# Perceptive Intelligent Capture

**Technical Specifications** 

Version: 5.6.x



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### About the Intelligent Capture technical specifications

This document provides the technical specifications for the Intelligent Capture products produced by Lexmark Enterprise Software. The technical specifications in this document are specific to a product release. We publish a new technical specification for each major release, for example, Intelligent Capture version 5.x. For the most accurate information, refer to the technical specifications document that matches your version of the product.

The product highlighted in this specification document has unique requirements. It is important to understand what the product is and how it relates, or does not relate, to the other products.

Intelligent Capture performs the optical character recognition (OCR), classification, extraction, verification and exporting of data extracted from documents. This product outputs reporting data, used by the Visibility product. Intelligent Capture is a 32-bit application.

Intelligent Capture requires a minimum amount of memory and disk space. You must meet these requirements to support your implementation. These requirements specifically list the needs of the product and do not include any amount of memory or disk space you require for the operating system, environment, or other software that runs on the same machine.

Some of these technical specifications also provide minimum recommendations, which are based on historical customer implementation/performance data. For maximum performance, review your specific environment, network, and platform capabilities and analyze your planned business usage of the system. Your specific system may require additional resources above these recommendations.

This Technical Specification lists third-party product and platform versions to which the respective vendors provide general support at the time of our release. If the support lifecycle for a third-party product or platform version ends during the life of the Lexmark product that supported it, you must either update to a supported version or subscribe to extended support from that vendor. Taking this step ensures that your support from Lexmark is sufficient across all products.

**Note:** As part of the sales process, Lexmark provides detailed hardware requirements that are specific to your configuration needs, based on volumes, desired throughput, number of users, existing infrastructure, and so on.

### Assumptions for Intelligent Capture

The following assumptions are made for purposes of providing minimum specifications.

- 1-3 page TIFF documents 300 dpi document resolution
- Average TIFF size of approximately 80 KB
- Project size of less than 5 MB and less than 10 document classes
- Exported batches are cleaned up after 3 days
- Daily processing of volume requirements are within a standard (8 to 10 hour) business work day
- Processing volume is steady month-to-month (processing "peaks" were not considered)
- Servers do not have any other non-related resource intensive applications running



# Intelligent Capture - network port usage

Intelligent Capture uses specific network ports as part of the default implementation. If needed, you can modify port assignments. The following table lists the Internet Assigned Number Authority (IANA) for networking protocols. It is possible that your networking group will have changed ports for LDAP, SMTP, POP3, or for database traffic to meet your organization's security requirements.

**Important:** For integrations with customer ERP solutions, consult with Professional Services for information on the ports that Intelligent Captures requires and uses.

Port	Usage
110	RTS - Incoming email (POP3)
50607	RTS - Instances
3000	ABBYY FineReader 10 Network License Manager
3011	ABBYY FineReader 11 Network License Manager
1433	Microsoft SQL Database
1521	Oracle Database



# Intelligent Capture - Servers

#### Intelligent Capture Server

Intelligent Capture Server is the primary server that powers the Intelligent Capture process (Licensing Control, OCR, Classification, Extraction, and so on). The following table lists the minimum technical specifications required for Intelligent Capture Server, as well as recommendations.

Specification	Description, Recomme	ndations and Supported Platforms/Versions
Hardware	process power of this serve	quired to run Intelligent Capture in an enterprise environment. The r directly impacts performance. Minimum hardware ed on the number of documents to be processed daily.
	Volume Level	Minimum Recommendation
	Low Volume	Server Class CPU - minimum 2 cores
	(500 pages per day)	4+ GB RAM (2 GB per core)
		20-40+ GB hard disk
	Medium Volume	Server Class CPU - minimum 4 cores
	(5,000 pages per day)	8+ GB RAM (2 GB per core)
		100-200+ GB hard disk
	High Volume	Server Class CPU - minimum 8 cores
	(10,000 pages per	16+ GB RAM (2 GB per core)
	day)	200+ GB hard disk
		nce, we recommend 3.0+ Ghz processors. Slower processor mance and throughput could be reduced.
Operating Systems	We recommend that you up supported operating system	ograde to the latest operating system patch of the following a versions.
	Operating System	Supported Platforms/Versions
	Microsoft Windows	Windows Server 2012 R2
	Server	Windows Server 2008 R2
	Other	.NET Framework 3.5 SP1
Accessibility		, configured at full duplex (or Auto Negotiate), is required for nd the database server. If possible, a 1 Gb/s network provides



Specification	Description, Recommendations and Supported Platforms/Versions
Memory	Memory recommendations are based on volumes described in the <u>Hardware</u> section. In addition, include any memory requirements recommended by your operating system manufacturer.
Disk Space	Hard disk recommendations are based on volumes described in the <a href="Hardware">Hardware</a> section. If daily page volumes exceed 10000, consult with sales engineering for appropriate recommendations.  In addition, we recommended that Hot Swappable hard drives and the use of RAID Controllers be part of your hard disk implementation strategy.
Virtual Machine	Lexmark Enterprise Software supports customers who run Intelligent Capture products on the operating systems listed in this document, regardless of whether the system is running in a proven virtual environment, such as VMWare or Microsoft Hyper-V. Unless otherwise noted in this document, we support specific operating systems, web server configurations, and web browsers – not hardware configurations. Accordingly, virtual platforms operate on and interact with the hardware abstraction layer provided by the virtual platform vendor.
	The virtual platform vendor supports a set of certified operating systems and hardware. The customer and virtual platform manufacturer are responsible for any interactions or issues that arise at the hardware or operating system layer because of the virtual platform vendor.
	<b>Important:</b> In virtual environments, Intelligent Capture supports virtualization but does not support paravirtualization.

### Intelligent Capture Database Server

The Intelligent Capture database stores the data and documents being processed. The use of Network Attached Storage (NAS) devices is not recommended. The following table lists the minimum technical specifications required for Intelligent Capture Database Server, as well as recommendations.

Description, Recommendations and Supported Platforms/Versions	
Intelligent Capture only supports the use of Microsoft SQL Server or Oracle databases.  Hardware requirements specified by respective DBMS vendors are required in addition to following Intelligent Capture-specific requirements. We also recommend installing the database on a separate server.	
Minimum Recommendation	
Server Class - minimum 4 cores	
8+ GB RAM	
100+ GB hard disk	
<b>Note:</b> For optimal performance, we recommend 3.0+ Ghz processors. Slower processor speeds will work, but performance and throughput could be reduced.	



Specification	Description, Re	ecommendations and Supported Platforms/Versions
Operating Systems	We recommend the system versions.	nat you upgrade to the latest operating system patch of the following operating
	Operating System	Supported Platforms/Versions
	Microsoft	Windows Server 2012 R2
	Windows   Server	Windows Server 2008 R2
		<b>Note:</b> We provide support for ODBC and/or web services as they relate to Microsoft Windows Server OS; however, you can use any server OS that allows database connectivity through ODBC and/or web services (for example, REHL, AIX, Solaris). The non-Windows Server OS needs to be able to provide the same level of functionality for ODBC and/or web services as does Windows Server OS.
DBMS	We recommend the	nat you upgrade to the latest DBMS patch of the following versions.
	DBMS	Supported Platforms/Versions
	Microsoft SQL	SQL Server 2012 SP2
	Server	SQL Server 2008 R2
	Oracle	Oracle 12c R1
		Oracle 11g R2
		Oracle 10g R2 (32-bit)
		<b>Note:</b> When using Oracle as a database, an Oracle client must be installed on any workstation/server where Intelligent Capture communicates with the database (for example, when using Designer or Verifier).



# Intelligent Capture Web Verifier Server

Intelligent Capture Web Verifier Server is required for implementations where the Web Verifier client is used. The following table lists the minimum technical specifications required for Intelligent Capture Web Verifier Server, as well as recommendations.

Specification	Description, Recomm	nendations and Supported Platforms/Versions
Hardware		Intelligent Capture Web Verifier Server on a dedicated server.  nmendations vary based on the number of (concurrent) supported
	Number of Users	Minimum Recommendations
	2-4 users	Server Class - minimum 4 cores
		4+ GB RAM
		50+ GB Hard Disk
		30+ GB OS Hard Disk Space
		<b>Note:</b> For optimal performance, we recommend 3.0+ Ghz processors. Slower processor speeds will work, but performance and throughput could be reduced.
	Add-ons per user	Memory: Add 500 MB RAM for each additional concurrent user
		Cores: Add 1 additional core for each two additional concurrent users
Operating Systems	We recommend that you system versions.  Operating System	upgrade to the latest operating system patch of the following operating  Supported Platforms/Versions
	Microsoft Windows Server	Windows Server 2012 R2
		Windows Server 2008 R2
	Web Application Server	Microsoft IIS (version supported by the related MS Windows server platform used)
	Other	.NET Framework 3.5 SP1



### Intelligent Capture - Clients

There are several clients, each of which is associated with a corresponding server application for Intelligent Capture. The following sections provide the technical specifications associated with each client application.

### Intelligent Capture Designer Client

Intelligent Capture Designer Client creates and maintains Intelligent Capture projects and applications. The Designer Client does not require a separate desktop system and is typically installed on Intelligent Capture Server. The following table lists the minimum technical specifications required for this client.

Specification	Recommendations and Supported Platforms/Versions
Hardware	Processor: 1 Core - 2.4 GHz or greater processor.
	Screen Resolution: The required minimum screen resolution is 1024 x 768; however, 1280 x 1024 SVGA is recommended.
Operating Systems	Supported Versions:
	Microsoft Windows 7
Other	.NET Framework 3.5 SP1
Accessibility	A 10 Mb/s connection is required. For optimal performance, use a 100 Mb/s connection.
Memory	1 GB of available RAM is required in addition to the recommended RAM for the operating system.
Disk Space	40+ GB available hard disk space is required.
Note(s)	Oracle DB Implementations - When using Oracle for the Intelligent Capture DBMS, a 32-bit Oracle client must be installed on every desktop where the Designer Client is installed.

#### Intelligent Capture Verifier Client

Intelligent Capture Verifier Client is a thick client that interacts with extracted data as a part of the verification process. The Verifier Client provides data verification, advanced verifier operations, and Learnset management. This client does not require a separate workstation if normal Verifier operations are delivered through the web-based client. The following table lists the minimum technical specifications required for this client.

Specification	Recommendations and Supported Platforms/Versions
Hardware	Processor: 1 Core - 2.4 GHz or greater processor.  Screen Resolution: The required minimum screen resolution is 1024 x 768; however, 1280 x 1024 SVGA is recommended.
Desktop Operating Systems	Supported Versions: Microsoft Windows 7



Specification	Recommendations and Supported Platforms/Versions
Other	.NET Framework 3.5 SP1
Accessibility	A 10 Mb/s connection is required. For optimal performance, use a 100 Mb/s connection.
Memory	1 GB of available RAM is required in addition to the recommended RAM for the operating system.
Disk Space	40+ GB available hard disk space is required.
Note(s)	Oracle DB Implementations - When using Oracle for the Intelligent Capture DBMS, a 32-bit Oracle client must be installed on every desktop where the Verifier Client is installed.

# Intelligent Capture Web Verifier Client

Intelligent Capture Web Verifier Client is a web-based client that interacts with extracted data as a part of the verification process. The use of this client is optional. The minimum technical specifications required for this client appear in the following table.

Specification	Recommendations
Hardware	Processor: 1 Core - 2.4 GHz or greater processor.  Screen Resolution: The required minimum screen resolution is 1024 x 768; however, 1280 x 1024 SVGA is recommended.
Operating Systems	Supported Versions: Microsoft Windows 7 (32-bit or 64-bit)
Web Browser(s)	Recommended: Internet Explorer, version 11.0 Supported: Internet Explorer 9 Internet Explorer 8
Accessibility	A 10 Mb/s connection is required. For optimal performance, use a 100 Mb/s connection.
Memory	1 GB of available RAM is required in addition to the recommended RAM for the operating system.
Disk Space	40 GB available hard disk space is required.



#### Intelligent Capture Verifier Client using Citrix or Terminal Services

Our core applications are **not** designed to work with any specific desktop presentation platform. Third party products like Citrix and Microsoft Terminal Services can be used, however, the customer is responsible for providing, configuring, and supporting the environment.

#### Intelligent Capture RTS Remote Admin Client

Intelligent Capture Remote Admin Client is a thick client that manages the RTS (Runtime Server) instances. This client does not require a separate workstation. It is typically installed on an Intelligent Capture Server system or any network-accessible system where the Microsoft Management Console is available for the Intelligent Capture RTS Remote Admin Snap-in. The following table lists the minimum technical specifications required for this client.

Specification	Recommendations and Supported Platforms/Versions
Hardware	Processor: 1 Core - 2.4 GHz or greater processor.  Screen Resolution: The required minimum screen resolution is 1024 x 768; however, 1280 x 1024 SVGA is recommended.
Desktop Operating Systems	Microsoft Windows 7
Accessibility	A 10 Mb/s connection is required. For optimal performance, use a 100 Mb/s connection.
Memory	1 GB of RAM is required in addition to the recommended RAM for the operating system.
Disk Space	40+ GB available hard disk space is required.



# Development and test environments for Intelligent Capture

Virtually every customer requires a development environment, test environment, or both, in addition to the production server environment. A typical development or test environment consists of a single server capable of processing 500 pages per day. The technical specifications in the following table should be sufficient to house Intelligent Capture Server, Web Verifier Server, and Intelligent Capture Database Server.

Specification	Description, Recommendations and Supported Platforms/Versions			
Hardware	Use the following specifications if you install Intelligent Capture in a Tese Environment.			
	Minimum Recommendation			
	Server Class - minimum 4 cores 8+ GB RAM 100+ GB Hard Disk			
Operating	We recommend that	you upgrade to the latest operating system patch of the following :		
Systems	Operating System	Supported Platforms/Versions		
	Microsoft Windows Server	Windows Server 2012 R2 Windows Server 2008 R2		
	Other	.NET Framework 3.5 SP1 Microsoft IIS		
DBMS	We recommend that	you upgrade to the latest DBMS patch of the following versions.  Supported Platforms/Versions		
	Microsoft SQL Server	SQL Server 2012 SP2 SQL Server 2008 R2		
	Oracle	Oracle 12c R1 Oracle 11g R2 Oracle 10g R2 (32-bit)		
		<b>Note:</b> When using Oracle as a database, an Oracle client must be installed on any workstation/server where Intelligent Capture communicates with the database, such as the Designer and Verifier applications.		



### Appendix A: Additional platform support information

This appendix provides details on supported versions, languages, integrations, and so on, not referenced in the above technical specifications.

#### **Email servers**

The email service provided within Intelligent Capture is compatible with the following email server.

**Note:** This capability is currently in maintenance mode only. All requirements for email importing are better satisfied with the Perceptive Core or Content platform with the Mail Agent. Future platform support requirements are being reviewed for possible support with this feature.

Specification	Supported Platforms/Versions
Email server	Microsoft Exchange/Outlook 2010 Microsoft Exchange/Outlook 2007

#### ABBYY FineReader - compatibility

Intelligent Capture is compatible with the following versions of ABBYY FineReader.

Specification	Supported Platforms/Versions
ABBYY FineReader versions	ABBYY FineReader 11
	ABBYY FineReader 10



# ABBYY FineReader - OCR language support

The following table lists the languages that are supported by our OCR engines with this release. In all cases, ABBYY FineReader 11 is required. For a list of languages supported for FineReader 10, contact Sales Engineering.

OCR Language Support			
Abkhaz	Crimean Tatar	Hausa	Latvian
Adyghe	Croatian	Hawaiian	Lezgi
Afrikaans	Crow	Hebrew	Lithuanian
Agul	Czech	Hungarian	Luba
Albanian	Dakota	Icelandic	Macedonian
Altaic	Danish	Ido	Malagasy
Arabic (Saudi Arabia)	Dargwa	Indonesian	Malay
Armenian Eastern	Dungan	Ingush	Malinke
Armenian Grabar	Dutch Netherlands	Interlingua	Maltese
Armenian Western	Dutch Belgian	Irish	Mansi
Awar	English	Italian	Maori
Aymara	Eskimo Cyrillic	Japanese	Mari
Azeribaijani Cyrillic	Eskimo Latin	Kabardian	Maya
Azeribaijani Latin	Estonian	Kalmyk	Miao
Bashkir	Even	Karachay Balkar	Minankabau
Basque	Evenki	Karakalpak	Mohawk
Belarusian	Faeroese	Kasub	Moldavian
Bemba	Fijian	Kawa	Mongol
Blackfoot	Finnish	Kazakh	Mordvin
Breton	French	Khakass	Nahuatl
Bugotu	Frisian	Khanty	Nenets
Bulgarian	Friulian	Kikuyu	Nivkh
Buryat	Gagauz	Kirghiz	Nogay
Catalan	Galician	Kongo	Norwegian Bokmal
Chamorro	Ganda	Korean (Hangul)	Norwegian Nynorsk
Chechen	German	Koryak	Nyanja
Chinese Simplified	German New Spelling	Kpelle	Occitan
Chinese Traditional	German Luxembourg	Kumyk	Ojibway
Chukchee	Greek	Kurdish	Ossetian
Chuvash	Guarani	Lak	Papiamento
Corsican	Hani	Latin	Pidgin English



OCR Language Support			
Polish	Spanish	Swedish	Tuvinian
Portuguese Brazilian	Sunda	Tabasaran	Udmurt
Portuguese	Swahili	Tagalog	Uighur Cyrillic
Provencal	Swazi	Tahitian	Uighur Latin
Quechua	Selkup	Tajik	Ukrainian
Rhaeto Romanic	Serbian Cyrillic	Tatar	Uzbek Cyrillic
Romanian	Serbian Latin	Thai	Uzbek Latin
Romany	Shona	Tok Pisin	Vietnamese
Rundi	Sioux	Tongan	Welsh
Russian Old Spelling	Slovak	Tswana	Wolof
Russian	Slovenian	Tun	Xhosa
Rwanda	Somali	Turkish	Yakut
Sami (Lippish)	Sorbian	Turkmen Cyrillic	Zapotec
Samoan	Sotho	Turkmen Latin	Zulu



# Language localization

The following table lists the languages that are supported for user interface localization for each application. This does **not** pertain to the Verifier form itself. Custom services are required to support localization of the verifier form in other languages.

Language	Designer	Desktop Verifier	Web Verifier	
Chinese (Simplified)			Yes	
Chinese (Traditional)			Yes	
Danish			Yes	
Dutch (Dansk)			Yes	
English	Yes	Yes	Yes	
Finnish (Suomi)			Yes	
French			Yes	
German (Deutsch)	Yes	Yes	Yes	
Italian			Yes	
Japanese			Yes	
Korean			Yes	
Norwegian			Yes	
Polish			Yes	
Portuguese (Brazilian)			Yes	
Romanian			Yes	
Russian			Yes	
Spanish			Yes	
Swedish			Yes	
Turkish			Yes	



# Intelligent Capture for Invoices – language support

The following table lists the languages that are supported for each release of Intelligent Capture for Invoices. In each case, ABBYY FineReader version 10 or 11 is required.

Language	1006*	1007*	2.X
Bulgarian	Yes	Yes	2.1+
Chinese (Simplified)		1007D+	2.1+
Czech	Yes	Yes	2.1+
Danish	Yes	Yes	2.1+
Dutch	Yes	Yes	2.1+
English	Yes	Yes	2.1+
Estonian	Yes	Yes	2.1+
Finnish	Yes	Yes	2.1+
French	Yes	Yes	2.1+
German	Yes	Yes	2.1+
Greek	Yes	Yes	2.1+
Hungarian	Yes	Yes	2.1+
Italian	Yes	Yes	2.1+
Japanese		1007D+	2.1+
Korean		1007E+	2.2+
Latvian	Yes	Yes	2.1+
Lithuanian	Yes	Yes	2.1+
Norwegian	Yes	Yes	2.1+
Polish	Yes	Yes	2.1+
Portuguese	Yes	Yes	2.1+
Portuguese (Brazilian)	Yes	Yes	2.1+
Romanian	Yes	Yes	2.1+



Language	1006*	1007*	2.X
Russian	Yes	Yes	2.1+
Slovak	Yes	Yes	2.1+
Slovenian	Yes	Yes	2.1+
Spanish	Yes	Yes	2.1+
Swedish	Yes	Yes	2.1+
Thai		1007F+	2.3+
Turkish	Yes	Yes	2.1+

### Intelligent Capture for Invoices – compatibility

The following table lists the releases of Intelligent Capture that are compatible with Intelligent Capture for Invoices (previously known as DFI) releases.

Capture for Invoices Release	5.5	5.5 SP1	5.5 SP2		5.6
1006D	Yes	Yes	Yes	Yes	
1007B	Yes	Yes	Yes	Yes	
1007C & CA	Yes	Yes	Yes	Yes	
1007D			Yes	Yes	
1007E				Yes	Yes
1007F				Yes	Yes
1007G				Yes	Yes
2.1		Yes	Yes	Yes	
2.2			Yes	Yes	
2.3				Yes	Yes
2.4				Yes	Yes**

<sup>\*\*</sup> Version 2.4 does not support Windows 2012 – Version 2.5 (Q2 2015) will provide 2012 support.



# Appendix B: Considerations for Intelligent Capture

Intelligent Capture is a Microsoft Windows-based, distributed, two-tier application typically deployed on one or more Windows Server operating systems.

Configuration of the core hardware and software depends on the specific project requirements and business rules as defined in the Statement of Work (SOW). This information, gathered during the requirements analysis phase of the project, serves as a guideline to aid the project team members who are responsible for sizing the hardware and software required for the implementation.

The following table lists some factors to consider when sizing the hardware for a production environment.

Consideration	Notes		
Input volume	The number of documents/pages processed on a daily basis		
Completion time	The required amount of time from when the document is scanned into the system to when it is exported out of Intelligent Capture		
Complexity of input documents	For example, single or multi-page TIFFs, scan resolution, document size, and number of pages for which you have used OCR per document		
Output requirements	For example, data extraction, validation, export, and number of documents processed per day		
Complexity of workflow customization			
Third-party software integration requirements	For example, Oracle, Microsoft Dynamics, Lawson, SAP, or an ECM system		
Backup strategy			
Disaster recovery	For example, backup, fault tolerance, and up time		
Network operating system platform and network environment			
Anticipated room for growth	For example, increases in input/output and other system requirements		
Number of concurrent Verifier users	Both Web Verifier and Thick Client Verifier		
Batch Retention Time	The time for a batch of documents to remain in the system after expo		
Number of Intelligent Capture projects	Per country, per solution, and so on		
Components Installed	Lexmark recommends that you install separate components such as the Workflow Module, Visibility, or databases on separate servers for production processing.		



### Appendix C: Intelligent Capture and Perceptive Core

Whenever you want to leverage Perceptive Content functionality, such as workflow, and you already have a current ECM/DMS solution or other document repository, Perceptive Core is required. This product includes the basic framework to support the following features.

- Email importing
- Fax importing
- Scanning and importing features available in CaptureNow
- Workflow, with or without eForms
- Any of the Interact Products, such as Microsoft Office and MFPs

This product cannot be used as a document repository. Documents contained within Perceptive Content are transient only and are automatically removed after a preset amount of time, for example, 60 days or as set during implementation.

For more information on the technical requirements for Perceptive Core components, such as the ImageNow Server specifications, refer to the *ImageNow Technical Specifications*.

