Genie™ 4.0 and Apex® Products
Operating System and Database Qualifications

MIRION TECHNOLOGIES

Status as of November 2023
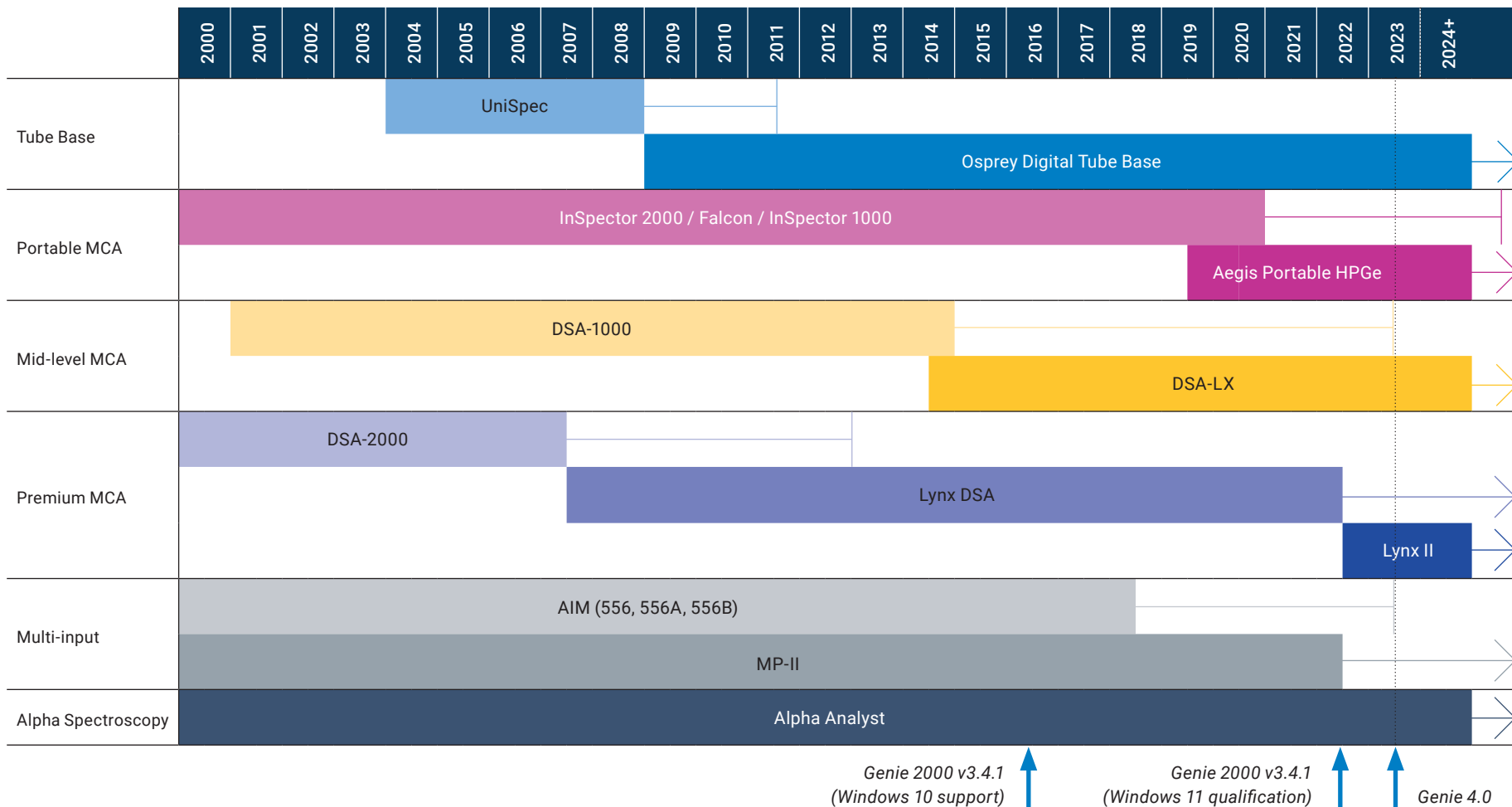
Base Model / Name	Version	Legacy Product Model(s)	Windows 10	Windows 11	Windows Server 2019	Windows Server 2022	SQL Server 2019	SQL Server 2022	Oracle 19c
Genie / Genie™ Spectroscopy Suite	4.0	S500/S502/S504 Genie Basic S501 Gamma Analysis S505 Genie Quality Assurance S506 Genie Interactive Peak Fit S509 Alpha Analysis S561 Genie Batch Programming Genie-FieldPro™ Software	✔	✔	✔	✔			
GenieLite / GenieLite Basic Spectroscopy	4.0	S500/S502/S504 Genie Basic	✔	✔					
ISOCS / ISOCS™/LabSOCS™ Mathematical Efficiency Software	4.5	S573 ISOCS S574 LabSOCS	✔	✔	✔	✔			
Apex-InVivo / Apex-InVivo™ Desktop / Workstation	1.3	S734 Apex-InVivo Workstation	✔	✔			✔		
AIV-Server / Apex-InVivo Server Software	1.3	S738 Apex-InVivo Server				✔	✔		
AIV-Review / Apex-InVivo Review Client	1.3	S735 Apex-InVivo Review Client		✔					
Apex-Alpha / Apex-Alpha™ Software	1.4	S770 Apex-Alpha Desktop S771 Apex-Alpha Server S772 Apex-Alpha Client	✔		✔		✔		
MGAU / Multi-Group Analysis for Uranium (MGAU™) Software	4.3	S507 MGAU		✔					
MGA / Multi-Group Analysis (MGA™) Software	10.1	S508 MGA		✔					
Apex-Gamma / Apex-Gamma™ Software	1.5.1	S700 Apex-Gamma Desktop S701 Apex-Gamma Server S702 Apex-Gamma Client S703 Apex-Gamma NPP Option	✔	✔	✔	✔	✔	✔	✔
Apex-Guard / Apex-Guard™ Option	1.1	S707 Apex-Guard	✔	✔	Coming soon	Coming soon	✔	Coming soon	

Product qualification, at time of qualification, for each indicated operating system and configuration is in compliance with the following standards:
ISO 9001, ASME NQA-1c-1992, ASME NQA-2-1990 Part 2.7, and latest revision of IEEE 730.1.

Please note: NDA 2000™ software will continue to require Genie 2000 Version 3.4.1 until further notice.

Supported MCAs in Genie Software and Apex Products

The below graphic indicates the years when Mirion MCAs were manufactured (solid bars), and continued support within Genie software after end of MCA manufacturing (thin line).

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024+ |

Tube Base — UniSpec; Osprey Digital Tube Base

Portable MCA — InSpector 2000 / Falcon / InSpector 1000; Aegis Portable HPGe

Mid-level MCA — DSA-1000; DSA-LX

Premium MCA — DSA-2000; Lynx DSA; Lynx II

Multi-input — AIM (556, 556A, 556B); MP-II

Alpha Spectroscopy — Alpha Analyst

Genie 2000 v3.4.1 (Windows 10 support)

Genie 2000 v3.4.1 (Windows 11 qualification)

Genie 4.0

Genie 4.0 is qualified with the following devices:

Osprey® DTB	Lynx® MCA	Aegis™ Portable HPGe Spectrometer
InSpector™ 2000	Lynx® II DSA	Sample Changers
Falcon 5000® Instrument	Multiport II™ MCA	
DSA-LX® DSA	Alpha Analyst™ Spectrometer	

Recommended Windows PC Requirements

The following tables can be used to guide users on recommended computer system specifications to be used when operating the Genie and Apex software suites. These specifications are also appropriate for the Horizon application.

Suggested PC Requirements for Genie Applications, Including Apex Products (Desktop and Client Systems)

	Recommended	Notes
Operating System	Windows 11 64-bit	Windows 10 is the minimum required for most products currently provided. Windows 11 has also been qualified and is the current recommendation for most client and desktop applications. Review the qualification matrix for which OS is supported for each application.
Memory (RAM)	16 GB to 32 GB	RAM helps performance of both the server components and the SQL Server database (if you run SQL Server on the same computer). 64-bit server operating systems can access up to 2 TB RAM. 32 GB is recommended for good performance and longevity of the computer – in particular if SQL Server is running on this computer.
Processor	i7 or Xeon processor is recommended for more efficient computational throughput	An i7 processor is recommended. Additional cores are recommended especially if using Apex-Gamma platform's LabSOCS™ Variable Geometry feature or Cascade Summing Correction. An i5 processor is also sufficient, although performance issues may be observed.
Hard Drive	Two 1 TB drives or larger configured as RAID1	The server stores all count results and may even have the database on it. For sites that count under 10,000 samples a year, 1 TB drive is sufficient and will hold 15 years of data or more. Sites that count over 10,000 per year should use 2 TB drives. In both cases, we recommend installing two matching drives configured with RAID1 (mirrored) to increase reliability without reducing performance. For all applications, it is recommended to have a minimum of 300 GB.
Monitor/Video	1920 x 1080 or better	It is recommended to use a 27 inch or larger monitor size for adequate viewing of reports and spectra. However, smaller screen sizes (such as the Microsoft Surface Pro) are also supported.
Database (Desktop systems only)	SQL Server 2022 is recommended for longevity	Desktop systems ship with SQL Server Express. This is a free version of SQL Server and it has a 10 GB size limit. If the system is expected to be used for many years and process a lot of counts, the customer should upgrade to a full version of SQL Server such as the Standard Edition. See the compatibility matrix to choose the proper version of SQL Server. It is strongly recommended to include a full version of SQL Server when buying the PC, so it can be integrated at the factory and to avoid loss of data and system downtime if the Express version runs out of space in the future.

Suggested PC Requirements for Genie Applications, Including Apex Products (Server Systems)

	Recommended	Notes
Operating System	Windows Server 2022	The Application server is recommended to run on a Windows Server platform.
Memory (RAM)	16 GB to 32 GB	RAM helps performance of both the Server components and the SQL Server database (if you run SQL Server on the same computer). 64-bit server operating systems can access up to 2 TB RAM. 32 GB is recommended for good performance and longevity of the computer – in particular if SQL Server is running on this computer.
Processor	i7 or Xeon processor is recommended for more efficient computational throughput	i7 processors are recommended. Additional cores are recommended especially if using Apex-Gamma platform's LabSOCS Variable Geometry feature or Cascade Summing Correction. An i5 processor is also sufficient, although performance issues may be observed. If using an Oracle database, additional resources may be required.
Hard Drive	Two 1 TB drives or larger configured as RAID1	The server stores all count results and may even have the database on it. For sites that count under 10,000 samples a year, 1 TB drive is sufficient and will hold 15 years of data or more. Sites that count over 10,000 per year should use 2 TB drives. In both cases, we recommend installing two matching drives configured with RAID1 (mirrored) to increase reliability without reducing performance. For all applications, it is recommended to have a minimum of 300 GB.
Monitor/Video	1920 x 1080 or better	If the server will be used very infrequently (or never) for running the client application, then a minimum vertical resolution of 1024 is fine. If you plan to sit at this computer more often, we recommend HD 1080p (1920 x 1080) or WUXGA (1920 x 1200) resolution or better.
Database	The latest qualified database for each respective product is recommended choice for longevity	The application server is a central repository of all counts for all detectors. SQL Server 2022 is now recommended. If there is no preference stated, use of the Standard Edition is fine because the server does not need any of the advanced features in the Enterprise edition.

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