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FIX Antenna QF Adaptor

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FIX Antenna QF Adaptor (QF Adaptor) was developed in response to high demand from the open source QuickFIX© community users to achieve substantial improvement of the latency characteristics of their trading applications.

QF Adaptor is an add-on package for FIX Antenna C++ library which helps migrate a program from QuickFIX/C++ to FIX Antenna. The package includes C++ classes which implement the QuickFIX interface. The migration to FIX Antenna engine essentially becomes a replacement of the library.

QF Adaptor supports import of customized dictionaries from QuickFIX. This is done by using an XML conversion tool which is part of the migration package. The user migrating to FIX Antenna can leverage Certified FIX Connections to major exchanges and ECNs, while still using the QuickFIX business object model. This is achieved by utilizing the C++ code generator, a part of the migration package, that can convert FIX custom protocol definitions provided by B2BITS into the typed C++ business messages in QuickFIX style.

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Feature	Description
High throughput / low latency	The message delivery time with FIX Antenna™ QF Adaptor is 3.7 times less than that of the QuickFIX Library: **38** mcs - average message latency with FIX Antenna™; **146** mcs - average message latency with QuickFIX. The message throughput of FIX Antenna™ with QF adaptor is over 7 times more than that of the QuickFIX.
QuickFIX features	• Typed C++ message objects and MessageCracker interface • Transient and persistent FIX session storage • FIX session management (schedules) • 4x and 5x FIX protocol versions • FIX protocol customizations

Supports standard FIX	• 100% FIX standard compliance
	• Message validation
	• Guaranteed delivery
	  ○ Relies on the store and forward technique
	  ○ Flat files are used for persistence to achieve maximum performance
	• Standard FIX routing based on DeliverTo and OnBehalfOf fields

Feature	Description
Delivery modes	• Later delivery mode allows unsent messages to be stored in queue and delivered later when connection is re-established • Rejecting mode allows messages, which cannot be sent during some reasonable time (customizable), to be rejected
Highly customizable FIX session level	• Different modes of handling sequence number during logon and reconnect • Intraday logout tolerance • Custom logon message • Force sequence number reset on logon
Security	• Standard FIX authorization utilizing username and password fields in FIX Logon message • FIX encryption to work in non-private networks: DES and PGP-DES-MD5 schemes • SSL
Reliability vs. performance	• Supports transient sessions, which do not use any persistence. This significantly increases performance giving up recovery
Performance tuning	• Ability to enable or disable Nagle's algorithm to minimize latency or maximize throughput • Ability to configure (or turn off) the number of messages to be joined in a bunch before sending • Ability to dedicate threads for session for sending and receiving data, to minimize overhead on context switching
Monitoring and administration	• Built-in remote monitoring and administrative interface for sessions monitoring and management • Rich monitoring and administration GUI out of the box
Message composition API	• FIX flat message model — generic model to work with the abstract FIXMessage class via fields and groups getters and setters, which gives the highest performance • FIX object model — each FIX message type is a class with FIX fields as members, using intellisense to make working with FIX business object more pleasant
Advantages	• Economical - use the open source interface where performance of QuickFIX is sufficient and leverage FIX Antenna C++™ on latency/ throughput critical connections • Customer-driven product roadmap – we provide fixes and updates as soon as possible and have a product roadmap. Open sources such as QuickFIX, may take years to release an update or a new FIX version support. Even though, technically, you could fix bugs yourself, but it's a high risk approach to handling complex financial applications and is time-consuming, and, perhaps, not the best use of your development budget • Guaranteed support - by acquiring our FIX solutions, you get guaranteed help and support from a dedicated team of professionals who can address issues promptly vs. the mixed crowd of open source developers who may or may not be able to help