

| Suite  | Manufacturing & Supply Chain Suite |
|--|------------------------------------|
| V12 Platform Specifications that are supported                 | Camo                               |
|  | Unscrambler                        |
| <b>Operating Systems (64-bit only)</b>                         |                                    |
| Windows 10 Anniversary Enterprise & Professional (64-bit)      | ✓                                  |
| Windows 8.1 Update 1 Enterprise & Professional (64-bit)        | ✓                                  |
| <b>Windows Server 2019</b>                                     | ✓                                  |
| Windows Server 2016  | ✓                                  |
| Windows Server 2012 R2   | ✓                                  |
| <b>Ubuntu Server Edition 20.04 LTS</b>                         |                                    |
| Ubuntu Server Edition 18.04 LTS                                |                                    |
| Ubuntu Server Edition 16.04 LTS                                |                                    |
| <b>Microsoft Office</b>  |                                    |
| Office 365 (Desktop/Click-to-run) (32-bit/64-bit)              |                                    |
| <b>Office 2019 (64-bit)</b>                                    |                                    |
| <b>Office 2019 (32-bit)</b>                                    |                                    |
| Office 2016 (64-bit)   |                                    |
| Office 2016 (32-bit)   |                                    |
| Office 2013 (32-bit)   |                                    |
| <b>Database Servers</b>  |                                    |
| <b>Microsoft SQL Server 2019 (Enterprise/Standard Edition)</b> |                                    |
| <b>Microsoft SQL Server 2019 (Express Edition)</b>             |                                    |
| Microsoft SQL Server 2017 (Enterprise/Standard Edition)        |                                    |
| Microsoft SQL Server 2017 (Express Edition)                    |                                    |
| Microsoft SQL Server 2016 (Enterprise/Standard Edition)        |                                    |
| Microsoft SQL Server 2016 (Express Edition)                    |                                    |
| Microsoft SQL Server 2014 (Enterprise/Standard Edition)        |                                    |
| Microsoft SQL Server 2014 (Express Edition)                    |                                    |
| Microsoft SQL Server 2012 (Enterprise/Standard Edition)        |                                    |

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| Microsoft SQL Server 2012 (Express Edition)    |                                    |
| SQL Server 2014 Local DB                       |                                    |
| SQL Server 2016 Local DB                       |                                    |
| SQL Server 2012 -2019 Analysis Services        |                                    |
| Oracle Database 19.x.x 64-bit                  |                                    |
| Oracle Database 18.x.x 64-bit                  |                                    |
| Oracle Database 12.2 64-bit                    |                                    |
| <b>Database Clients</b>                        |                                    |
| Oracle Client 19.x 32-bit                      |                                    |
| Oracle Client 19.x 64-bit                      |                                    |
| Oracle Client 18.x 32-bit                      |                                    |
| Oracle Client 12.2 64-bit                      |                                    |
| Oracle Client 12.2 32-bit                      |                                    |
| <b>Runtimes</b>                                |                                    |
| .NET Framework 4.8                             | ✓                                  |
| .NET Core 3.1.x                                |                                    |
| ASP.NET Core 3.1.x                             |                                    |
| 64-bit Oracle Java 11 JRE LTS                  |                                    |
| 64-bit Oracle Java 11 JDK LTS                  |                                    |
| 64-bit Oracle Java 8 JRE LTS                   |                                    |
| 64-bit Oracle Java 8 JDK LTS                   |                                    |
| 32-bit AdoptOpenJDK Java 11 LTS                |                                    |
| 64-bit AdoptOpenJDK Java 11 LTS                |                                    |
| 64-bit AdoptOpenJDK Java 8 LTS                 |                                    |
| MSXML 6  |                                    |
| Visual Studio 2019                             |                                    |

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| Visual Studio 2017                               |                                    |
| Visual Studio 2015                               |                                    |
| Visual Studio 2013                               |                                    |
| Visual Studio 2010 Tools for Office Runtime      |                                    |
| <b>Microsoft Visual C++ Redistributable 2019</b> |                                    |
| Microsoft Visual C++ Redistributable 2017        |                                    |
| Microsoft Visual C++ Redistributable 2015        |                                    |
| Microsoft Visual C++ Redistributable 2013        |                                    |
| <b>Virtualization</b>                            |                                    |
| Microsoft App-V 5.1                              |                                    |
| Microsoft Hyper-V (Server)                       |                                    |
| VMware ESXi Hypervisor Server 6.x (Server)       |                                    |
| VMWare vSphere Enterprise Plus                   |                                    |
| Microsoft Terminal Services (Desktop)            |                                    |
| Citrix XenApp 7.18 (Desktop)                     |                                    |
| <b>Web Browsers</b>                              |                                    |
| Internet Explorer 11                             |                                    |
| Microsoft Edge <sup>25</sup>                     |                                    |
| Google Chrome Evergreen Version 75+              |                                    |
| Firefox  |                                    |
| Chrome on iOS 12+ for iPad Support               |                                    |
| Safari on iOS 13+ for iPad Support+A86           |                                    |
| <b>Security Components/Services</b>              |                                    |
| Aspen Framework (AFW) 5                          |                                    |
| <b>Java App (Servers)</b>                        |                                    |
| Apache Tomcat 9.0+                               |                                    |
| <b>Native Web Servers</b>                        |                                    |
| IIS 10   |                                    |

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| ILS 8.5  |                                    |
| <b>Reporting Services</b>  |                                    |
| Microsoft Report Viewer 2015   |                                    |
| Microsoft SQL Server 2012/2014/2016/2017/2019 Reporting Services   |                                    |
| <b>Load Balancing</b>  |                                    |
| F5 Load Balancing  |                                    |
| <b>Integration Components</b>  |                                    |
| Aspen Supply Chain Connect   |                                    |
| Informatica Powercenter 10.4   |                                    |
| <b>Cloud Support *</b>   |                                    |
| Azure VM - Microsoft   |                                    |
| Amazon VM (AWS)  |                                    |
| Azure VM - Linux   |                                    |
| Nutanix XiFrame  |                                    |
| Virtual Apps Essentials  |                                    |
| Windows Virtual Desktop (WVD Fall 2019 Release) <sup>27</sup>  |                                    |
| <b>Deployment Tools</b>  |                                    |
| SCCM   |                                    |
| <b>Supported Versions of Fortran</b>   |                                    |
| FORTRAN 2019   |                                    |
| <b>Container Support</b>   |                                    |
| Docker Engine-Enterprise 19.03.x   |                                    |
| Docker Compose 1.26.x  |                                    |
| <b>Desktop Types - Minimum Recommended</b>   |                                    |
| <b>Type I:</b><br>Computer & processor: Intel Core-i5 family or faster<br>Memory (RAM): 16 gigabytes (GB) RAM<br>Hard Disk: 120 gigabytes (GB) available<br>Monitor: Graphics hardware acceleration requires a DirectX10 graphics card and a 1440 x 900 or higher resolution monitor<br>Network: 100MB/Sec |                                    |

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| <b>Type II:</b><br>Computer & processor: Intel Core-i5 family or faster<br>Memory (RAM): <b>16</b> gigabytes (GB) RAM<br>Hard Disk: <b>250</b> gigabytes (GB) available<br>Monitor: Graphics hardware acceleration requires a DirectX10 graphics card and a 1440 x 900 or higher resolution monitor<br>Network: 100MB/Sec  |                                    |
| <b>Server Types - Minimum Recommended</b>  |                                    |
| <b>Type I:</b><br>Computer & processor: Intel Core-i7 family or faster for standalone deployment<br>Intel Xeon Gold series, <b>4</b> cores or more for multi-user environment<br>Memory (RAM): <b>16</b> or above gigabytes (GB) RAM for standalone deployment, <b>32</b> or above gigabytes (GB) RAM for multi-user environment<br>Hard Disk: <b>150</b> gigabytes (GB) available for standalone deployment, <b>300</b> gigabytes (GB) for multi-user environment<br>Monitor: Graphics hardware acceleration requires a DirectX10 graphics card and a 1440 x 900 or higher resolution monitor<br>Network: 100MB/Sec |                                    |
| <b>Type II:</b><br>Computer & processor: Intel Xeon Gold series type system ( <b>4</b> cores) or faster<br>Memory (RAM): <b>16</b> or above gigabytes (GB) RAM<br>Hard Disk: <b>300</b> gigabytes (GB) or more available<br>Monitor: Graphics hardware acceleration requires a DirectX10 graphics card and a 1440 x 900 or higher resolution monitor<br>Network: 100MB/Sec (Gigabyte network recommended)  |                                    |
| <b>Type III:</b><br>Computer & processor: Intel Cascade Lake-based Xeon processor with <b>8</b> cores or more per processor<br>Memory (RAM): <b>32</b> or above gigabytes (GB) RAM<br>Hard Disk: <b>500</b> gigabytes (GB) or more available<br>Monitor: Graphics hardware acceleration requires a DirectX10 graphics card and a 1440 x 900 or higher resolution monitor<br>Network: 100MB/Sec (Gigabyte network recommended)  |                                    |
| <b>Type IV: (IIoT Gateways)</b><br>Computer & processor: ARM or Intel based CPU or more<br>Memory (RAM): <b>256Mb</b> or more<br>Hard Disk: <b>128Mb</b> or more   |                                    |
| <b>Type V</b><br>Windows Server 2019 v1809+<br>Memory (RAM in GB): Minimum: 16 Recommended: 32<br>Cores: Minimum: 4, Recommended: 8<br>Disk space (GB): Minimum: 64, Recommended: 100<br>Network (MB/s): Minimum: 50, Recommended: 100   |                                    |
| <b>Notes</b>   |                                    |

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| <p>* In general, AspenTech aspenONE® software license agreements with customers permit use of the licensed software on Supported Computers at customer Sites. "Supported Computers" include computers with a manufacture, model and operating system for which AspenTech offers a supported version of the software, and that are controlled by the customer. "Sites" are customer facilities or locations specified in the license agreement.</p> <p>AspenTech permits customer use of licensed aspenONE software in the cloud where: (i) the Platform Support specifications published by AspenTech for the relevant version of the software product include cloud support; (ii) only the customer has access to the licensed software hosted by the cloud service provider; and (iii) the user is accessing the software only from a Site specified in the applicable license agreement.</p> <p>Cloud deployment does not change any license restrictions, including the restrictions on which regions can access the software.</p> | <p><b>Need a list of the products included</b></p> |
| When running software on a virtual machine, the machine should meet the same requirements.   |  |
| AspenTech does not support the in-place upgrade of the Operating System (for example: upgrade Windows 7 to Windows 10) with AspenTech software already installed. Our recommendation is to uninstall Aspen Software before upgrading the OS and reinstall it after the upgrade.  |  |
| Your Aspen SLM Server must be installed and running prior to installing any V12 product.   |  |
| If running standalone, 1280 x 800 is the minimum recommended resolution monitor for servers.   |  |
| For SLM server using Type 1 Desktop configuration, the minimum memory is 4GB with 20GB hard drive.   |  |
| Microsoft Active Directory/Domain Services (Required for aspenONE Web Server)  |  |
| A minimum of 10GB of free space is needed to install/upgrade products.   |  |