

LaserNet Product Suite Technical Whitepaper



LaserNet
Output Management

LaserNet Output Management

- Create, Transform & manage Business Documents to Grater Advantage

LaserNet is a suite of document and output management solutions. Each element tightly integrates with all your existing IT applications to support your migration from labour and paper intensive systems to more cost effective, faster e-enabled document processing.

LaserNet captures your output and transforms it into attractive documents, reports and labels, intelligently routing them for distributed print or electronic delivery by e-mail, fax, PDF, XML etc.

All this is achieved without complex and expensive programming via an entirely 'point & click' configurable interface: enabling you to extend the functionality of your core applications without major investment or upheaval.

Why use LaserNet Output Management?

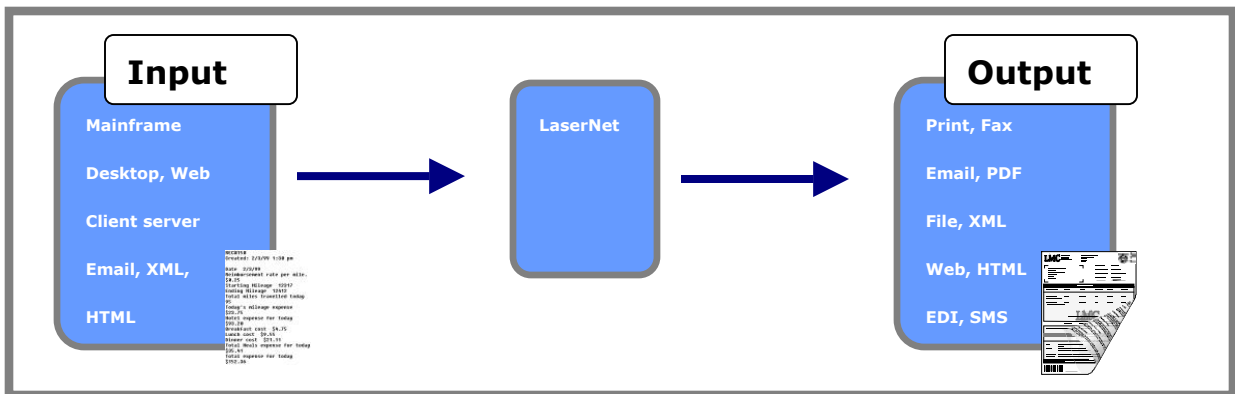
- Reinforce corporate image with customized documents
 - Ensure your corporate image standards are properly portrayed in your business critical documents. Send your customers professional-looking, high quality documents that incorporate complex design elements such as graphics, barcodes, colors and custom fonts.
- Reduce costs associated with programming or preprinted documents
 - Minimize costs associated with custom programming and managing preprinted forms inventories with LaserNet. Creating electronic document templates with LaserNet 's easy-to-use design tool means your programming effort is minimized, and changes can be implemented quickly and easily.
- Deliver documents and information in multiple formats
 - LaserNet enables your organization to present meaningful, dynamically generated documents in a variety of formats using multiple delivery options such as print, e-mail, fax, PDF and the Web.
- LaserNet scalability enables it to support the communication needs of a growing business

How does LaserNet work?

A complete Output Management solution

LaserNet offers all the tools you need. The solution contains tools for extraction of data from any ERP and other enterprise applications to document design and output delivery. LaserNet can work with of any given data stream such as page formatted, records, tab or line separated files, XML, HTML without any need to adjust the application that is producing the data to LaserNet.

When LaserNet receives input it process the data or documents and deliver the output reformatted and distributed to any channel defined by the user.



LaserNet delivers business information to the right people, in the right place, in the right format – all automatically and without touching the originating data

Input

LaserNet is built with a wide range of ways to receive input from any given application. The software can capture data via LPR/LPD, FTP, shared folder, fax, email, web services etc. and process the input to intelligent output. It is possible to split and install the LaserNet software on many different servers on the network, and data capture can be done on one server, processing and delivery of documents on another. LaserNet is able to work with many different input formats like ASCII, XML, XHTML, and the format can be single oriented print containing one page, or it can be joboriented containing several pages, with or without page separators. Furthermore the software supports Windows formatted data (EMF) like word etc. and several special output formats from systems like SAP, Oracle, JD Edwards, Navision etc.

Output

LaserNet supports the most widely used delivery channels. This means documents and files can be transformed and delivered from LaserNet to any recipient, in any format in any volume. The most preferred delivery technology is;

Print – LaserNet supports any printer working with Windows drivers. The driver information is loaded into LaserNet, and any function within the driver can be used for any document. This means full control of output bins, duplex, paper size etc. and support for special printers like label, cheuch and thermo printers.

Files – Any information or document can be stored into a database, a shared folder or on a network. The file can be named on behalf of information from the datastream (invoice number.PDF). LaserNet supports all common formats like XML, HTML, Tiff, RTF, PDF etc. etc.

Mail – LaserNet supports all mail systems using MAPI or SMTP, such as Microsoft Exchange, GroupWise, Lotus Notes etc. Information from the datastream can be used to fill information like "TO:", "CC:", "Subject:" etc. and the body text plain text or HTML can be changed as well. By using PDF as attachments it is possible to send documents in full colour and collect, schedule and combine mail to same receiver.

Fax – LaserNet support almost any standard fax system like ZetaFax, Faxination, ExtraFax, Tobit, Faxware etc. by converting documents to preferred format like Tiff or PDF, and generate the needed headerfile for sending.

e-business – It is possible to convert documents to XML, EDI or HTML etc. to provide a powerful range of e-document requirements. LaserNet offers a full graphical tool for building XML, EDI or HTML files, using the correct tag/field names. When working with XML it is possible to import any stylesheet, and no programming skill is needed. LaserNet e-business can also receive, transform and process XML files, enabling a full exchange of business documents.

Database – LaserNet support any ODBC/OLE DB compliant database for storing data or documents. Data stored in database can also be inserted into documents, files etc. Most common databases supported are Microsoft SQL, Oracle, Access etc.

The above mentioned is the most common output functions used by customers working with LaserNet. It is possible to combine and use more than one output destination, which gives the user the possibility of building a powerful output strategy. A document received can be changed and processed into a print, an

email, and at the same time converted to a XML file, which will be stored into a database - All combinations are possible with LaserNet.

Document creation

Converting application data into business documents can take days of complex, expensive programming. With LaserNet's click & point interface it takes only a few hours and changes take just minutes. Saving programming time and cost.

LaserNet Developer

LaserNet Developer is the core design and configuration tool allowing customers to create intelligent and sophisticated customer-focused documents from any data source. LaserNet Developer is a graphics design tool, in which formatting of data is made with a simple point and click, using the mouse to define settings for any document or file which should be handled in LaserNet. The software is installed anywhere on the network, on a dedicated workstation or maybe it is handled by an external reseller which support the running LaserNet installation.

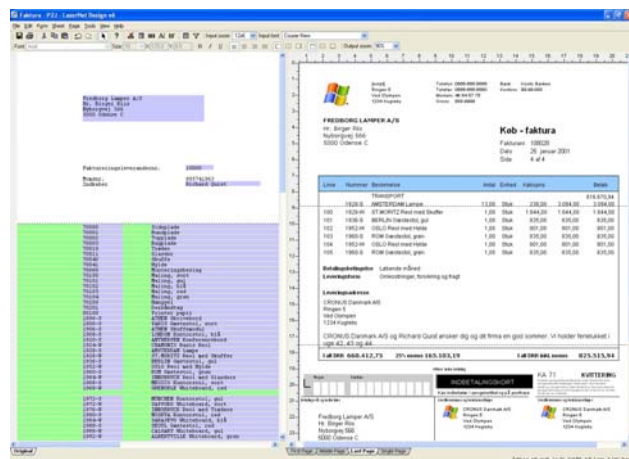
Filter - The software contains several standard input filters standardize the incoming data formats, to optimize the existing data streams and form creation.

LaserNet can convert to and from any codepage format supported by Windows.

Drivers - Any Windows driver can be used together with LaserNet, which means full control of page size, font types, line spacing, shading, colours, duplex and tray selection etc. and all options can be different from one form to another.

Overlay - Any overlay or drawing created in any Windows application like Microsoft Word, Publisher or even Adobe Indesign can be inserted in LaserNet Developer. This unique overlay support gives customers the possibilities to maintain overlays separately from the forms application.

Barcodes - Special label documents can be designed using all types of Barcodes including 2D barcodes, PDF 417, EAN 13, EAN 128 and many more.



Charts & Graphs - LaserNet makes it very easy to incorporate small illustrations by the product code, add chemical hazard symbols onto labels, incorporate graphs or charts into reports & financial statements.

Calculations – Perform any calculations on the data stream, including adding numbers, running totals calculate transport lines, discount coulombs etc. New calculated fields can be linked back to the main application.

Unicode – LaserNet has native support for all Unicode formats, such as UTF-8, UCS-2, UFT-16 etc. for design and print of documents in Chinese, Russian, Korean etc. This means transferring single byte character set like ASCII into double byte character set without any change in the application system.

Rearrange Master – The LaserNet Developer is built with a powerful tool for handling forms design using Master pages and child pages. This means that documents can be used as Master for other documents and all corrections, font, calculations and settings will be inherited to the new form, email, fax, file etc. This means outstanding easily handling and maintenance of forms setup.

JavaScript – Using Java technology, LaserNet makes it possible for users to create, build and run JavaScript in LaserNet. This means that any script can be called from LaserNet when processing data or pass information between modules. The JavaScript function in LaserNet lets advanced users create specialised applications or functions if needed.

JobInfo – JobInfo - LaserNet has a powerful and flexible support for adding meta data to the data stream. Lots of information that may be interesting when handling a job (ex. username, originating printer or mail headers) gets attached to the job, identified with a unique name. For example, the JobInfo "DocName" contains the original document name as shown in the Windows spooler subsystem, such as "Microsoft Word - LaserNet.doc". LaserNet uses the Job Info system for setting up information like an e-mail addresses, archive indexes, FAX numbers, or printer specific information. The additional data inserted into Job Infos are commonly used for setting up conditions for validating the data stream. When mail is received on a mail input port, a "MailFrom" JobInfo is set. As the data reaches the form recognition part of LaserNet, a form may be configured to differentiate based on the "MailFrom" JobInfo, so that "bugs@efstech.dk" and "b2b@efstech.dk" e-mail addresses can be assigned each their form and data flow throughout LaserNet.

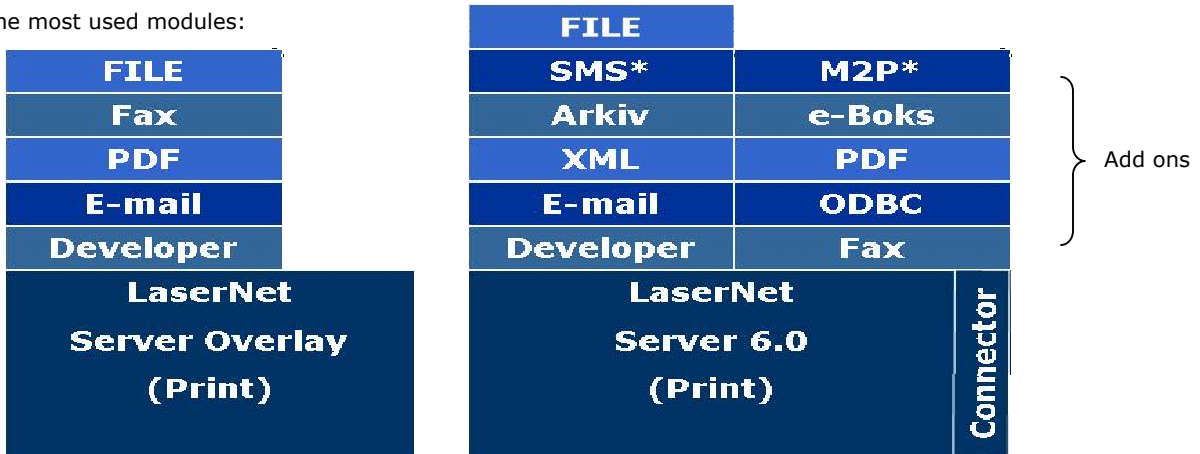
The above functionality is only part of the many different possibilities and options supplied in LaserNet Developer. The software is built with high focus on user friendliness and reformatting documents can be done without any programming.

The LaserNet Architecture

Add the modules needed

The LaserNet Output Management solution is built to suit any need from customers running single server application to world wide organisations running several servers. The LaserNet suite is built in modules which allows each company to choose from a range of applications all depending on output capabilities found in business application systems, and the demand for communication with business partners.

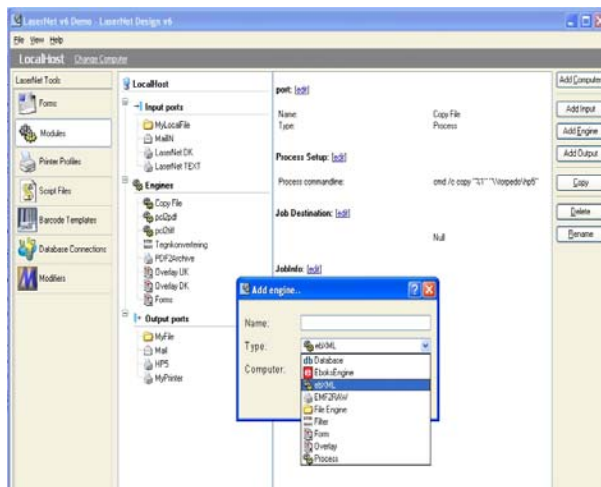
The most used modules:



A LaserNet solution can therefore be one or two modules combined into a solution, or it can be the whole range of modules combined into a full output management solution. New modules are constantly developed and added to the product suite and users can add those modules to running solutions easily.

System configuration

All modules can be installed on central location, or on several locations across the network. LaserNet is delivered with full monitor software for tracking job and status, helping maintain the running solution. Modules can even be installed at business partners site as a part of an automated communication process.



Other features

Schedule & Sort

LaserNet also contains the advanced schedule & sort facilities where collections of documents: say a test certificate, invoice and shipping documents are automatically collated and printed together or attached to one e-mail. There are also impressive report 'splicing & dicing' functions that automatically splits reports so that each one only contains the wanted segments.

Multi-threading capability

LaserNet Server can run multiple print queue processes concurrently, rather than on a first-come first served basis. This means that printjob are speeded up and the risk of bottlenecks is reduced.

LaserNet Overlay

The LaserNet Overlay can be installed as a stand alone solution within the LaserNet product suite. It is built to add an overlay on data supplied from any Windows Application or already business application formatted data. Windows applications such as Office, Navision, SAP Business One etc. are the most common systems for working with the LaserNet Overlay solution.

LaserNet Overlay Solution

Any overlay on a given print is set up and maintained in a section of LaserNet Developer which means that the overlay solution and the full LaserNet v6 are maintained within the same program. It is possible to use any Windows based program for designing the overlay files, and a different overlay can be added on the first, middle or last page of the output from the business application. Furthermore it is possible to take full use of the jobinfo and the most common output modules previous described.

Input

Windows print – It is possible to add information or overlays into documents printed from Windows applications like the Office package, or 100% Windows based applications. This means handling output without changing data structure, but only adding logos or overlay and controlling bin, duplex, copies and the distribution to email, fax, database etc.

TEXT/ASCII – The stand alone Overlay solution is not built for handling ASCII print and using the LaserNet Full version is strongly recommended. It can be used also on text-based systems like Oracle, Unix etc. but then the print file must be ASCII - Courier only and the print width will only be approx 72 characters.

PostScript – It is possible to operate with Postscript files, which open up for the possibility to receive PostScript Files from a given system. Limitations in the Overlay solution is there must be 1 input queue pr. Document type, the PostScript driver create bigger filesize, and sometimes the quality of the print can be less than normal.

For non-windows ERP systems we normally propose the complete LaserNet package, which include the drag 'n' drop formatting engine. This gives a lot easier way to design the application output. Furthermore the solution requires Win2000 or XP on all clients printing to LaserNet Overlay.

Technical details

System requirements for LaserNet

A standard implementation of LaserNet requires the following:

Developer:

- Microsoft Windows NT, XP or 2000+ Workstation with:
 - Intel Pentium III or Higher Processor
 - 128 MB RAM Minimum
 - 4 GB Hard Disk Drive Minimum
 - TCP/IP Services Installed & Configured
 - Network Interface Card (NIC) Installed & Configured
 - Network Access, Color Monitor, Keyboard & Mouse

Server

- Microsoft Windows NT, XP or 2000+ Server with:
 - Intel Pentium III or Higher Processor
 - 512 MB RAM Minimum
 - 10 GB Hard Disk Drive Minimum
 - TCP/IP Print Services Installed & Configured
 - Network Interface Card (NIC) Installed & Configured
 - Network Access, Colour Monitor, Keyboard & Mouse

Why LaserNet

Solutions to meet your needs now and in the future

For over 15 years LaserNet has led the way in the development of Output & Document Management. Networked distributed forms, Windows document design software, automated document e-mailing and archiving are all pioneering products developed by the EFS Technology Group. Also we have launched solutions capitalising on emerging technologies such as XML and the latest advances in web document publishing and e-commerce. In other words, you can be totally assured that LaserNet will meet all your requirements now and in the future.

Global reach - local service

EFS Technology understands that enterprise wide document and output management solutions are best implemented and maintained at a local level. We therefore have two development centers in Europe that are further supported by 61 implementation partners across the world. In this way EFS ensures that you have someone close by who knows your systems and our software in considerable detail so that we can resolve any queries in moments without waiting for a help desk response from another time-zone.

Solutions built with understanding

Our Partners are specialists: highly experienced in providing tailor made solutions using advanced software technology. The first thing that they will offer you is consultancy. A chance for them and us to gain an understanding of your business requirements – and for you to review how LaserNet has risen to similar challenges elsewhere. Then in collaboration and partnership with yourselves they will tailor the core applications to fit your precise needs to ensure that they bring you benefit from day one.

Adaptable solutions that work in the real world

International experience with manufacturing, logistics, government institutions, universities and hospitals has provided EFS with the expertise to develop a comprehensive range of standard solutions that can be adapted to meet your precise needs. Our case studies and application sheets provide in-depth details and are available from our website or from your account manager.

Multi-application, single interface

LaserNet is essentially an open product which is frequently used with multiple applications to solve many issues at once. To this end, EFS Technology and our partners work closely with a long list of leading IT applications including: SAP, Oracle, GEAC's System 21, BPCS, JDE and MBS Navision.

Look who's working with us

With nearly 2,000 clients in 35 countries, LaserNet has been chosen as the preferred output & document management solution by some of the world's biggest and best known companies. The larger installations include: AT&T, BOC Edwards, Corus Engineering Steels, Peugeot, Toyota, MAN-ERF, FIAT Group Companies, Securicor Logistics, Panasonic and The Open University.

Further information

For more information regarding LaserNet Output Management, please contact EFS Technology or a reseller.

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