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Network Packet Processors

B2BITS <epam>

Reduce Latency in High Frequency Trading Applications

Intelligent network packet processors, utilizing the PCI express interface, open a lot of promising opportunities for re-architecting trading infrastructure. Having part of the trading algorithm or communication protocol offloaded to card provides an efficient way to control jitter and guarantees consistent latency at any time.

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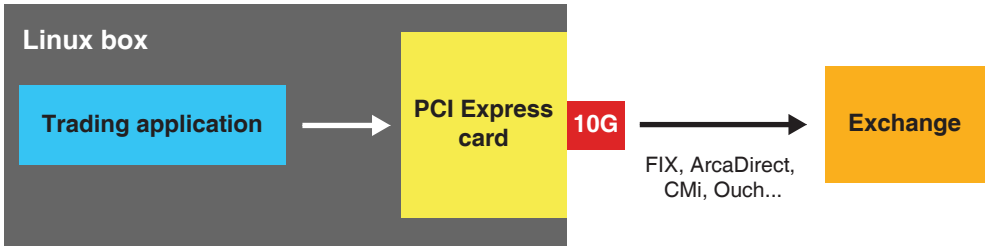
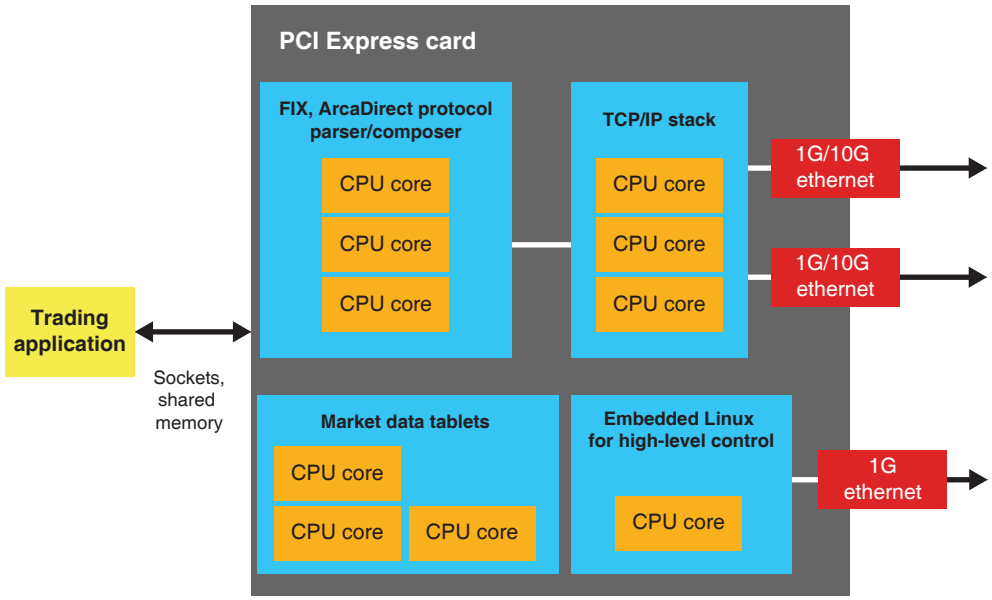
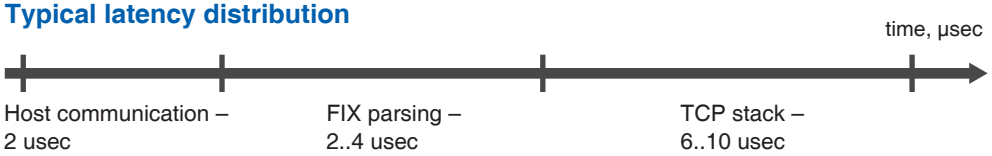


Cards typically have several Ethernet ports and 8-32 cores 1-2 GHz CPUs on board, which together with 4-8GB of memory create an excellent environment for parallel processing of network packets and financial protocols.



Typical latency distribution



We have developed a framework to build applications for these cards and provide services for custom application development.

The framework consists of:

- A Linux socket library for seamless integration with existing applications
- Open source TCP stack for TCP offload engine on the card (a number of choices exists)
- Prototyping on PC for the card on Linux and Windows
- Shared memory based API for inter-process communication
- Remote access to the card to update the software

We provide services to develop applications:

- Market data feed processing
- Risk management
- Order/Trades transaction protocols parsing of protocols such as FIX, OUCH
- “Kill switch” type of algos
- Auditing
- Time stamping
- Non-intrusive monitoring

For further info contact us at sales@b2bits.com.