

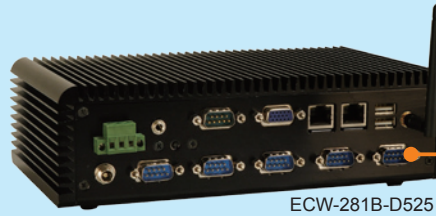
ECW-281B/B2-D525

Fanless Embedded System for Intel® Atom™ Dual core D525

New

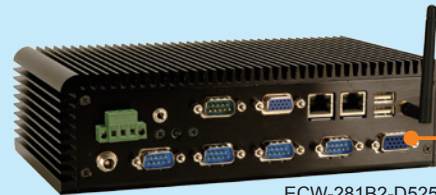


Extended Temperature



6 COM

COM2 for ECW-281B-D525

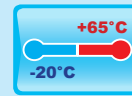


Dual VGA

2nd VGA for ECW-281B2-D525

Features

- ◆ Fanless system with
 - » 1.8 GHz Intel® Atom™ D525 dual-core CPU
- ◆ Supports four USB 2.0 ports and six COM ports
- ◆ Dual GbE LAN ideal for high speed network applications
- ◆ Supports CompactFlash®, 2.5" SATA HDD and SSD storage devices
- ◆ 12 VDC and 9 VDC - 36 VDC power input models available
- ◆ Supports dual VGA display (B2 model only)



Specifications

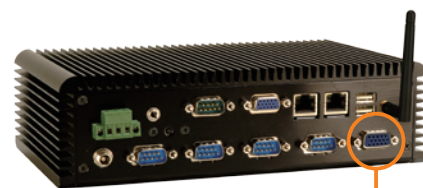
Model Name	ECW-281B-D525 ECW-281B2-D525 (Dual VGA)
Dimensions	229 x 132 x 64mm
Chassis Construction	Aluminum alloy with heavy duty metal
Processor CPU	Intel® Atom™ D525 Processor 1.8GHz /1MB L2 cache
System Memory	1 x 204-pin 1GB DDR3 SODIMM (2GB for optional)
Hard Drive	1 x 2.5" SATA HDD space
Compact Flash	1 x Compact Flash type II slot
USB 2.0	4
Ethernet	2 x Realtek RTL8111E PCIe GbE
Serial Port	6 RS232 ports for ECW-281B-D525 (COM2: Default RS232, RS422/485 optional) 5 RS232 ports for ECW-281B2-D525
Display Interface	1 x VGA for ECW-281B-D525 2 x VGA for ECW-281B2-D525 1st VGA resolution up to 2048x1536 2nd VGA resolution up to 1024x768
Audio	1 x speaker out
Wireless	1 x 802.11 b/g/n (support by wifi models)
PCIe Mini Card	1 x PCIe Mini Card Slot (reserve for wifi module, optional for IEI mini DOM)
Power Consumption	12V@1.79A (Intel® Atom™ D525 1.8GHz with DDR3 1GB)
Power input	9~36V DC in (WD model) 12V DC in
Mounting	DIN mount, VESA 75 mount, wall mount
Operating Temperature	-20°C~65°C (SATA SSD) with Air flow* -10°C~50°C (wifi model with SATA HDD) with Air Flow* *Ambient air speed pre IEC-68-2-2 standard
Operating Shock	Half sine wave 3G; 11ms 3axis
Operating Vibration	Meet MIL-STD-810F 514.5C-1 MIL-STD-810F 514.5C-2
Weight (Net/Gross)	2.1kg/3.9kg

Storage & Expansions



Dual Display

The models of the ECW-281B series, either with Intel® Atom™ N270 single-core processor or D525 dual-core processor, all support dual VGA display through the optional LVDS to VGA converter module. The first VGA output signal is from on-board chipset and supports resolutions up to 2048x1536 (D525) while the second display output is made through the LVDS to VGA converter board (LVDS-VGA-R10) via the LVDS interface and supports resolutions up to 1024x768.



LVDS-VGA-R10

Install in ECW-281B2 series

- » Provide 2nd VGA option for Dual VGA display
- » Resolution adjustable by BIOS
- » Supports 800x600 or 1024x768
- » 18 bit LVDS to VGA Converter board



1 Industrial Computing Solutions

2 Video Capture Solutions

3 Embedded Computing Solution

4 Industrial Data Collector and Controller

5 I/O Communication Solutions

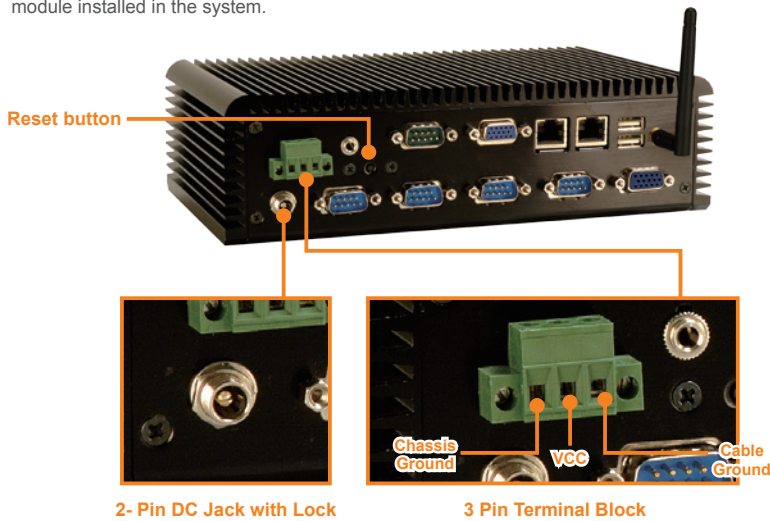
6 Panel Solutions Introduction

7 Oring Network Communication

8 Power Supply/ Peripherals

Extended Voltage Input

The ECW-281B rear panel has two types of power input connectors which support either single 12 V DC input or 9~36 V DC input depending on the power module installed in the system.



IDD-936260

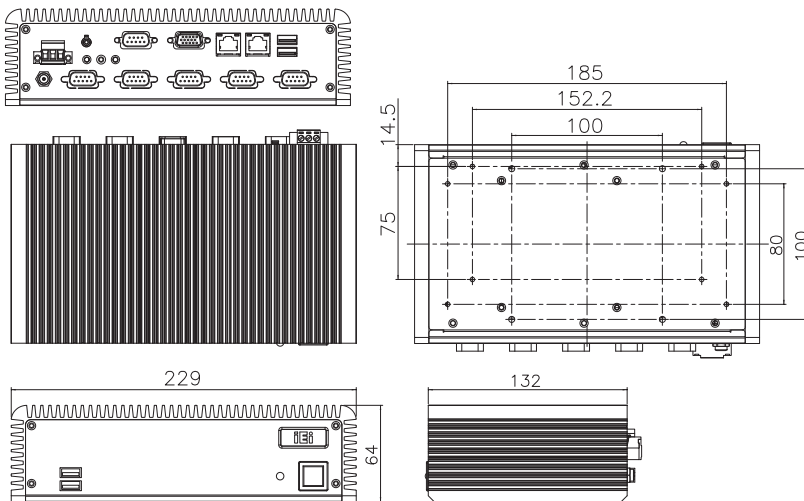
- » Install in 9~36V DC in model (ECW-281BWD series)
- » Input range: 9-36VDC
- » Output:
 - 12 V @ 3 A (Max.)
 - 5 V @ 10 A (Max.)
 - 5 VSB @ 0.5 A (Max.)

DIN Mount



Adjustable to fit with different rail width

Dimensions (Unit: mm)



Packing List

- 1 x QIG
- 1 x Screw set
- 1 x Din mount
- 1 x Hard drive thermal pad
- 2 x Wall mount bracket
- 1 x Driver & user manual CD
- 1 x Power adapter P/N:63000-FSP060DBAB1552-RS (optional for WD model)
- 1 x Power cord (optional for WD model)
European standard P/N: 32000-089900-RS (Default)
American standard P/N:32000-000025-RS
- 1 x Wireless antenna (for wireless model)
- 1 x SATA with power output cable (P/N: 32000-114000-RS)

Ordering Information

Input Type	Model	Description
12V DC input	ECW-281B-R10/D525/1GB	Fanless embedded system , with dual core Intel® Atom™ D525 1.8G, with 6 serial ports, with 1GB DDR3 memory, 12VDC in, 60W power adapter with ERP and PSE certificates, black, RoHS
	ECW-281BW-R10/D525/1GB	Fanless embedded system , with dual core Intel® Atom™ D525 1.8G, with 6 serial ports, built-in 802.11b/g/n wireless, with 1GB DDR3 memory, 12VDC in, 60W power adapter with ERP and PSE certificates, black, RoHS
	ECW-281B2-R10/D525/1GB	Fanless embedded system , with dual core Intel® Atom™ D525 1.8G, with dual VGA display and 5 serial ports, with 1GB DDR3 memory, 12VDC in, 60W power adapter with ERP and PSE certificates, black, RoHS
	ECW-281B2W-R10/D525/1GB	Fanless embedded system , with dual core Intel® Atom™ D525 1.8G, with dual VGA display and 5 serial ports, built-in 802.11b/g/n wireless, with 1GB DDR3 memory, 12VDC in, 60W power adapter with ERP and PSE certificates, black, RoHS
9~36V DC input	ECW-281BWD-R10/D525/1GB	Fanless embedded system , with dual core Intel® Atom™ D525 1.8G, with 6 serial ports, with 1GB DDR3 memory, 9-36VDC in, w/o power adapter, black, RoHS
	ECW-281BWDW-R10/D525/1GB	Fanless embedded system , with dual core Intel® Atom™ D525 1.8G, with 6 serial ports, built-in 802.11b/g/n wireless, with 1GB DDR3 memory, 9-36VDC in, w/o power adapter, black, RoHS
	ECW-281B2WD-R10/D525/1GB	Fanless embedded system , with dual core Intel® Atom™ D525 1.8G, with dual VGA display and 5 serial ports, with 1GB DDR3 memory, 9-36VDC in, w/o power adapter, black, RoHS
	ECW-281B2WDW-R10/D525/1GB	Fanless embedded system , with dual core Intel® Atom™ D525 1.8G, with dual VGA display and 5 serial ports, built-in 802.11b/g/n wireless, with 1GB DDR3 memory, 9-36VDC in, w/o power adapter, black, RoHS

1

Industrial Computing Solutions

2

Video Capture Solutions

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Embedded Computing Solution

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Industrial Data Collector and Controller

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I/O Communication Solutions

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Panel Solutions Introduction

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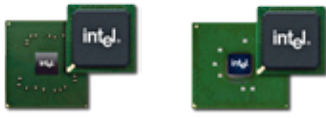



Oring Network Communication

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Power Supply/ Peripherals

Embedded Dual Core Atom

New Atom Platform

Generation	Pentium M / Celeron M		3 chipsets Atom	2 chipsets Dual core Atom	
Architecture	Banias	Dothan	Atom N270	Atom DDR2	Atom DDR3
					
	Socket 479			D510/ D410/ N450	D525/ D425/ N455
TDP	5.5W ~ 27W		2.5W	D510 13W/ D410 10W/ N450 6.5W	
Platform					
	852GM/855GM 915GM		Intel® ICH 7M	Intel® ICH 8M	Intel® ICH 8M

South Bridge	ICH7M	ICH8M
PCI-Express	4 Lanes, PCI Express 1.1	6 Lanes, PCI Express 1.1
PCI	PCI Rev 2.3 @ 33MHz up to 4 Bus Masters	PCI Rev 2.3 @ 33MHz up to 2 Bus Masters
I/O	8 x USB 2.0, 2 x SATA, 1 x IDE, AC'97, HD Audio	10 x USB 2.0, 3 x SATA II, 1 x IDE, HD Audio
TDP	1.7W	2.4W

Embedded Intel® Atom™ Family

New

Platform	Navy Pier DDR2	Luna Pier DDR2	Luna Pier DDR3	Luna Pier DDR3	Luna Pier DDR3
	Atom N270	Atom D510	Atom D425	Atom D525	Atom N455
Launch Date	2008*Q2	2010*Q3	2010*Q4	2010*Q4	2010*Q4
CPU/Chipset	Atom N270 1.6GHz Intel 945GSE	Atom 1.66GHz Dual Core/D510	Atom 1.8GHz Single Core/D425	Atom 1.8GHz Dual Core/D525	Atom 1.66GHz Single Core/N455
FSB	533MHz	N/A	N/A	N/A	N/A
TDP	6.5W (2.5W Atom + 4W 945GSE)	13W	10W	13W	6.5W
L2 Cache	512KB	1024KB	512KB	1024KB	512KB
Supported Memory	DDR2(400/533MHz) up to 2GB	DDR2 (533/667MHz) up to 4GB	DDR3 (667/800MHz) up to 4GB		DDR3 (667MHz) up to 2GB
Graphic	VGA, HDTV(1080i)	VGA (2048x1536)		VGA (1400x1050)	
output	Dual 18bit LVDS (36bit), SDVO	Single 18bit LVDS (1366x768)			
Graphics	Gen3.5, 133MHz, GMA950	Gen 3.5, 400MHz, GMA3150		Gen 3.5, 200MHz, GMA3150	
Cores		DirectX9c, OpenGL 1.5			

D525/D425/N455 Embedded Low Power DDR3 Solution

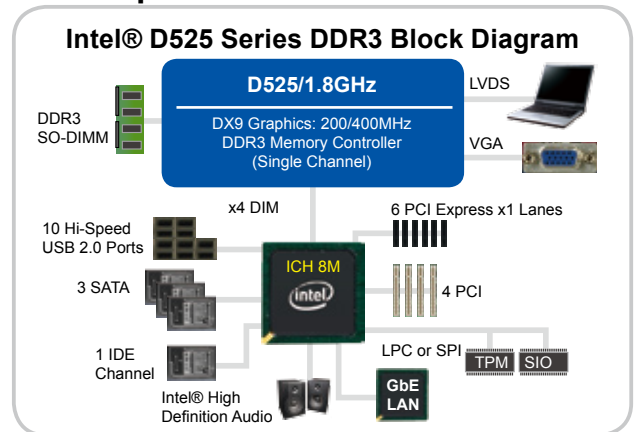
D525/D425/N455: The Intel® Atom™ processor D425 and D525/N455 series integrates the graphics, display, and DDR3 memory controller with the processor and specifically designed to enable affordable entry-level for basic computing.

Features

- **DDR3 support up to 4GB by UEFI BIOS**
 - » Power saving more than 30% compare to DDR2
 - » Higher bandwidth performance, up to 2133 MT/s standardized
- **UEFI BIOS**
 - » Boot time under 10 seconds for fast boot
 - » Support HDD capacities more than 2.2 TB
 - » Support Dual ranks x16 DDR3 Memory up to 2GB per DIMM, system up to 4GB
- **New Graphic Performance**
 - » The GPU contains the 3rd generation graphics core GMA3150 support DX9*, MPEG2 Hardware Acceleration
 - » VGA resolution up to 2046x1536 MHz
 - » Single 18bit LVDS resolution up to 1366x768MHz



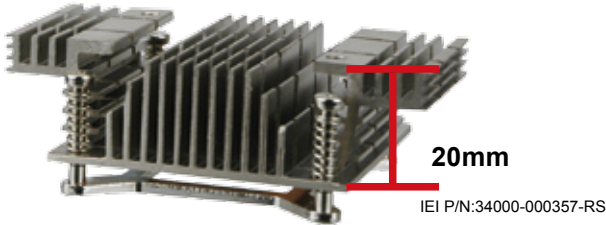
2 Chipsets Solution



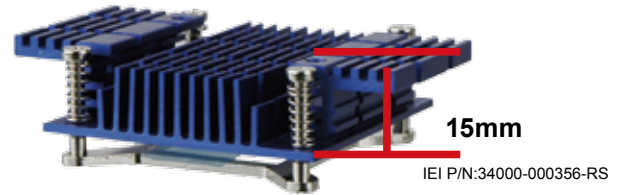
Fanless Design

IEI Provides two types Heatsink for D525/D425/N455 Heatsink for SBC Fanless design

- D525 series with 20mm heatsink
 - D425/N455 with 15mm heatsink
- A. 20mm height heatsink with bracket preinstalled for D525 series products



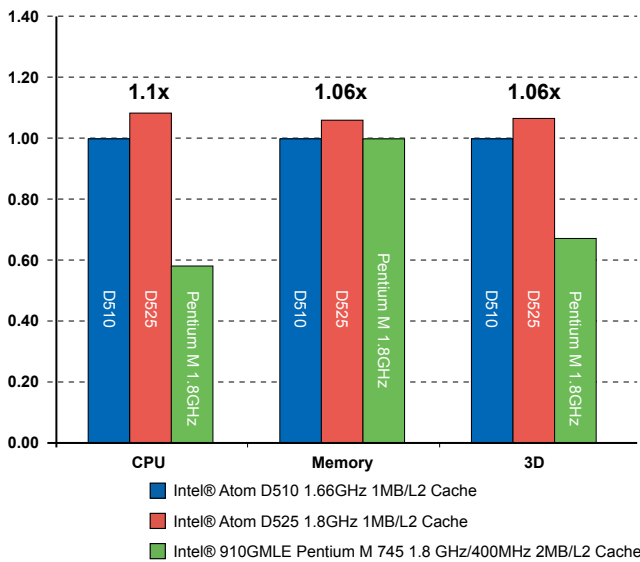
- B. 15mm height heatsink with bracket preinstalled for D425/N455 series products



Dual Core Atom DDR3 solution

Pentium M replacement platform

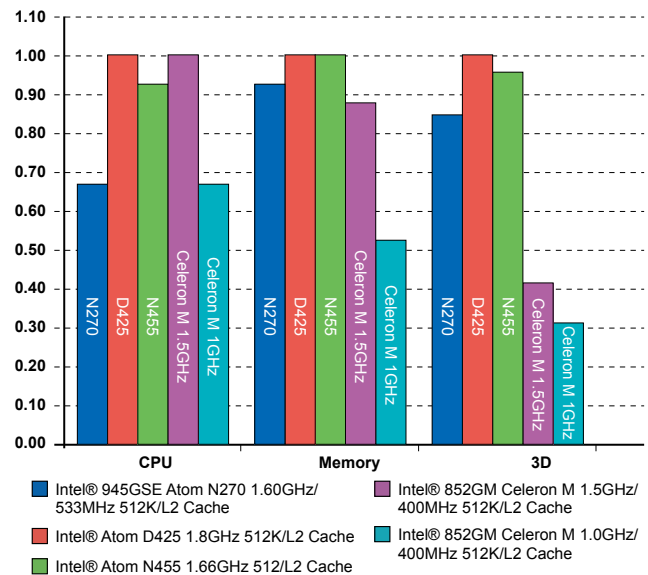
D525: Intel dual core Atom with DDR3 supported, Performance 1.1x better than Intel D510 (DDR2 dual core Atom)



Single Core Atom DDR3 Solution

Celeron M replacement platform

D425/N455 integrated Intel Graphic GMA3150 graphic core, graphic performance 50% better than Celeron M with 852GM



IEI Capture Card Solutions

IEI provides complete video/audio capture card solutions to fulfill the demands of various applications.

The latest HDC solutions are capable of compressing and decompressing full HD video (1920x1080) in real-time using the H.264 codec.

IEI IVC series provides standard-definition (SD) video resolution with standard or MP3 audio capture capability which provides better quality.

H.264 Hardware Compression Solution

Supports high definition video resolution up to 1920 x 1080

HDMI Interface DVI Interface SDI Interface
 HDC-304E HDC-401 HDC-502E
 HDC-302E HDC-401E HDC-501ER
 HDC-301E HDC-402E
 HDC-301



Software Compression Solution

Supports standard definition video resolution up to 720 x 480 NTSC/ 720 x 576 PAL

PCI type PCI type PCI type
 IVCE-C604 IVCE-T604 IVC-T604
 IVCE-C608 IVCE-T608 IVC-T608
 IVCE-268G IVC-168G IVC-268G



2011 New feature in Standard Definition Compression Capture Card

1. Single card with 8 channels capture up to 128 channels.
2. Direct PCIe bus with better bandwidth flow.
3. Better power consumption.
5. Real time video/audio output for real time monitor
5. MP3 quality audio capture



Long Distance High Quality Extension Solution

SDI Interface
 HD-SDI-BOX



H.263/ MPEG4 Hardware Compression Solution

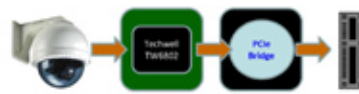
PCI type
 IVC-8371P
 PM-1059



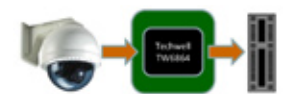
Direct PCIe Solution

2010 PCIe Bridge Solution

2011 Direct PCIe Solution



PCI base capture engine



PCIe base capture engine