

# MIC-3325

## 3U CompactPCI® Intel® Atom™ Dual Core D525/N455 Processor Blade



### Features

- Dual Core Intel® Atom™ D525 processor/single core N455 processor
- Intel® I/O Controller Hub 8-Mobile (ICH8M)
- Two GB DDR3 onboard up to 800 MT/s
- Optimized CompactFlash socket on single board computer
- 2.5" SATA-II HDD on XTM second layer
- Two 10/100/1000 Mbps ports, two USB ports, one VGA port on front panel
- Two COM ports, one USB ports, one PS/2 port on 8HP second layer
- Support 5V only power input
- PICMG 2.0, R 3.0, PICMG 2.1, R 2.0 compliant



### Introduction

Advantech's MIC-3325 is a 3U CompactPCI dual/single core processor blade based on the Intel® Atom™ processor D525/N455+ICH8M two-chip platform. It provides the high performance of 2 cores and 4 threads of processing power at lower cost, and with easier validation. The MIC-3325 fully utilizes the I/O features of the Intel® chipsets, including an integrated memory controller (IMC), integrated graphics processing unit (GPU) and integrated I/O (IIO) such as DMI. The low power requirements of the Intel® Atom™ processor makes operation in elevated temperature ranges possible. Breakthrough memory design puts 2GB SDRAM on board, while keeping the speed at DDR3 800MT/s. The on-board CPU and memory provide less weight and higher shock/vibration resistance than socket devices. With such benefits, the MIC-3325 can be used in mission-critical applications such as military defense, transportation, traffic control, test and measurement (T&M) as well as critical data acquisition & control applications. MIC-3325 uses the Intel® ICH8M as the PCH, which provides extensive I/O support. The Integrated Gigabit Ethernet Controller can operate at multiple speeds (10/100/1000 Mb/s) and in either full duplex or half duplex mode. A flexible 8HP extension module design provides the MIC-3325 with great flexibility and additional I/O connectivity to the customer. For more connectivity details, please contact an Advantech representative.

### Specifications

Processor System	CPU	Intel Atom N455 Single Core 1.66 GHz Intel Atom D525 Dual Core 1.8 GHz
	Max. Speed	1.8 GHz
	Chipset	Intel ICH8M @ Pine View-D Platform
	BIOS	SPI 2-MByte BIOS
	DMI	100 MHz reference clock
CompactPCI Interface	J1 Connector	32-bit PCI local bus (33MHz)
	J2 Connector	RTM area (VIO Power 32bit)
Memory	Technology	DDR3-800 SDRAM
	Max. Capacity	2 GB
	On board/socket	On board
Graphics	Chipset	Integrated in Intel Atom N455/D525
	Resolution	Intel Atom N455 Single Core up to 1400 x 1050 (SXGA)
		Intel Atom D525 Dual Core up to 2048 x 1536
Ethernet	Controller	2Xi82583V
	Interface	10/100/1000 Mbps
	I/O Connector	RJ-45 x 1 (front panel), RJ-45 x 1 (RTM)
	Controller	ICH8M (MAC)+82567 (PHY)
	Interface	10/100/1000 Mbps
Storage	I/O Connector	RJ-45 x 1 (front panel)
	IDE	1 x CompactFlash Socket Type II
	SATA	1 x Internal SATA connector only on 8HP version
Front I/O	VGA	DB15 Port
	Ethernet	2 x 10/100/1000 Mbps RJ-45 connector
	USB 2.0	2 x Type A ports
	LEDs	Power, Hot Swap
	8HP-option A	2 x DB9 RS-232, 1 x USB Type A port, 1 x PS/2 port

## Specifications (Cont.)

RIO (J2 interface)	SATA	1 SATA-II (internal)
	VGA	1 port (VGA switchable from front panel by jumper1)
	COM	2 ports (internal)
	USB 2.0	2 ports
	RJ-45	1 PCIe1 based on i82583V MAC/PHY
Watchdog Timer	Supervision	0 ~ 255s, 1s step, generate reset signal
Operating System	Compatibility	Microsoft Windows XP Professional, Windows 7, Windows XPE, Redhat6.1
Power Requirement	Configuration	4HP, w/o RIO
	Consumption	16.6 W for D525, 14.6 W for N455 (4HP with peripherals)
Physical Characteristics	Dimensions (W x D)	4HP, 160.00 x 100.00 mm (6.30" x 3.95") (PCB size)
	Weight	0.4 kg including XTM
Environment		Operating Non-operating
	Temperature	0 ~ 60° C (32 ~ 140° F) -40 ~ 85° C (-40 ~ 185° F)
	Humidity	5 to 95% @ 40°C (non condensing) 95% @ 60° C (non-condensing)
	Shock	10 G, 11ms 30 G, 11ms
	Vibration	1.06 Grms (5 ~ 100 Hz, without on-board HDD) 2 Grms (5 ~ 500 Hz)
Regulatory	Conformance	FCC, Class A, CE, RoHS
Compliance	Standard	PICMG 2.0 Rev. 3.0 compatible; PICMG 2.1 R2.0 CompactPCI Hot Swap Specification

## Ordering Information

Part Number	Description
MIC-3325D-D2E	MIC-3325 with D525 CPU 2G RAM XTM dual slot
MIC-3325D-S2E	MIC-3325 with D525 CPU 2G RAM single slot
MIC-3325N-D3E	MIC-3325 w/ N455 CPU 2G RAM 8HP-2 XTM dual slot
MIC-3325N-S2E	MIC-3325 with N455 CPU 2G RAM single slot
MIC-3525-S1E	Rear I/O for MIC-3325 with VGA, LAN, USB, SATA, COM
MIC-3325XTM-S1E	3U CPCI Extension Board for MIC-3325

## Recommended Configurations

CPU Board	Enclosure	Rear I/O Board
MIC-3325	MIC-3022AE, 3U CPCI enclosure with 400W ATX PSU	MIC-3525-S1E
MIC-3325	MIC-3022CE, 3U CPCI enclosure with 250W CPCI PSU	MIC-3525-S1E

If you need other chassis or RIO, please contact your Advantech sales representative.

## Optional Accessories

Part Number	Description
MIC-3955A1-S1E	3U CPCI 4-port Serial Port Controller with RS-232/422/485
MIC-3955B1-S1E	3U CPCI 4-port RS-232/422/485 to RIO 4HP
MIC-3955R1-D1E	3U CPCI 4-port RS-232/422/485 RIO Board 8HP
MIC-3716/3-A	3U 250kS/s, 16-bit, 16-ch multifunction Card
MIC-3756/3-A	64-ch Isolated DI/O Card
MIC-3680/3-A	2-port CAN Card
MIC-3953-AE	MIC-3953 3U PMC carrier board
MIC-3665-AE	CompactPCI PMC with dual copper (RJ-45) Gigabit Ethernet interfaces

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