

TT Trading Systems – Hardware and Software Requirements

The TT Systems Integration team continually evaluates and tests new software and hardware as it is released to the market to ensure that TT software performance benchmarks are met or exceeded. The software and hardware requirements below are a result of these tests and are the same standards that TT uses in its own network, development environments, and test labs. Although TT software may run on operating systems and hardware that do not meet the listed standards, using systems that do not meet or exceed TT's recommendations may degrade TT Software performance and reliability.

Note: Refer to the *Hardware / Software Optimizations and Recommendations Reference Guide* for more specifics on TT optimizations.

Server-Class Machines

Server-class machine requirements pertain to the following TT products:

- TT Gateway
- FMDS
- Autospreader® SE
- Historical Fill Server (HFS)
- TT Simulation (TTSIM)
- TT Trainer™
- TT WAN Router
- FIX Adapter
- Price Proxy
- Synthetic SE
- X_TRADER® Remote Host
- SQL Databases
- Algo SE

Server-class machine requirements:

Hardware	Requirement
Operating System	Windows Server 2003 R2, Service Pack 2, 32-bit. Note: The following products also support Windows Server 2008 R2, Service Pack 1, beginning with the version listed: Autospreader SE 7.2.1, Algo SE 7.2.2, FIX Adapter 7.7.1, FMDS 7.5.2, Synthetic SE 7.1.4, Xetra Gateway 7.7.0, Montreal, CBOE, and FIX Gateways 7.13, all other TT Gateways 7.14, TT Chron 7.7.0, TT WAN Router (TTM 4.2.3), and TT User Setup 7.4.1.
Memory	4 GB
Processor	Four cores (eight cores or more is preferred)
Network Card	<ul style="list-style-type: none"> • Two or more NICs with one pointed to the internal network and one or more pointed to the exchange • Match the speed and duplex settings of the switch port and NIC to maximize speed and avoid duplex mismatches. Note: Due to driver and firmware limitations, TT does not recommend using certain Ethernet cards in a production environment. Refer to the <i>NIC Configuration</i> section of the <i>Hardware / Software Optimizations and Recommendations Reference Guide</i> for specific chipset and version recommendations.
Hard Drive	30 GB or more of available space to accommodate TT software and log files

Additional server-class machine recommendations or exceptions:

Server or Product	Recommendation or Exception
Algo SE	Requires at least Windows Server 2003, Server Pack 2, 64-bit
Autospreader SE / Synthetic SE / Algo SE	Requires at least an eight core machine, e.g., Dual Quad-Core, or better
FIX Adapter	<ul style="list-style-type: none"> • 60 GB or more of available space, per FIX Adapter instance • .Net Framework 2.0 or higher
FMDS	300 GB or larger hard drive
TT User Setup Server	Requires at least two instances of the TT User Setup Server per trading environment
TTM	When TTM is deployed as a Remote Host, TT recommends Windows Server 2008 R2, SP1 64-bit for optimum performance and scalability

Client-Class Machines

Client-class workstation requirements pertain to the following TT products:

- X_TRADER®
- X_TRADER® API
- TT API
- X_TRADER® Pro
- X_STUDY®
- TT User Setup
- X_RISK®
- Back Office Bridge™
- TT SIM™
- X_FILE

Component	Minimum Requirement	Preferred Requirement (and for use with ADMIN logins)
Operating System (OS)	<ul style="list-style-type: none"> • X_TRADER Desktop: Windows XP Professional or Windows 7 (Home Premium, Professional, and Ultimate). Note: Service Pack 1 or higher is required on Windows XP and Windows 7. • X_TRADER Tablet PC: Windows XP Tablet PC Edition 2005 <p>The following operating system combinations are supported for a Japanese X_TRADER Desktop:</p> <ul style="list-style-type: none"> • Japanese or Non-Japanese versions of Windows XP Professional or Windows 7 (Home Premium, Professional, and Ultimate). Non-Japanese Windows must run an East Asian Language Pack set to the Japanese language. Note: Japanese X_TRADER is not supported on Tablet PCs. Note: Service Pack 1 or higher is required on Windows XP and Windows 7. 	<ul style="list-style-type: none"> • X_TRADER Desktop: Windows XP Professional or Windows 7 Professional or Ultimate. Note: Service Pack 1 or higher is required on Windows XP and Windows 7. Note: Customers have the option of installing a 64-bit version of TTM (v2.1.1 or higher). To use this version, you must be on a Win64 bit operating system. Note: The following products can be installed on a 64-bit operating system: X_TRADER, X_TRADER Pro, TT API, X_STUDY, X_RISK, and TT User Setup. • X_TRADER Tablet PC: Windows XP Tablet PC Edition 2005.
Add'l OS Reqs	.Net Framework 4.0	.Net Framework 4.0
Memory	2 GB Note: Tablet PCs – 1 GB	4 GB or more Note: Tablet PCs – 2 GB
Processor	Four cores Note: Tablet PCs – Two cores running at 1.2 GHz	Eight cores or more Note: Tablet PCs – Two cores running at 2.16 GHz
Network Card	Integrated Gigabit NIC. Match the speed and duplex settings of the switch port and NIC to maximize speed and avoid duplex mismatches. Note: Due to driver and firmware limitations, TT does not recommend using certain Ethernet cards in a production environment. Refer to the <i>NIC Configuration</i> section of the <i>Hardware / Software Optimizations and Recommendations Reference Guide</i> for specific chipset and version recommendations.	Gigabit NIC on a PCI-X 133 slot. Match the speed and duplex settings of the switch port and NIC to maximize speed and avoid duplex mismatches.
Hard Drive	10 GB of available free space to accommodate TT software and log files	<ul style="list-style-type: none"> • SATA or Parallel ATA drive with a minimum rotation speed of 7200 rpm • 30 GB or more of available free space to accommodate TT software and log files
Motherboard	Should have one PCI-Express 16x slot for graphics card	Should have a PCI-X 133 slot for NIC; one or more PCI-Express 16x slots for graphics card
Graphics Card	<ul style="list-style-type: none"> • PCI-Express based graphics card with 128 MB of memory • Graphics card with two DVI ports to support a dual-monitor setup • Multiple two-port cards to support more than two monitors 	<ul style="list-style-type: none"> • PCI-Express based graphics card with 512 MB or more of memory • One or more graphics cards with two DVI ports to support a dual-monitor setup • Multiple two-port cards to support more than two monitors
Mouse	Standard mouse (not wireless)	3-button mouse to support middle-button click trading
Remote Connection	High-bandwidth Internet connection; do not use Satellite Broadband or proxy servers due to significant latency problems.	Dedicated direct line