

## ATS CM4D System Requirements

The following is a list of hardware and software requirements for the various configurations of ATS CM4D v21.

- ▶ For network **servers** such as an application server, web server, and/or storing databases, see the *Server Requirements* section on page 1.
- ▶ For **server clients** connecting to a server for database and automation services, see the *Server Client Requirements* section on page 4.
- ▶ For a stand-alone **workstation Clients** that will have the CM4D installation, ATS Licensing, and database on the same machine, see the *Workstation Client Requirements* section on page 4.
- ▶ For **web clients** using the CM4D Web interface only, see the *Web Client Requirements* section on page 5.

All installations of ATS CM4D rely on an external SQL Server or Oracle database to store the quality data. The database can be local to the installation or on a server within a network.

⚠ Normal Windows System Updates should be installed to ensure the computer has any critical Root Certificate updates that might be required by digitally signed software.

### Server Requirements

The following software and hardware requirements must be met for the Server that will be running a CM4D Enterprise Installation, v21. Some configurations may have the Application Server, Web Server, and Databases on the same machine, in which case the requirements for all three must be met.

**Typical use:** Large networks with one or more servers hosting shared databases and running the Site Automation services for multiple CM4D Clients.

### Software for an Application Server

If the Server will be used to run the Automation Services used throughout the network, the following requirements must be met.

**Typical use:** Large network running Automation services, with multiple Clients connecting to the server for database access, document storage, and ATS licensing.

- ▶ Windows Server 2008 R2 or higher
- ▶ Internet Information Services (IIS) 7.0 or higher
- ▶ eDocPrinter PDF Pro 6.68 or higher (from [Iteksoft](#))
- ▶ Internet Explorer 8.0 or higher
- ▶ ATS Licensing 2.1

### Oracle

If you are using an Oracle database that is not located on this computer, you must have the corresponding Oracle Client installed.

- ▶ Oracle Client 10g - 12g with OLEDb Support\*

- ▶ ASP.NET 4.5

## Ports

The following ports are the default ports used by ATS CM4D, but these can be manually configured to a different port number if needed.

- ▶ Port **36057** - CM4D Scheduler Services.
- ▶ Port **80** - CM4D Web and EventSmith.

## Software for a CM4D Web Server

The server that will be host CM4D Web requires the following:

- ▶ Windows Server 2008 R2 or higher
- ▶ Internet Information Services (IIS) 7.0 or higher
- ▶ ASP
- ▶ ASP.NET 4.5
- ▶ Windows Authentication

## Oracle

If you are using an Oracle database that is not located on this computer, you must have the corresponding Oracle Client installed.

- ▶ Oracle Client 10g - 12g with OLEDb Support\*
- ▶ ASP.NET 4.5

## Software for a Database Server

If the Server will be used to host the Site and CM4D Databases, at least one of the following database types must be installed on the server:


- ▶ SQL Server 2005 or higher - SQL Server 2014 is recommended for new installations
- ▶ Oracle 10g-12g

 CM4D requires a SQL/Oracle Server Instance that is *Case Insensitive*.

## Hardware Requirements

The following requirements are based on the wide availability of 64 Bit Operating Systems. ATS recommends a modern 64-bit operating system such as Windows 2008 R2 to maximize your hardware investment and maximize available memory to the CM4D Server processes.

The disk sizing in the table below is only an estimation. Your actual sizing will be based on the volume of measurement data you plan to store and analyze with CM4D. Often times 300GB is the starting point for newly purchased server configurations.

 Although 64-bit is recommended for best performance, it is not a requirement, as CM4D is still available as an x86 install for 32-bit OS.

If Server stores...	Minimum	Recommended	Best Performance
Database Managed Documents Images	Quad Core i7 2GHz or Higher 4GB RAM 72GB Hard Drive	6 Core Xeon 2GHz or Higher 16GB RAM 144GB Hard Drive	Dual 6 Core Xeon 3GHz or Higher 24GB RAM or More 500GB Hard Drive Multiple Drive Arrays to Split IO Loads
Database Only	Dual Core i5 2GHz or Higher 4GB RAM 40GB Hard Drive	Quad Core Xeon 2GHz or Higher 16GB RAM 118GB Hard Drive	Dual Quad Core Xeon 3GHz or Higher 24GB RAM or More 300GB Hard Drive
Managed Documents Images	Dual Core i5 2GHz or Higher 4GB RAM 40GB Hard Drive	Quad Core Xeon 2GHz or Higher 8GB RAM 72GB Hard Drive	Dual Quad Core Xeon 3GHz or Higher 16GB RAM 100GB Hard Drive
None	Dual Core i5 2GHz or Higher 4GB RAM 20GB Hard Drive	Quad Core Xeon 2GHz or Higher 8GB RAM 40GB Hard Drive	Dual Quad Core Xeon 3GHz or Higher 16GB RAM 100GB Hard Drive

### Some Notes on Memory

The CM4D Site Automation package arrives by default with a single DataSmith Batch process and two CM4D worker processes for CM4D Scheduler. In addition, the CM4D Web application requires its own dedicated CM4D worker processes. The number of CM4D Web worker processes should be based on the number of users who are simultaneously generating reports on demand.

Utilizing current Virtualization technology, you could monitor peak memory demand over a time period to better tune available memory to prevent page swapping. Most Virtualization technology also makes use of shared or balloon memory, which allows the host to dynamically adjust available memory based on load demand.

 For information from Microsoft on Memory Limits for Windows Releases, visit:  
[http://msdn.microsoft.com/en-us/library/windows/desktop/aa366778\(v=vs.85\).aspx](http://msdn.microsoft.com/en-us/library/windows/desktop/aa366778(v=vs.85).aspx)

### Client Requirements

The following software and hardware requirements must be met for the machine that will be running a Client installation. There are three different configurations in which the same Client install of ATS CM4D is used:

- ▶ **Server Client** - A local CM4D installation that connects to a network Server for access to the CM4D database and ATS Licensing.
- ▶ **Workstation Client** - A self-contained instance of the Client install that has ATS CM4D, ATS Licensing, and the CM4D database all on the same machine. Generally, this is used when by organizations that do not have the Site Automation package or does not use CM4D widely throughout a large network to need shared databases.

- ▶ **Web Client** - CM4D Reports are retrieved via the CM4D Web interface. This configuration does not require any CM4D or CM4D Web install, as the user will only access CM4D reports via a web browser.

⚠ CM4D Classic and DataSmith dialogs require a **minimum screen resolution of 1280x1024**.

## Server Client Requirements

**Typical use:** Machines on the plant floor running CM4D Interactive or Workcell, connecting to the central server for its database and license. This could also be used for a CM4D Scheduler Client that is utilized by the server to automatically generate reports.

### Software

- ▶ Windows 7 or higher

### Oracle

If you are using an Oracle database that is not located on this computer, you must have the corresponding Oracle Client installed.

- ▶ Oracle Client 10g - 12g with OLEDb Support\*
- ▶ ASP.NET 4.5

## Workstation Client Requirements

**Typical use:** This configuration is usually the Node-locked CM4D Classic Developer and DataSmith licenses, and is used by report template developers and DataSmith translator developers.

*Other use:* CM4D Interactive or CM4D Workcell for on-the-fly reporting.

### Software

- ▶ Windows 7 or higher
- ▶ ATS Licensing 2.1

### Oraclev

If you are using an Oracle database that is not located on this computer, you must have the corresponding Oracle Client installed.

- ▶ Oracle Client 10g - 12g with OLEDb Support\*
- ▶ ASP.NET 4.5

## Database

If the workstation is self-contained (does not connect to a database server), you will need to have one of the following database tools installed locally:

- ▶ SQL Express 2012 or higher (new installs)
- ▶ SQL Server 2008 or higher (if connecting to a pre-existing infrastructure)

- ▶ Oracle 10g-12g

**!** CM4D requires a SQL/Oracle Server Instance that is *Case Insensitive*.

## Web Client Requirements

**Typical use:** Multiple users throughout the network, those with no knowledge of CM4D, but need on-demand access to reports.

### Software

- ▶ Adobe Acrobat Reader 9.x or higher (available from [Adobe.com](http://Adobe.com))
- ▶ Web Browser - all major browsers are compatible with CM4D Web (Chrome\*, Firefox, Internet Explorer\*, Microsoft Edge, Opera and Safari).

*\*Recommended browser*

## Hardware Requirements for All Clients

The following hardware minimum and recommended specifications listed below for any Client installation. If the CM4D database is hosted on the same machine as the CM4D installation (as with the Workstation Client configuration), the **Recommended Configuration** should be considered to be the Minimum Requirements.

	Minimum	Recommended
<b>Processor</b>	Intel i3 Single Core 2GHz or Higher	Intel i3 Dual Core 2GHz or Higher
<b>Memory</b>	2 GB RAM	4 GB RAM
<b>HDD Space</b>	150 MB free HDD Space	150 MB free HDD Space
<b>Video</b>	32 MB Video card with OpenGL support	128 MB Video card with OpenGL support
<b>Network Connectivity</b>	LAN Connections	LAN Connections
<b>OS</b>	Windows 7 (32 or 64-bit)	Windows 7 (64-bit)

**!** ATS CM4D can run on Windows 8 and Windows 10, there are known issues with graphics in those versions of Windows.

*\* ATS can provide you with an Oracle client that is compatible with ATS CM4D. Contact CM4D Support if you need to obtain this client.*