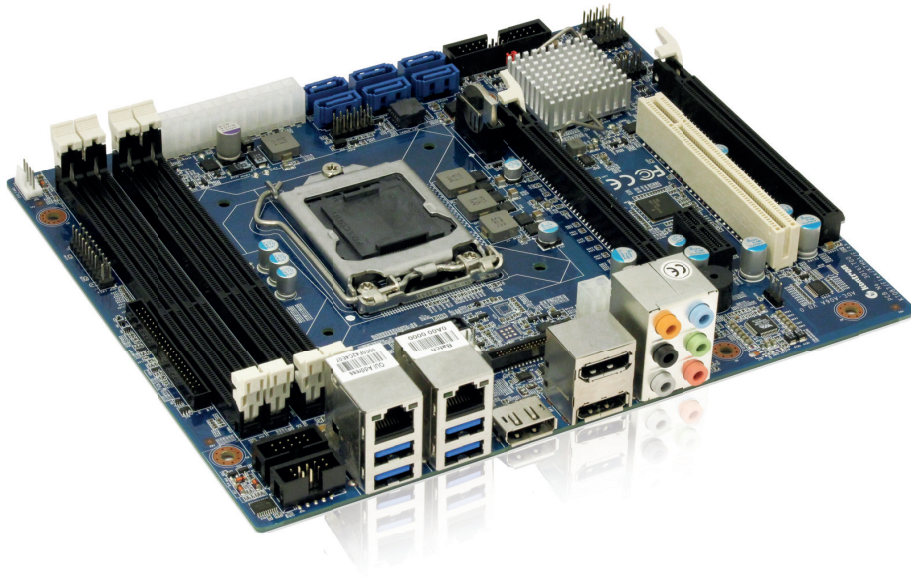


» KTQ87/Flex «



Embedded Flex Motherboard with Intel® Q87 Chipset and 4th Generation Intel® i7/i5/i3 Dual and Quad Core CPUs

- » 4th Generation Intel® 22nm Dual and Quad Core i7, i5, i3, Pentium & Celeron® CPUs with Intel® Q87 Lynx Point PCH
- » Long term available Embedded Flex motherboard
- » High performance CPU, graphics, and media performance supporting 3 independent displays pipes
- » Graphics APIs DirectX 11.1, OpenGL 4.x, OpenCL 1.2
- » 3x DisplayPort for flexible, high resolution display drive
- » 1x 18/24bit dual link LVDS interface.
- » 4x DDR3L/DDR3 DIMM sockets supporting up to 32GB DDR3 Memory

KTQ87/Flex

- » **Gaming/POS/POI:** High graphics and CPU performance, multi display support
- » **Medical:** High Graphics performance & longevity
- » **Industrial Automation:** Wide range of I/Os & longevity
- » **Future-oriented Devices** Due to DisplayPort and LVDS



Technical Information

Form Factor	Flex 229 × 191 mm (7.5" x 9.0")
CPU	Intel® Core i7/i5/i3 2C/4C CPU clock up to 3.1 GHz
Graphics	Integrated into CPU with GT1 or GT2 depending on CPU type
Graphic Interface	3x DisplayPort revision 1.2 in Rear IO 1x 18/24Bit dual Link LVDS interface in internal header, Note: LVDS interface share one DisplayPort
Memory	Up to 8 GB DDR3L/DDR3, 4xDIMM (max. 32GB), PC3-10600/PC3-12800 support
Chipset	Intel® Embedded Q87
Front Side Bus	DMI 2.0 support, four lanes in each direction, up to 20 Gb/s each direction, full duplex, DMI interface to PCH is supported
SATA	6x SATA interfaces SATA 1.5/3/6Gbit/s w. RAID 0/1/5/10
USB	4x USB 3.0 & 8 USB 2.0. (4x USB3.0/USB2.0 Rear IO, 8x USB2.0 Internal Header)
Audio	HD Audio codec VT1708S supporting 7.1 channel surround sound
Ethernet	2x Intel Gigabit-LAN, one LAN controller supporting Intel® AMT 9.0
Available I/Os	PCIe x16 socket with Gen3 and Gen2 support, 1x x4 PCIe, 1x x1 PCIe, 1x PCI rev 2.3, 2x COM (RS232)
Rear I/O	Audio stacked 2x3 mini Jack tower, 4x USB, 3x DisplayPort, 2x RJ45 LAN
Special Feature	AMT 9.0, TPM 1.2, Intel® AES security, Kontron embedded feature connector with ADC, DAC up to 160 GPIOs
OS Support	Win7, Win8 WES8, WES7, Linux, VxWorks
Temperature	Operating 0°C to 60°C (32°F to 140°F)
Additional	Up to 7 years availability

Ordering Information

Article	Part No.	Description
KTQ87/Flex	810582-4500	Flex board based on Intel® Shark Bay platform
CPUs		
CPU, Core i5	1054-9757	CPU, Core i5-4570S GT2 2.9G 4C 6M LGA1150
CPU, Core i7	1054-9752	CPU, Core i7-4770S GT2 3.1G 4C 8M LGA1150
CPU, Core i3	1055-5247	CPU, Core i3-4330 GT2 3.5G 2C 4M, LGA1150
Further CPUs will be defined in near future		
Recommended Memory Modules		
DDR3 DIMM 1GB	1054-3706	DDR3, 1GB, 240P, 1600MHZ, PC3-12800 DIMM
DDR3 DIMM 2GB	1054-3707	DDR3, 2GB, 240P, 1600MHZ, PC3-12800 DIMM
DDR3 DIMM 4GB	1054-3708	DDR3, 4GB, 240P, 1600MHZ, PC3-12800 DIMM
DDR3 DIMM 8GB	1052-5601	DDR3, 8GB, 240P, 1600MHZ, PC3-12800 DIMM

CORPORATE OFFICES

Europe, Middle East & Africa

Lise-Meitner-Str. 3-5
86156 Augsburg
Germany
Tel.: +49 (0) 821 4086-0
Fax: +49 (0) 821 4086 111
sales@kontron.com

North America

14118 Stowe Drive
Poway, CA 92064-7147
USA
Tel.: +1 888 294 4558
Fax: +1 858 677 0898
info@us.kontron.com

Asia Pacific

17 Building, Block #1, ABP.
188 Southern West 4th Ring Road
Beijing 100070, P.R.China
Tel.: +86 10 63751188
Fax: +86 10 83682438
info@kontron.cn