MIC-3328

3rd Generation Intel® Core™ Processor 3U CompactPCI® PlusIO Card

Features

- Supports 3rd Generation Intel® Core™ processor
- Intel® QM77 Platform Controller Hub
- 4 or 8GB DDR3-1600 soldered SDRAM with ECC
- Triple independent display support
- Optional 8GB SATA NAND Flash on board
- 2.5" SATA-II SSD, CFast, XMC on 8HP version
- Two 10/100/1000 Mbps ports, 2 USB 3.0 ports, 1 VGA port on front panel (4HP)
- Two COM ports, 2 Display ports, 1 PS/2 port (8HP)
- Supports CompactPCI PlusIO
- PICMG2.0, R3.0 , PICMG2.1, R2.0, PICMG2.30 compliant

Introduction

Advantech's MIC-3328 is a 3U CompactPCI PlusIO CPU blade based on the 3rd generation Intel® Core™ processor family. Based on 22nm process technology these processors support up to four cores / eight threads at up to 2.5GHz and up to 6M last level cache. With Intel® HD Graphics(Gen7,DX11,OCL1.1) integrated into the CPU, the MIC-3328 can serve applications demanding high performance, high resolution video output on up to three independent display interfaces. DDR3 DRAM up to 8GB running at 1600MT/s complements the powerful processor with high performance, ECC protected onboard memory.

The MIC-3328 is designed for reliabilty with soldered processor, DRAM and flash storage for enhanced shock and vibration tolerance making it an ideal choice for workstation workloads in harsh environments and mission/business-critical applications such as military, transportation, test & measurement and traffic control.

MIC-3328 uses the Intel® QM77 PCH, which provides extensive I/O support such as USB3.0, PCI Express gen.2 and SATA-III ports.

The MIC-3328 PlusIO J2 supports interfaces such as 4 PCI Express x1 gen. 2 links for IO extension, one GbE for computer to computer multiprocessing, three SATA for Hard drives and RAID systems as well as 4 USB ports for wireless interfaces and legacy interface replacement.

For more information about CompactPCI PlusIO and Serial offerings from Advantech or information on how this new platform can help you to gain competitive advantages, please contact your Advantech representative.

Specifications

Processor System	CPU	3nd Generation Intel® Core™ i7 up to 2.5 GHz (6MB L2 cache) 1.7G, 3517UE, 17w / 2.5G,3555LE, 25w/ 2.1G, 3612QE, 35w
	Platform Controller Hub	Intel® QM77
	BIOS	Customized AMI Aptio UEFI BIOS
CompactPCI Interface	J1 Connector	32-bit PCI local bus (33MHz)
	J2 Connector	CompactPCI PlusIO / RTM
Memory	Technology	DDR3-1600MHz SDRAM, dual channel with ECC support
	Max. Capacity	8GB
	Soldered/socket	Soldered
Graphics	Chipset	Integrated in Intel® CPU
	Resolution	VGA 2048 x 1536 pixels with 32-bit color at 75 Hz Display port 2560 x 1600 at 60 Hz
Ethernet	Controller	3 x i210AT
	Interface	10/100/1000 Mbps
	I/O Connector	RJ-45 x 2 (front panel), RJ-45 x 1 (RTM / PlusIO)
Storage	IDE	1 x CFast Socket on 8HP
	SATA	1 x optional SATA NAND Flash on 4HP,1x Internal SATA connector on 8HP version
Front I/O	VGA	DB15 Port
	Ethernet	2 x 10/100/1000 Mbps RJ-45
	USB 3.0	2 x Type A
	8HP XTM	8HP-1: 2x RJ45 RS232, 2x Display port, 1x PS/2 port 8HP-2: XMC (PCIex8 gen.3) front IO
PlusIO / RTM interface (4HPJ2 interface)	PCIE	4 x PCIex1 Gen 2 (one PCIex1 is routed to Mini-PCIe socket on board for wireless LAN using)
	SATA	2 x SATA-II (one SATA-II is designed as half size mSATA socket on board), 1 x SATA-III
	RJ45	1 GbE based on i210AT
	USB 2.0	4 ports

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All product specifications are subject to change without notice.   Last updated: 21-Jun-2017

Specifications (Cont.)

RIO (8HP)	8HP-1 J2 interface	1 x PS/2 is mutually exclusive with PS/2 on 8HP front panel by BOM control. It requires a special 8HP board to work. The special 8HP board is on available by customer request. 2 x COM default setting is RS232, RS422/485 can be set by the switch on 8HP board (Total 4 COM ports on 8HP and it's RIO) 2 x DisplayPort is switchable from front panel by switch on 8HP board
Watchdog Timer	Supervision	0 ~ 255s, 1s step, generate reset signal
Operating System	Compatibility	Microsoft Windows XP Professional, Windows 7, Windows server 2008, VxWorks 6.9, Linux Redhat 6.1
Power Requirement	Configuration	CPU TDP 17w/25w/35w, 8HP with RIO
	Consumption	23.42W/ 33.12W /43.91W
Physical	PCB Dimensions	4HP or 8HP, 160.00 x 100.00 mm (6.30" x 3.95") (W x H)
	Weight	0.62kg w. AL Heatsink ,0.9kg w. Cu Heatsink including XTM
Environment		Operating	Non-operating
	Temperature	0 ~ 60° C (32 ~ 140° F)	- 40 ~ 85° C (-40 ~ 185° F)
	Humidity	95% @ 40° C (non condensing)	95% @ 60° C (non-condensing)
	Shock	10 G, 11ms, each axis three times	30 G, 11ms, each axis three times
	Vibration	2Grms (5~500Hz, with CFast on 8HP)	Sine 2 Grms, 30mins each axis (5 ~ 500 Hz)
Regulatory	Conformance	FCC, Class A, CE, RoHS
Compliance	Standard	PICMG 2.0 Rev. 3.0, PICMG 2.1 R2.0, PICMG2.30 PlusIO compatible

Supported CPU Configurations

Intel® CPU Model Number	# Cores	Freq.	Cache	Memory Types	CPU TDP
I3 3120ME	2	2.4GHz	3 MB L2 Cache	DDR3-1600	35W
I7 3517UE	2	1.7 GHz	4 MB L2 Cache	DDR3-1600	17W
I7 3555LE	2	2.5GHz	4 MB L2 Cache	DDR3-1600	25W
I7 3612QE	4	2.1GHz	6 MB L2 Cache	DDR3-1600	35W

Ordering Information

System board	Front panel								On board Features			
	LAN (RJ45)	LAN (M12)	USB3.0	VGA	COM RJ45	COM DB9	Displayport	PS/2	CPU	Memory	SATA CFast/ HDD	Slot Width
MIC-3328B1-D1E	2		2	1	2		2	1	I7 3555LE	8GB	2	2
MIC-3328C2-D1E	-	2	2	1	-	1	-	-	I7 3612QE	8GB	2	2
MIC-3328D1-D1E	2		2	1	2		2	1	I3 3120ME	4GB	2	2
MIC-3328B1-D3E	2		2	1	2		2	1	I7 3555LE	8GB	2	2

Ordering Information

Model Number	Configuration
MIC-3328B1-D1E	MIC-3328, 3555LE, 8G RAM, w/ 8HP-1, 2 DP, 2 COM, PS/2, Support PlusIO
MIC-3328C2-D1E	MIC-3328, 3612QE, 8G RAM, VGA, USB,w/ 8HP-3, 2 M12 LAN, 1 DB9 COM
MIC-3328D1-D1E	MIC-3328, i3120ME, 4G RAM, w/8HP-1, 2DP, 2COM, PS/2
MIC-3328B1-D3E	MIC-3328, 3555LE, 8G RAM, w/8HP-1, 2DP, 2COM, PS/2

For other CPU blade SKU,chassis and RIO, please contact your Advantech sales representative.

Related Products

Model Number	Configuration
MIC-3955A2-S1E	4port RS for RIO application 3U CPCI
MIC-3527A1-S1E	4port RS RIO for MIC-3955A2-S1E 3U CPCI
MIC-3955A1-S1E	4-port RS-232/422/485
MIC-3716/3-A	3U 250kS/s,16-bit,16-ch multifunction Card
MIC-3756/3-A	3U CPCI 64-ch Isolated DI/O Card
MIC-3680/3-A	2-port CAN Card
MIC-3022AE	3U single system CPCI enclosure, with 400W ATX PSU
MIC-3022PAE	3U single system CPCI PlusIO enclosure, with 400W ATX PSU
MIC-3022CE	3U enclosure,8slots,32-bit/33 MHz/66 MHz,250W CPCI PSU
MIC-3022PCE	3U enclosure, w/ CPCI PlusIO BP, 300W CPCI PSU
MIC-3954-AE	3U CPCI-Serial card with dual mini-PCIe slot and SIM slot
MIC-3953-AE	3U CPCI PMC Carrier board