PRODUCT BRIEF
Intel® QuickAssist Adapter 8960/8970

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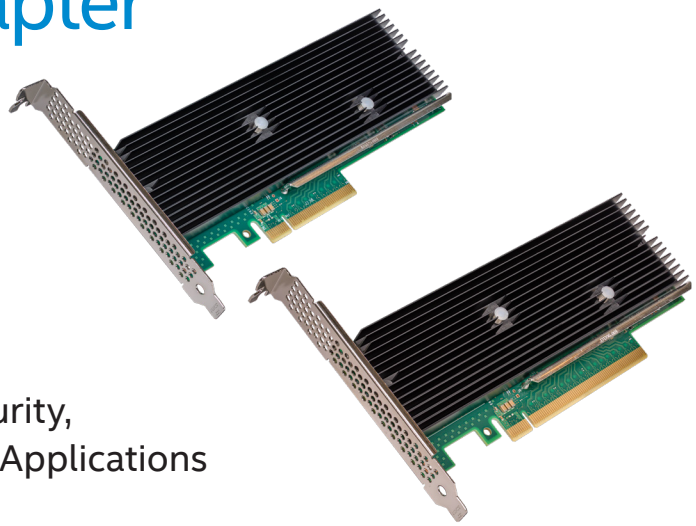

Hardware Acceleration for Data Center Security, Networking, Storage, and Communications Applications

Key Features

- Up to 100Gbps hardware acceleration performance
- Commercial ready Intel-branded solution
- Low-profile PCI Express* v3.0 x8/x16 compliant adapter cards
- Virtualization support for Network Function Virtualization (NFV) deployments
- Utilizes existing Intel® QuickAssist Technology Software Libraries and APIs supporting IPsec, SSL/TLS, network, storage, communications services and workloads

Overview

Intel® QuickAssist Adapters 8960/8970 deliver turn-key standard PCI Express access to hardware acceleration for compute intensive Data Center Networking, Security, Storage, and Communications applications.

- Hardware acceleration performance is designed to specifically meet the thermal, power, and form factor requirements for data center servers.
- Seamlessly support industry standard server deployments to comply with low-profile form factor constraints, passive thermal needs, and PCI Express v3.0 specifications.
- One physical adapter supports several virtual data center applications using single root input/output virtualization (SR-IOV) technology.
- Intel® QuickAssist Library provides an acceleration stack with a common interface for both application and accelerator function developers.
- APIs and driver capabilities for standard operating systems provide flexibility to adapt to new applications.

Intel® QuickAssist Adapters, with virtualization support, software libraries, and APIs, offer a complete and versatile acceleration stack for compute-intensive markets.

FEATURES	DESCRIPTION
GENERAL	
Software	• Intel® QuickAssist Technology Software Library and API Support: Linux*, KVM, open source framework patches, and Open SSL
Power	• Onboard voltages are generated from the +12V main power supplied by the PCIe edge connector; 3.3V and 3.3V auxiliary supplies are not used
Virtualization	• Single Root I/O Virtualization (SR-IOV); Up to 48 Virtual Functions and 3 Physical Functions
Mechanical and I/O	• Supports PCI Express Gen3 x8/x16 low-form factor dimensions • Passive heatsink solution • Complies with the mechanical specifications given in the PCI Express Card Electromechanical Specification, Revision 3.0
SECURITY	
Security	• Provides hardware acceleration for industry standard security algorithms for VPN, SSL/TLS, IPSec and firewall applications
Symmetric (Bulk) Cryptography	• Ciphers (AES, 3DES/DES, RC4, KASUMI, ZUC, Snow 3G) • Message digest/hash (MD5, SHA1, SHA2, SHA3) and authentication (HMAC, AES-XCBC) • Algorithm chaining (one cipher and one hash in a single operation) • Authenticated encryption (AES-GCM, AES-CCM) • AES-XTS
Asymmetric (Public Key) Cryptography	• Modular exponentiation for Diffie-Hellman (DH) • RSA key generation, encryption/decryption and digital signature generation/verification • DSA parameter generation and digital signature generation/verification • Elliptic Curve Cryptography: ECDSA, ECDHE, Curve25519
COMPRESSION	
Provider hardware acceleration for Industry Standard compression/decompression algorithms for Network Bandwidth and Storage Applicaitons	• DEFLATE: LZ77 compression followed by Huffman coding, with a gzip or zlib header • Stateless Compression and Decompression
WIRELESS	
Provides hardware acceleration for Common Mobile Wireless Standards including 3G / 4G LTE	• KASUMI, Snow 3G and ZUC in encryption and authentication modes - ZUC/ 128-EEA3 Cipher - ZUC/128-EIA3 Wireless MAC - SHA3-256

SPECIFICATIONS

Performance	Up to 100Gbps hardware acceleration
RSA ops/sec	4K decrypt
SR-IOV Virtual Functions	3 Physical / 48 Virtual
Connection	Low Profile PCIe Gen3 x8 or x16
Operating Temperature (Ambient)	0 °C to 50 °C (32 °F to 131 °F)
Storage Temperature (Ambient)	-40 °C to 70 °C (-40 °F to 158 °F)
Power (maximum)	~23W
Airflow	275 LFM @ 55 °C PCIe Gen3 x16
Storage Humidity	90% non-condensing relative humidity at 35 °C
Dimensions (H x L)	2.7" x 6.6"

PRODUCT ORDER CODE

Configuration	MM#	Product Code
x8 PCIe	954358	IQA89601G1P5
x16 PCIe	954359	IQA89701G1P5

SAFETY AND REGULATORY

Safety	UL/CSA 60950-1-07, 2nd Edition + amendment 1, dated 2011/12/19. The Bi-National Standard for Safety of Information Technology Equipment, EN60950-1: 2006+A11:2009+A1:2010+A12:2010+A2:2013
Regulatory	• USA & Canada FCC, 47 CFR Part 15, Class A digital device (USA) ICES-003, Class A (CAN) • EN 55032 EN 55032: 2015 Class A Radiated and Conducted Emissions requirements for European Union • EN-55024 EN 55024: 2010 Immunity requirements for European Union (EU) • Korea • KN32 Radiated and Conducted Emissions • KN35 Immunity • Australia/New Zealand AS/NZS CISPR 22:2009 + A1:2010 Class A and CISPR 32:2015 for Radiated and Conducted • Emissions requirements • CE Passes CE specification and receives the CE Mark • Japan VCCI:2014-04 Class A Radiated and Conducted Emissions requirements • Taiwan BSMI CNS13438: 2006 (complete) Class A Radiated and Conducted Emissions requirements • EU REACH Complies with European REACH directive • EU WEEE Complies with European WEEE directive • EU RoHS Complies with European RoHS directive • China RoHS Complies with China RoHS directive

Warranty

Intel limited lifetime hardware warranty, 90-day money-back guarantee (U.S. and Canada) and worldwide support.

Product Information

For information about Intel(R) QuickAssist Technology and products visit:
intel.com/quickassist

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