging solutions (MS Exchange, IBM Notes), MQM (JMS, IBM MQ Series), file transfer monitors (Axway Interpel and CFT) and manages Web Services in customer and server mode supported by SOAP for various uses.



TradeXpress Enterprise

Fields of application

Business and technical process management,
Workflow management
B2B integration (or eEAI),
Electronic data interchange (EDI),
Extraction Transformation Loading (ETL),
Enterprise Application Integration (EAI),
File transfer, data collection and distribution, etc.

Operating systems

Unix (IBM Aix, HP-UX, HP Itanium, Linux,
Redhat Enterprise, Debian, SUN Solaris)
and Windows (XP, 2000, 2003, Vista)

Writing languages

Java, C

Architecture: thin client and Java

Java TradeXpress client and thin client access
via an HTTP browser

Data, repository storage

SQLite or DMS integrated database

Multi-environment architecture

Unix User or Windows Service

Characteristics of RTE language

C or C++ compiled L4G,
possible insertion of external codes
(C, C++, shell, script, executable, Java class, etc.),
addition of customized objects.

RTE language objects/instructions

(Reliable Transaction Engine)
Around 100 instructions
Access to DMS/R and FTP functions library,
loops, calculations, CGI, inter-process communica-
tion, table management, variables management,
inputs/outputs, Sap idoc, pdf, LDAP, character chain
manipulation, testing/conditions, sockets, XML,
Unicode management*, etc.

Task planning

Internal or external scheduler.

Handling, supervision, reporting, BAM*

Process monitoring and control
Unitary exchange monitoring, multi-criteria search,
alerts, anomaly messages routing, interface with
alert management software, reprocessing, decryp-
tion, parameterizable archiving and purging, parame-
terizable Web portal, display of data exchanged by
process steps, statistics, real-time management
charts, report production and editing*

Acknowledgement management

Protocol (Avis Allegro, DR/SR X.400, Exit CFT, EERP,
MDN EDIINT, etc.)
EDI (CONTROL, APERAK, ANSI 997 messages, etc.),
applicative (ERP) and functional with
wait and alert timer.

Security functions

Services (encryption and electronic signatures), EDI-
FACT messages (AUTACK and CIPHER), algorithms
(RSA, triple-DES, AES, IDEA, SQUARE, MD5, SHA-1, PGP,
etc.), protocols (HTTP-S, S-MIME, X.509 and LDAP),
Certificate management database
MIME and S/MIME envelope management
XMLDSIG* signature
Connection to SSO* infrastructures

Exchange modes with applications:

Directory polling, file depositing, file collection, inter-
applicative messaging, program to program, NFS,
DMS requests, trigger, await messages files, RFC, ALE
SAP, API of ERPs Web Services, etc.

Supported media

Supported EDI norms and standards:

ANSI X12, B2, CFONB, EANCOM, EDIFACT,
GENCOD, FIBEN, GTDI-TRADACOM, HL7, HPRIM, INOVERT,
LIDIC, NOÉMIE, ODETTE-GALIA, SPEC2000C,
SPEC2000M, TDFC, VDA, etc.

Supported XML versions (DTD or schemas):

cXML, ebXML, UCCnet, EANnet.fr, Rosettanet, XCBL,
Xbri, SWIFT, etc.

Supported formatings:

Fixed positions/lengths, tag separators
(HTML), DMS request result, etc.

Types of files:

Office automation (pdf, RTF, XLS, TIFF, etc.).
plans, programs, binary codes, images,
text files, HTML, etc.

Software and database interfaces

Interfaced ERPs:

Generix Collaborative Enterprise, Sage XS (Adonix)
Microsoft Dynamics AX and MW, INFOR ERP LN
(Baan), INFOR ERP LX (BPCS), JD Edwards, MFG PRO,
Lawson M3 (Movex), Oracle Applications, Peoplesoft,
SAP (EDI, trfc, XI), etc.

Interfaced SCMs:

Agrostar, Aldata, I2, Hardis, Infolog, Manugistics, etc.

Interfaced e-trade applications:

Ariba, Commerce One, Content Europe, etc.

Other interfaced management software:

Agresso, Cegid, Coda, Conex, EWR+, EDIRIS,
ELIT, e-med, Genacod, Generix, Gesica, JFC, Logdis,
Logali, Logistar, Mapics, MBS, OCS, Phare, Pop Corn,
Sage, Selligent, Siebel, Tolas, VIF, etc.

Interfaced DMS:

DB2 400, MS SQL Server, Oracle, Sybase, Informix,
Progress, etc.

All databases supporting ODBC or JDBC

Handling software:

Operation center, Open view, Patrol, Tivoli, etc.
Security software: Open PGP, Open SSL, Safex,

Transport mechanisms

Supported communication protocols:

Allegro V11, ebXML Messaging Service V2,
EDIINT AS/1, EDIINT AS/2, EDIINT AS/3, E-FTPS, Etebac
3/5, FTP, FTP Etendu, FTP-S, G-COPE BDF, HL7
Messaging, HTTP, HTTP-S, Odette FTP, Pedi, PeSIT HS,
Pop3, Presto, SMTP+MIME, RosettaNet RNIF 1 and 2,
Sesam Vital/CPAM, Secure FTP, Soap (RPC, Messaging,
etc.), X.400 P1 (X.APIA), X.400 P7, X.435, etc.

EDI VANs:

Allegro, D'Arva, Atlas400, ATT, BT, Dillicom, GXS,
IBM/GN, MCI, Sterling, Telebox 400, Telepost,
Telefonica, etc.

Fax forwarding operators:

Atlas fax, Graphnet, Première Global Services, etc.

Interfaced EDI communications software:

EDIGO for AIX by SERES, Isoplex by SOCOR, IUS and
Route400 by CLEARSWIFT, UA Allegro by SERES, UA
DILLICOM, UA TEDECO by X and Mail, UAFI by Add on
Mail, etc

Messaging software, HTTP servers

SMTP and/or POP3 compatible messaging:
MS Exchange, IBM Notes



www.generixgroup.com

69/71F-75003, rue Beaubourg Paris
Tel.: +33 (0)1 77 45 41 80

HTTP servers:

Apache, IBM, Microsoft IIS, Netscape

File transfer softwares,

MOM, CFT by Axway, Connect (Direct, Express, Tom)
by Sterling, Edith by RCS, Interpel by Axway,
WebSphereMQ by native IBM
All JMS compatible MOM

Java

JDBC, JMS, EJB, JCA*

B2B portal

Customer portal
Supplier portal
EDI Web portal (GALIA authorized)
Electronic catalogue management

Web Services

Publication of services: process, transport, transla-
tion, etc.
SOAP Messaging and SOAP RPC protocol management
UDDI directory*
WSDL* requests
Compliance with main standards: WS Addressing, WS
ReliableMessaging, WS Security, etc.

Remote returns, remote transmissions

Certification by EDIFICAS in 2001
Tax bundle, VAT, DUCS, and MSA remote returns,
CPAM remote transmission (email/LDAP), SESAM-
VITAL certification in 2006

Tax dematerialization of invoices

Certification by the General Tax Division in 1995
Connector with Invoice Manager software

* soon available