# Bloomberg

# **Bloomberg User Workstation Requirements**

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	STANDA	RD USER	TRADING SYSTEMS USER (Power Users)	
Component	Minimum	Recommended	Recommended	
Processor	Intel® 8 <sup>th</sup> Gen (Coffee Lake) Core™ i5, i7 or Xeon® Min Logical Cores: 6	Intel® 11 <sup>th</sup> Gen (Rocket Lake/Tiger Lake) Core™ i7 or i9 Min Logical Cores: 8	Intel® 11 <sup>th</sup> Gen (Rocket Lake/Tiger Lake) Core™ i7 or i9 Min Logical Cores: 12	
	-	AMD Ryzen™ 5, 7 or 9 5000 series Min Logical Cores: 8	AMD Ryzen™ 5, 7 or 9 5000 series Min Logical Cores: 12	
	Minimum PassMark® Score: 2,100	Minimum PassMark® Score: 2,500	Minimum PassMark® Score: 2,500	
Operating System	64-bit Windows 10	64-bit Windows 10	64-bit Windows 10	
Memory	16 GB RAM	32 GB RAM	32 GB RAM	
Hard Disk	SSD (15 GB minimum free space)	SSD (25 GB minimum free space)	SSD (25 GB minimum free space)	
Video Card	Dedicated Graphics Card (Dual port) with a minimum of 512 MB memory DirectX 11.x compatible			
Display Settings	1920x1080x32 recommended Dual Displays recommended			
Network Adapter	Network adapter with TCP/IP Services enabled			
Keyboard	Available USB port to accommodate the Bloomberg Keyboard			

\* Customers running several CPU/memory intensive applications on the same PC may need higher-grade hardware including more memory and faster and/or additional CPU cores.

\* In general, desktop CPUs can sustain faster speeds for longer periods of time vs mobile CPUs due to battery and cooling limitations in laptops.

\* Newer Intel® CPU models have efficiency cores in addition to performance cores which run at lower speeds but consume less power. In general, performance cores will help heavy Terminal usage during periods of high market activity.

\* Customers on PCs under the minimum specifications may experience degraded performance.

\* Trading Systems users include AIM/EMSX/ETOMS/TSOX/FXGO/FIT/TOMS/TRADEBOOK.

\* PassMark® Software's Single Core Benchmark Score is an indicator of the strength of the CPU. More information is available on https://www.cpubenchmark.net/.

\* Limited support is available for Windows 11 on Arm®-based systems.

#### **Customer Workstation Requirements**

The previous page outlines customer workstation requirements based on the needs of the primary user. These recommendations are reviewed and refreshed periodically based on various factors. Higher specifications may be required depending on concurrent usage of the Bloomberg Terminal, other Bloomberg applications as well as 3rd party applications (MS Office Suite, order management systems, etc.).

<u>Users monitoring fast moving markets should consider the recommended specification as</u> <u>a minimum requirement for optimal user experience.</u>

#### **Bloomberg Experience Score**

In order to assess your PC's performance capabilities, please run a test using the Terminal function BEXP<GO>. This function simulates Terminal application activity and outputs a score (1-10) indicating the throughput of your system. It will also run a series of diagnostic tests to identify any possible bottlenecks in your PC. This test can also be initiated from the TOUR INSTALL login. For any questions, please contact Bloomberg Technical Support.

#### Virtual Desktop Infrastructure (VDI) and Remoting Solutions

- Support of the Bloomberg Terminal on Virtual Desktop Infrastructures (VDI) is contingent on the ability of the VDI solution to provide the same (or better) performance and fidelity as the minimum PC requirements outlined on page 2 of this document.
- Traditional (Open) Bloomberg licenses are not permitted on VDI or Remoting solutions. Only Bloomberg Anywhere licenses are allowed on VDI and Remoting solutions.
- Virtualization and desktop remoting technologies may result in degraded performance of the Bloomberg Terminal based on several factors. To prevent this, Bloomberg recommends that virtualization vendors' reference models and capacity planning guidelines be followed in order to provide users of VDI solutions with the same or better user experience available to desktop PC users. In addition, the following factors should be carefully considered when deploying VDI and remoting solutions for Bloomberg Terminal users:
  - Allocation of sufficient CPU, Memory and Disk Space per VM session based on our recommendations on page 2 of this document.
  - Network latency and Bandwidth (VDI cluster to Desktop).
  - Number of real-time monitoring components (Launchpad, Excel sheets, etc.)
  - Support of automated monthly Bloomberg software updates.
  - Bloomberg Keyboard compatibility with VDI or remoting solution.
  - Number of displays and desktop resolution of each display (total pixels).
- Bloomberg recommends a maximum network latency of no more than 35ms, as measured by a 56 byte round trip ping, between the thin/zero client and the virtual machine.
- Bloomberg conducts some functionality testing with leading VDI solutions and can provide limited technical support for specific VDI solutions.

#### **Bloomberg Keyboard in VDI environments**

In order to use the Bloomberg Keyboard in a virtual desktop environment, the **Bloomberg Secure Access Technology (BSAT)** must passthrough to the host machine. The audio and key matrix typically do not need to be forwarded, as these are emulated by virtual desktop software. For further peripheral information on each Keyboard, including specific VID/PIDs related to audio and Keyboard updater, please reference the appendix.

Bloomberg Keyboard 4	VID	PID
Bloomberg Keyboard 4 (2 cables – PC port)	1188	9535
Bloomberg Keyboard 4 (single cable in PC port) * For enabling virtual desktop software to emulate the key matrix, use 2 cables instead.		9545
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Bloomberg Keyboard 5	VID	PID
Bloomberg Secure Access Technology (BSAT)		A101;
		A111
BSAT updater	1188	A401; A411
	1100	
Key matrix updater * Forwarding this VID/PID can restore Keyboard functionality if errors are encountered.	1188	A601; A611
Search Controls News Durite Course Message 18 Mery 1/2 1/2 1/4 1/4	Bloomberg	
Search History Favoritas News Limit Function Message IB Manu 12 Vit 10   Ext. F1 F2 F3 F4 P5 F6 F7 F8 F9 F10 F11 F12 Parint Scott		I <b>I</b> III
~ ! @ # \$ % ^ & & * ( ) - + 1 2 3 4 5 6 7 8 9 0 - = Backspace Insert Home Pg Up	Num Num Look	€ -
	7 8 9 Home ▲ Pg Up	र ::
	4 5 6 ►	+
Shift Z X C V B N M C P Shift A	1 2 3 End ▼ 9g Dn	
	O · Ins Del	Enter GO

Please note there are several hardware versions of the Bloomberg Keyboard 5 that require 2 separate PIDs. These variants provide identical functionality. Recognizing both VID/PIDs will allow access to all variants of the Keyboard 5.

Please see the Software Compatibility Matrix under <u>Documentation</u> section for further details on supported Operating Systems and Microsoft Office products.

### Appendix

## Bloomberg Keyboard Additional Information

Bloomberg Keyboard 4	VID	PID
Bloomberg Keyboard 4 (single cable in PC port)	1188	9545
Bloomberg Keyboard 4 (2 cables – PC port)	1188	9535
Bloomberg Keyboard 4 (2 cables – KVM port)	1188	9525

Bloomberg Keyboard 5	VID	PID
Bloomberg Secure Access Technology (BSAT)	1188	A101; A111
BSAT updater	1188	A401; A411
Key matrix updater	1188	A601; A611
Keyboard input (the first hardware version)	1188	A001
Keyboard audio (the first hardware version)	1188	A301
Keyboard input and audio (the second hardware version)	1188	A011
USB hub	1188	A901