ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

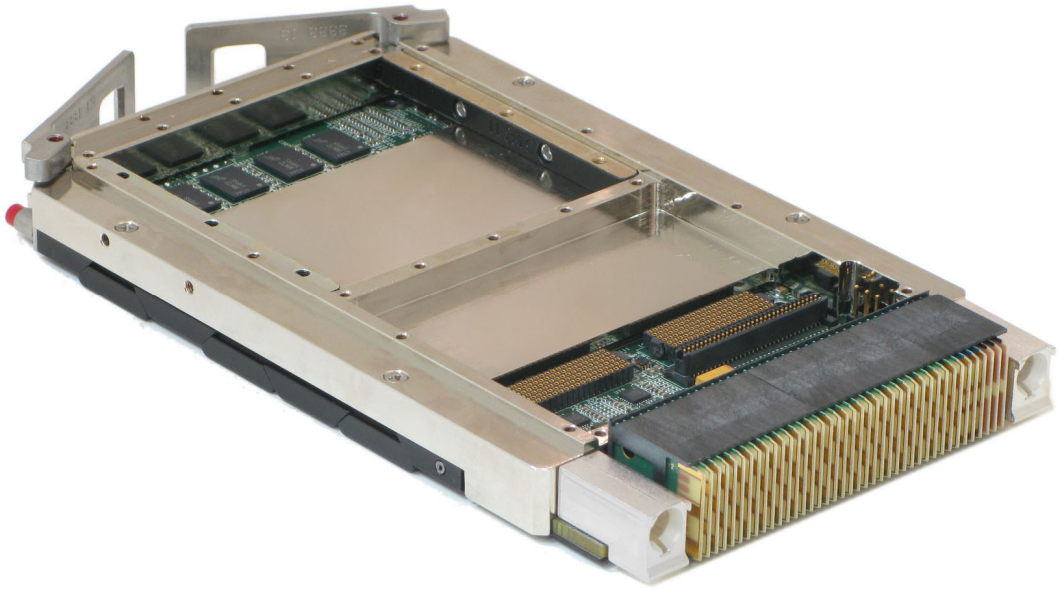
All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Aitech Defense Systems CM874* at our website: ***Click HERE***

C874

5th Gen. Intel Core™ i7 3U VPX SBC

Aitech
Embedded Computing *without* Compromise



- Rugged 3U VPX Single-Slot SBC
- 5th Generation Intel® Core™ i7 CPU
  - Quad Core @ 2.7 GHz
  - Iris™ Pro Graphics 6200
- Up to 16 GB DDR3L with ECC
- Up to 512 GB On-Board Flash Disk
- Versatile Board I/O
  - USB
  - Serial
  - HDMI/DVI Out
  - SATA
  - Discrete
  - RGBHV Out
  - GbE
  - Audio In + Out
- PMC/XMC Slot
- WWDT, IPMI, ETR, RTC, Temp. Sensors
- Windows®, Linux®, VxWorks® Support
- OpenVPX Compliant
- 2LM Option per VITA 48.2
- Conduction and Air-Cooled Versions
- Vibration and Shock Resistant



C874

5th Gen. Intel Core™ i7 3U VPX SBC

Aitech
Embedded Computing *without* Compromise

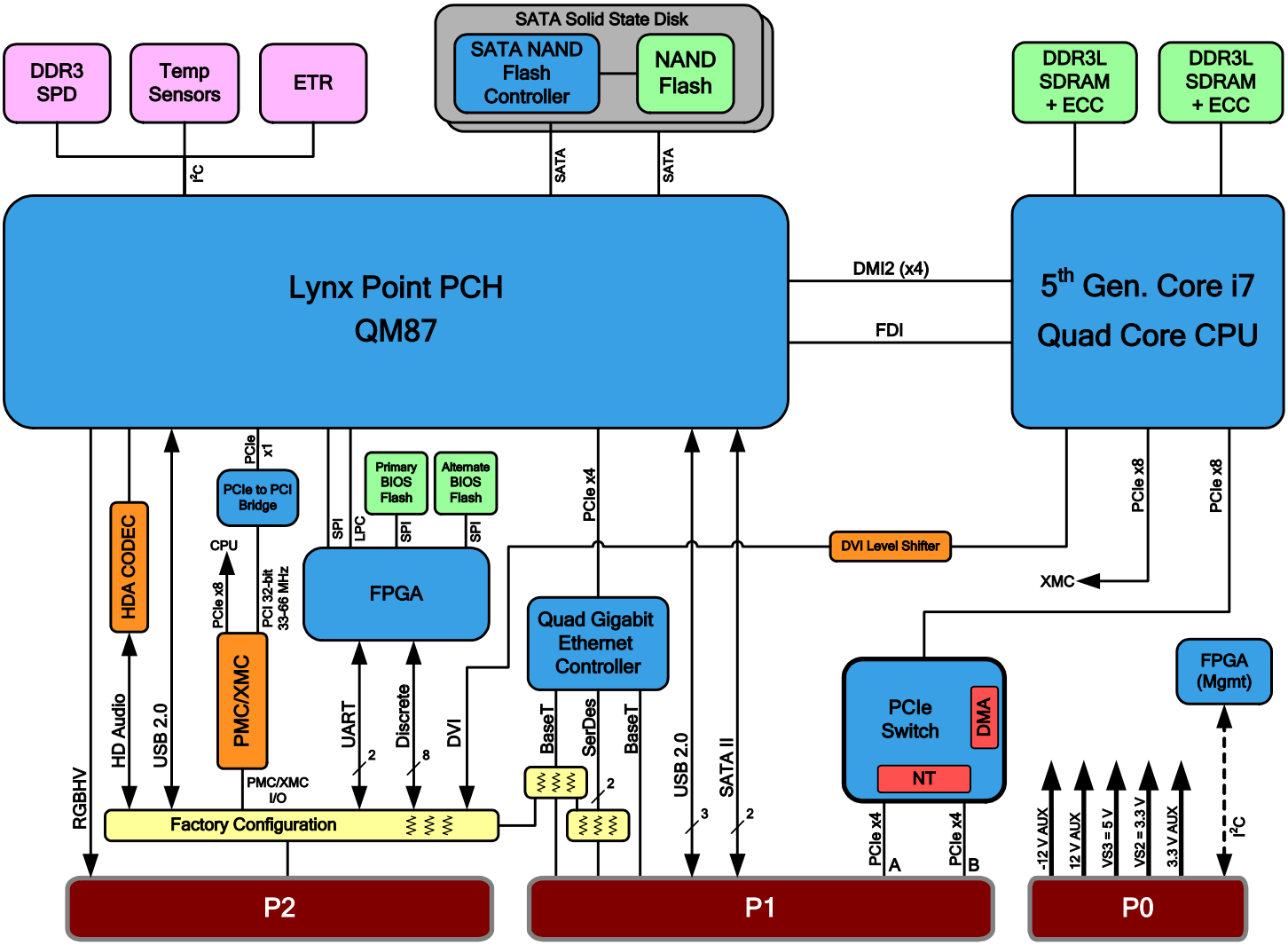
Aitech's C874 is a high-performance 3U VPX SBC for embedded and harsh environment applications. The heart of the C874 is Intel's Broadwell platform, featuring a 5th Generation Intel® Core™ i7 Quad Core processor with integrated Intel® Iris™ Pro Graphics 6200, coupled with a companion Lynx Point QM87 I/O Platform Controller Hub (PCH).

The processor's integrated 2D/3D graphics controller supports graphics and video processing and provides RGBHV and HDMI/DVI outputs.

The C874 integrates large on-board RAM (DDR3L) and mass storage (SATA Flash disk) resources, and provides a variety of popular I/O interfaces to meet a wide range of system requirements. Expandability and further flexibility are provided by an industry standard PMC/XMC slot.

The C874 is also pinout compatible with Aitech's C873 4th Gen. Core i7 (Haswell platform) SBC.

C874 mechanical and electrical designs guarantee operation over the full range of rugged application environments. It is available in industry standard conduction-cooled and air-cooled form factors.



C874

5th Gen. Intel Core™ i7 3U VPX SBC

Aitech
Embedded Computing *without* Compromise

Board Architecture

Processor	i7-5850EQ – 5th Gen. Intel® Core™ i7, Quad Core @ 2.7 GHz, Iris™ Pro Graphics 6200, 6 MB Last Level Cache Supports Hyper-Threading, Intel® Virtualization Technology (VT-x), SSE4.1/4.2, AVX 2.0
Chipset	Intel Lynx Point QM87 Platform Controller Hub
Board Resources	• Watchdog Timers (Windowed + Standard) • Temperature Sensors • Real Time Clock • Intelligent Platform Management Interface (IPMI) • Elapsed Time Recorder
OpenVPX (VITA 65) Slot Profiles	Available per factory configuration (see *Ordering Information* below): • **SLT3-PAY-2F2U** Payload board, 2 PCIe x4 ports, 2 1000Base-BX/KX ports • **SLT3-PAY-2F2T** Payload board, 2 PCIe x4 ports, 2 1000Base-T ports Implemented via software configuration of the SLT3-PAY-2F2T option: • **SLT3-PAY-1D** Payload board, 1 PCIe x8 port • **SLT3-PAY-2F** Payload board, 2 PCIe x4 ports • **SLT3-PAY-1F4U** Payload board, 1 PCIe x4 port, 4 PCIe x1 ports • **SLT3-PAY-8U** Payload board, 8 PCIe x1 ports • **SLT3-PER-2F** Peripheral board, 2 PCIe x4 ports

Memory Resources

RAM	Up to 16 GB of DDR3L SDRAM in dual channels with ECC operates at 1600 MT/s
Flash Disk	Up to 512 GB SATA Flash Disk, SLC (Single-Level Cell) & MLC (Multi-Level Cell) options per *Ordering Information* below
Boot Flash	Dual BIOS Flash devices (Primary device for normal board operation, Alternate device for board maintenance)

I/O

	I/O Variant (1)			
	Variant #1	**Variant #2**	**Variant #3**	**Variant #4**
USB 2.0	4		3	
SATA II	2		1	
GbE Ports: 1000Base-T+1000Base-BX/KX	2+0 (2) or 2+2 (3)		2+0 (2) or 1+2 (3)	
Audio - Stereo	1 In + 1 Out		0	
RGBHV Out	1		1	
DVI/HDMI Out	1		0	
Serial Ports (RS-232/422/485) Software configurable as RS-232/422/485	2		1	
Discrete I/O Lines/Serial Ports (RS-422/485) Discretes are individually software configurable as input (with optional interrupts) or output, and as SE (1 line per channel) or DIFF RS-422 (2 lines per channel). Four Discrete I/O lines can also be software configured as one RS-422/485 serial port.	8/2		4/1	
PMC I/O Routed per VITA 46.9 pattern P64s	35 (2) or 27 (3)	N/A	64	N/A
XMC I/O: Diff Pairs+SE Routed per VITA 46.9 pattern X24s+X8d+X12d	N/A	7+21 (2) or 3+21 (3)	N/A	20+24

Notes:
(1) C874 I/O Variants offer different combinations/quantities of on-board and PMC/XMC I/O via factory configuration; additional I/O routing options may be available per customer request, contact an Aitech representative for more information
(2) In slot profile SLT3-PAY-2F2T
(3) In slot profile SLT3-PAY-2F2U

C874

5th Gen. Intel Core™ i7 3U VPX SBC

Aitech
Embedded Computing *without* Compromise

PMC/XMC Slot

PMC	32-bit PCI at 33/66 MHz, universal site supports 3.3 V and 5 V PCI I/O signaling levels
XMC	PCIe x8 port supporting Gen2 and Gen1 speeds and port widths of x8/x4/x2/x1, 5 V VPWR supply

Note: The SDRAM devices on the second memory channel may cause a mechanical conflict with some PMC/XMCs. Contact an Aitech representative for more information.

Software

Operating Systems	Windows®, WindRiver VxWorks®, and Linux® are supported
Drivers	Operating system specific device drivers for board resources are available
BIT	Built-In Tests are available

Mechanical

	Form Factor & Dimensions	Pitch	Weight
Air-Cooled	3U VPX REDI per ANSI/VITA 48.1	1"	< 400 g (0.88 lbs.) – Commercial version
			< 700 g (1.55 lbs.) – Rugged and Military versions
Conduction-Cooled	3U VPX REDI per ANSI/VITA 48.2	0.8"	< 780 g (1.72 lbs.)
		1"	< 930 g (2.05 lbs.)
Conduction-Cooled 2LM	3U VPX REDI 2LM (Two Level Maintenance) per ANSI/VITA 48.2	0.85"	< 860 g (1.90 lbs.)

Power

	+3.3 V	+3.3 V_AUX	+5 V	+12 V_AUX (3)	-12 V_AUX (3)	Total (4)
Typical (1)	1.8 A	200 mA	4 A	0 A	0 A	26.6 W
Maximum (2)	1.8 A	200 mA	10 A	0 A	0 A	56.6 W

Notes:
(1) Measured in Windows 7 idle condition
(2) Measured when running the PassMark® BurnInTest
(3) ±12V_AUX required for PMC/XMC only
(4) Total power consumption depends on configuration and assembly options. Tests performed on fully featured configuration, no PMC/XMC installed.

Environmental

Specs per VITA 47	Air-Cooled			Conduction-Cooled	
	Commercial	**Rugged**	**Military**	**Rugged**	**Military**
Operating Temp.	AC1 (0 to +55 °C) (2)	AC3 (-40 to +70 °C) (2)	AC4 (-40 to +85 °C) (1,2)	CC3 (-40 to +70 °C) (3)	CC4 (-40 to +85 °C) (1,3)
Non-Operating Temp.	C1 (-40 to +85 °C)	C3 (-50 to +100 °C)	C4 (-55 to +125 °C)	C3 (-50 to +100 °C)	C4 (-55 to +125 °C)
Vibration	V1	V2	V2	V3	V3
Operating Shock	OS1	OS1	OS1	OS2	OS2
Altitude	15,000 ft.	35,000 ft.	70,000 ft.	35,000 ft.	70,000 ft.
Relative Humidity (4)	0 - 90%	0 - 95% with Acrylic (Standard),			
Conformal Coating	N/A	0 - 100% with Urethane (Optional)			

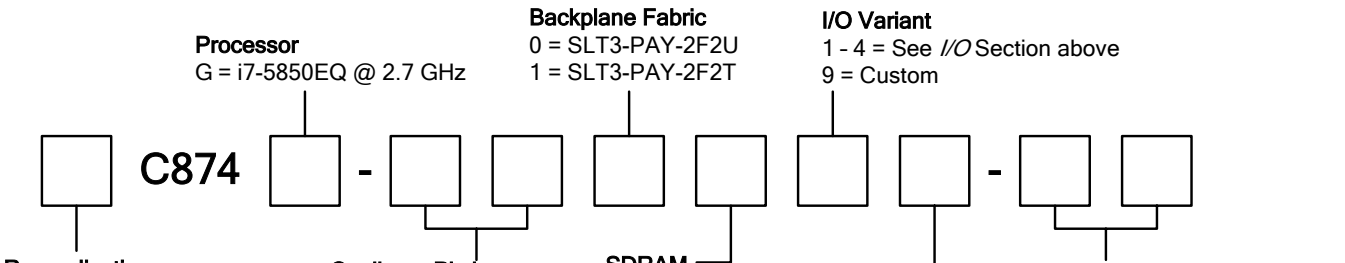
Notes:
(1) -55 °C available, contact an Aitech representative for more information
(2) Operating ambient air temperature (with sufficient airflow)
(3) Operating card edge temperature
(4) Non-condensing

C874

5th Gen. Intel Core™ i7 3U VPX SBC

Aitech
Embedded Computing *without* Compromise

Ordering Information



* Compatible also with 1" pitch enclosures and backplanes
** Only with large SATA Flash Drive (64 GB and above)

* Compatible only with 1" pitch (A3 and R3)
SLC - Single-Level Cell
MLC - Multi-Level Cell

Example: 4C874G-R01B22-00

Optional Accessories

TM870	Rear Transition Module (RTM) providing convenient access to C874 I/O interfaces via standard connectors and to all PMC/XMC I/O via headers. Supports both air and conduction-cooled C874 mounted in commercial air-cooled chassis. Refer to the TM870 datasheet for further information.
CM870	3U VPX PMC/XMC carrier board. Using one or more CM870s, system functionality can be significantly expanded, enabling the C874 to control additional PMCs/XMCs over the VPX backplane. Refer to the CM870 datasheet for further information.

Contact Aitech

Contact your Aitech sales representative for additional product information, and for inquiries regarding customized configurations of the C874 and additional software support.



All names, products, and/or services mentioned are trademarks or registered trademarks of their respective holders.
All information contained herein is subject to change without notice.

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP