

## ABBYY® FlexiCapture Engine 9.0

*The Most Powerful SDK for Data Capture*



### What is FlexiCapture Engine 9.0?

*FlexiCapture Engine 9.0 is a comprehensive data capture SDK to combine technologies and tools for intelligent document classification and form processing. Our SDK enables developers to bring powerful functionality for automating data extraction to their applications. FlexiCapture Engine facilitates tight integration of complex data capture functionalities for processing semi-structured and unstructured documents such as invoices, bills, contracts and many more. With FlexiCapture Engine you can easily add value to applications while simultaneously reducing development costs.*

### Extend Existing Applications or Build Automated Data Capture Solutions

FlexiCapture Engine 9.0 delivers a full-range of state-of-the-art technologies for data extraction, document classifying and indexing. Developers benefit from a single approach in developing, maintenance, and training for the SDK. Additionally, ready-to-use components for data export into backend systems and archiving can easily be integrated into one single application.

#### Intelligent Document Processing

Automated data extraction from fixed forms, processing of semi- and unstructured documents and document classification in one SDK.

#### Advanced Processing of Multi-Page Documents

Unique technology to easily process documents with multiple pages and tables stretching over more than one page.

#### Reliable Platform for Processing

Powerful SDK compliant to industry data capture standards for data processing in enterprise projects.

#### Automated Data Extraction into Backend Applications

Export of data into any backend applications via standard interfaces can be built using FlexiCapture Engine.

#### Ready for International Business and Documents

Language support for the development of world-wide localised applications.

#### Cost Savings

Reduce costs of data extraction by deploying automated data capture capabilities.

#### Efficient Development

Set of standard components enables fast integration, thus shortening development cycles.

#### High Quality Data Output

Highly accurate recognition technologies combined with rule-based automated verification methods ensure optimised and validated data output.

#### Tight Integration with Applications

FlexiCapture Engine enables developers to ensure that data capture technologies are perfectly integrated into their custom applications.

### Key Functionality

- Integration of intelligent data capture to process forms and questionnaires
- Document classification and automated document separation
- Powerful data extraction for semi- and unstructured documents
- Verification and monitoring methods for optimised data output
- High quality recognition technologies for OCR, ICR, OMR, 1D and 2D Barcodes
- Language support for 198 OCR and 112 ICR languages
- Automated data export to backend applications
- PDF, MRC PDF & PDF/A document export for archiving

### Benefits for Developers

- Enhance your applications with data capture components
- Unique and powerful feature set and API for data extraction
- Ready-to-use SDK components to speed up development processes
- Full control over document processing, extracted data and document routing
- Compatibility to FineReader Engine 9.0 API, which can be licensed within FlexiCapture Engine for integration of document conversion

# Development Overview



## Integration, Document Descriptions Development and Processing

Integration of Data Capture functionality with FlexiCapture Engine 9.0 in enterprise projects is a 2-tier process. Developers use the FlexiCapture Engine components to integrate Document and Data Processing into their applications. When processing various types of documents in a single stream, intelligent document descriptions and/or fixed form templates need to be developed and tested. FlexiCapture Engine comes with a document template editor and FlexiLayout Studio, which are the necessary design tools to process documents in custom-built applications.

### Integration in Custom Applications and Processing

FlexiCapture Engine 9.0 has a clear and easy-to-use API. Development can take place in C/C++, Visual Basic, .Net, Delphi, or any other tools supporting COM components. The following steps show how your application can be extended with Data Capture functionalities:

#### Step 1 – Integration:

Integrate FlexiCapture Engine DLLs into your application, workflow or business system.

#### Step 2 – Project Selection:

Load a predefined set of document templates that have been developed and tested with FlexiCapture 9.0 Standalone and FlexiLayout Studio.

#### Step 3 – Document processing:

Load the documents and PDFs to be processed. Document separation, classification and recognition are automatically executed. The logic comes from the loaded FlexiCapture 9.0 projects, but developers can also implement their own workflow logic using the "FCProcessor" options. New in Version 9:

- Multi-Level Classifier
- Multi-threaded Server
- 64-bit support and .NET compatibility

#### Step 4 – Data Verification:

The Data Verification API of FlexiCapture Engine 9.0 provides access to the internal recognition results. The new Visual Components\*, provided as source code sample, allow fast and easy implementation of user driven verification with a GUI.

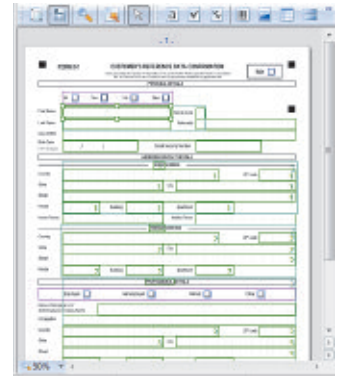
#### Step 5 – Data and Document Handling:

Finally the extracted data can be processed in your application, sent to other applications or exported to XML, XLS, CSV. The separated documents can be exported as image files, as well as searchable PDFs or PDF/A.

### Development of Document Templates for Forms

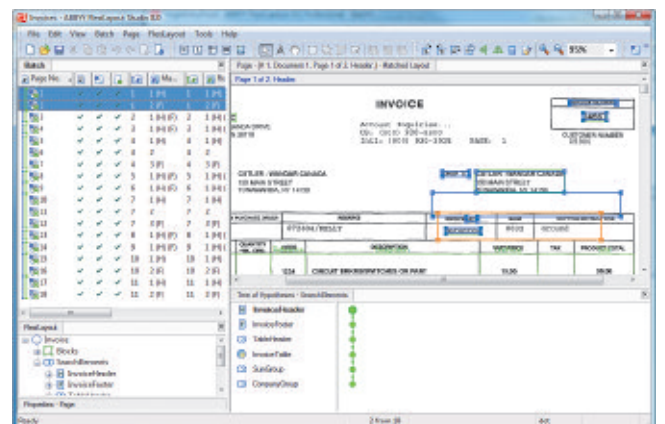
The Document Template editor allows fast and intuitive development of document templates to process static, fixed forms.

- 1) Load the different segments of the multipage form to the editor.
- 2) Define the elements that are used to match the document: anchors, static texts and separators.
- 3) Define the different recognition areas in a graphical editor where, e.g. text blocks, tables, checkmarks, checkmark groups, barcodes and pictures are located.
- 4) Set up the recognition properties, for each areas, e.g. OCR, ICR and attach data type definitions, dictionaries and verification rules.



### Development of Multipage FlexiLayout Templates with FlexiLayout Studio

- 1) Load a selection of documents with different layouts.
- 2) Define some generic elements that allow to identify documents and that can be used for orientation within one document, e.g. text strings, lines, spaces between elements.
- 3) Define search elements for the data you are looking for e.g. text, numbers, date, tables, the length of the string, the set of characters, one or multiple words, one or multiple lines. Additionally these elements are set into a relation with other areas set up in 2), for example right or below.





# Functionality Overview

## ABBYY FlexiCapture Technology for Data Capture

### Unique Set of OCR, ICR, OMR and Barcode Recognition Technologies

FlexiCapture Engine's core recognition technologies process 198 languages in OCR and 112 languages in ICR as well as checkmarks and barcodes (OMR).

### Processing Different Document Types in One Stream

FlexiCapture Engine 9.0 has ready-to-use components which enable developers to integrate automatic extraction of valuable data from the stream of forms and documents. Automatic document type recognition allows processing of different documents (structured, semi-structured, unstructured) via Fixed Forms and FlexiLayouts.

### Document Separation

Simple and advanced document separation is built into FlexiCapture Engine 9.0. Simple separation is managed via blank pages and barcodes, advanced document separation via intelligent document definitions. Even template matching can be performed without any manual labour.

### Document Classification

Once a document matches a Fixed Form or a FlexiLayout a document type (e.g. invoice, contract) is automatically classified.

### Fixed Forms Processing

FlexiCapture Engine 9.0 is perfectly designed to process any kind of fixed forms, like questionnaires, surveys and/or coupons.

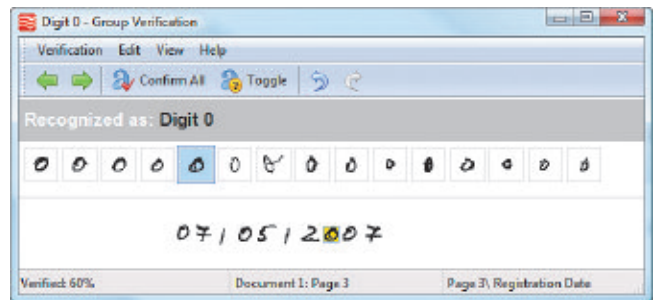
### Advanced Processing of Multi-Page Documents with Different Layouts

Most business documents, like price lists, contracts, or surveys consist of several pages. With FlexiCapture Engine 9.0, developers get a unique technology to easily process multiple page documents with tables that stretch over more than one page.

### Data Control and Verification

FlexiCapture Engine 9.0 offers effective and convenient instruments for checking the validity of captured data and tracking recognition errors:

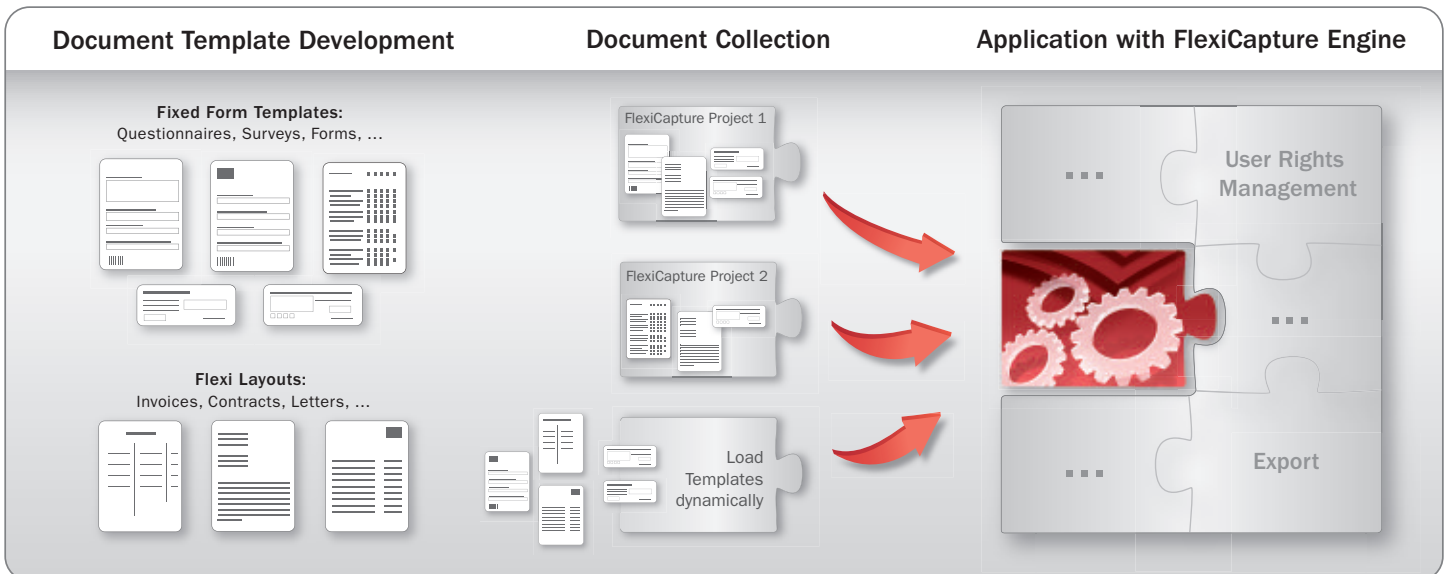
- Recognised data can automatically be checked if needed. This covers simple range checking, comparison with a known value (e.g. supplied as a regular expression or taken from a database), and comparison of data items within one document. Finally, scripts can be used to create very sophisticated checking rules.
- The verification API of FlexiCapture Engine 9.0 allows development of custom interfaces for field and group verification. The new Visual Components\*, provided as source code sample, allow developers to generate an extremely effective user interface. This feature speeds up manual verification and eliminates data errors.



### Data & Document Export

ABBYY FlexiCapture Engine 9.0 is able to index a document with relevant data for export into backend applications and converts analysed documents into searchable PDF, highly compressed (MRC) PDFs or PDF/A for archiving purposes.

\* Still under development, planned to be released in a maintenance release of FlexiCapture Engine 9.0



# Specifications and Licencing

## Specifications

### System Requirements

- PC with Intel® Pentium® / Celeron® /Xeon™, AMD K6/ Athlon™/Duron™/Sempron™ or compatible processor with a minimum clock speed of 1 GHz
- Operating System: Microsoft® Windows Server® 2008, Windows 7®, Windows Vista®, Windows Server 2003, Windows® XP, Windows® 2000, and 64-bit versions of Windows Server 2008, Windows 7®, Windows Vista, Windows Server 2003, Windows XP
- Memory: min. 400 MB RAM

### Input Formats

BMP, PCX, DCX, JPEG, JPEG 2000, JBIG2, PNG, GIF, TIFF, DjVu, PDFs (up to PDF 1.6)

### Output Formats

- Data Export: XLS, DBF, CSV, TXT, XML
- Document Export: BMP, PCX, DCX, JPEG, JPEG 2000, PNG, TIFF, image snippets, searchable PDF, MRC PDF and PDF/A

### Development

FlexiCapture Engine API supports the COM standard and can be easily used in C/C++, Visual Basic, .Net, Delphi, or others.

The distribution package contains samples for C/C++, VB 6, VB.Net, C#, and Delphi.

### Further information online:

[http://www.abby.com/flexicapture\\_engine/technical\\_specifications/](http://www.abby.com/flexicapture_engine/technical_specifications/)

## ABBYY Licencing Policy

ABBYY FlexiCapture Engine is sold via a flexible, modular licencing policy which allows developers to select the best combination of tools and pricing options for their project. Licencing is offered as:

### Developer Licences

Provides the right to develop and test the integration of FlexiCapture Engine into your applications. The licence includes FlexiCapture 9.0 Standalone and FlexiLayout Studio for fixed form template and FlexiLayout development.

### Runtime Licences

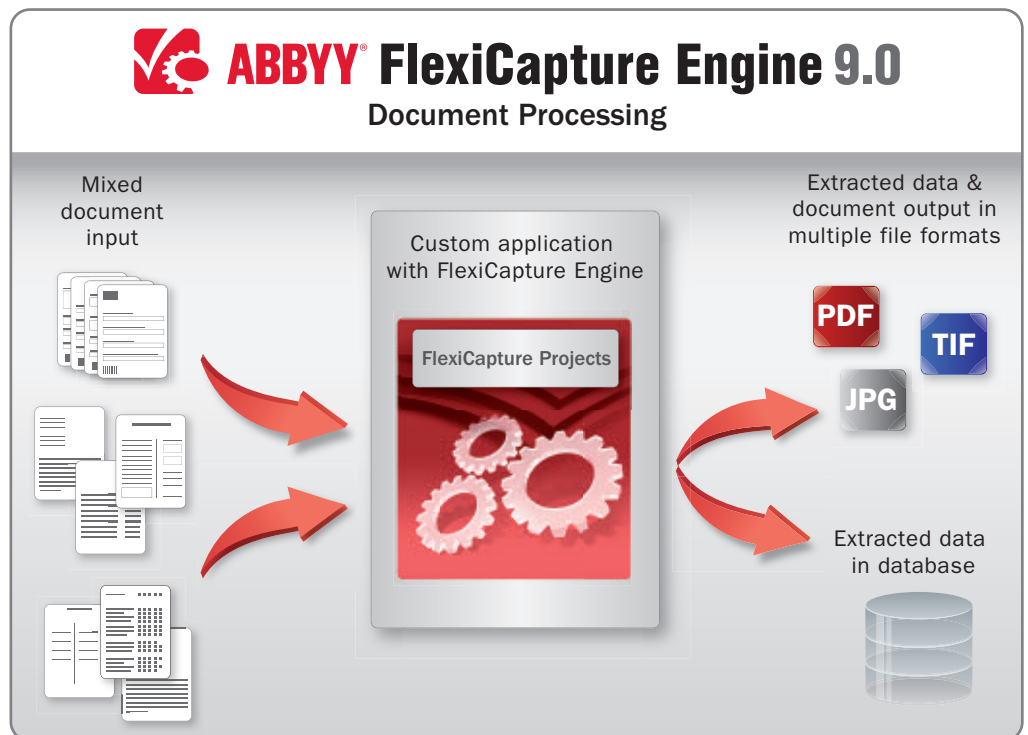
Grants right to distribute applications with FlexiCapture Engine 9.0 functions incorporated. Runtime licences (RTLs) differ by functionality, pages processed per month, and network support (Network Runtime Licence).

### Add-on Modules for Runtime Licences

RTLs can be enhanced by adding one or more of the following functionality offered as add-on modules: additional OCR languages and PDF export. ABBYY FineReader Engine 9.0 full text and document conversion API and processing functionality can also be licenced together with FlexiCapture Engine.

### Support, Maintenance and Upgrade Assurance SMUA), Certification Trainings and Professional Services

To secure the success of your projects, ABBYY offers additional support, training and certification programs for all products. If you need to speed up your project, contact ABBYY for Professional Services.



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