

Top-of-the-Line Performance Delivers Messages in Real Time



# Digital Signage



DS910 Series



DS912 Series



ES121-LR



ES122-NP

3	Introduction
4	Comparison
6	Features
11	Industrial Computing Applications
12	ES121-LR
14	ES122-NP
16	DS910-QB
18	DS910-CD
20	DS912-QB
22	DS912-CD

Digital signage is an electronic display of information, advertisements and real time messages on LCD or LED display devices. It is a means of delivering messages to a particular audience. Digital Signage is widely used in both private and public places such as corporate buildings, train stations, airport, healthcare centers and retail outlets. Digital Signage delivers still and animated presentations in accordance to your preferred time and sequence and allows updating contents from anywhere in real time.



Model		Intel® Atom™ E640		Intel® Atom™ N2800	Intel® Atom™ N2600	Intel® Atom™ D510/D410/N450	Intel® Atom™ N270
		DS912-QB	DS910-QB	DS912-CD	DS910-CD	ES121-LR	ES122-NP
Rear I/O	COM: DB-9 D-sub	1	0	1	0	2	2
	HDMI	1		1		1	0
	DVI-I	1		1		2	1
	VGA: DB-15 D-sub	0		0		1	1
	Gigabit LAN: RJ45 with LED	1		1		1	2
	USB 2.0 Type A	2		2		6	4
	Speaker-out: 2W (3.5mm audio jack)	1		1		0	0
	Line-out	0		0		1	1
	Line-in	0		0		1	1
	PS/2 Mouse	0		0		0	1
	PS/2 KB	0		0		0	1
	Power button	1 (with indicator)		1 (with indicator)		1	1
	Reset button	1		1		1	1
	Power LED	0		0		0	1
	HDD LED	0		0		0	1
	DC-in power jack (12V)	1		1		1	1
	Wi-fi module antenna hole	2		2		2	2
Expansion	PCIe x16 (x1 signal): for low profile card	1	0	1	0	0	0
	Mini PCIe	2		1		1 (option)	1 (option)
	Mini PCI	0		0		1 (option)	1 (option)
Front I/O	DIO: 9-pole terminal block for DIO	8-bit		8-bit		0	0
	COM: 5-pole terminal block supports COM	2		1		0	0
	USB 2.0 Type A	2		2		0	0
	Power LED	1		1		1	0
	HDD LED	1		1		1	0
Storage	2.5" Anti-Vibration HDD drive bay	1		1		1	1
	SD/MMC	1		1		0	0
	mSATA (via mini PCIe socket)	1		1		0	0
	CompactFlash	0		0		1	0
Memory	Memory	512MB DDR2 800MHz SDRAM onboard		2 DDR3 1066MHz SODIMM up to 4GB		2 DDR2 SODIMM up to 4GB (D510/D410) up to 2GB (N450)	1 DDR2 DIMM up to 2GB
Chipset	Chipset	Intel® EG20T		Intel® NM10		Intel® ICH8M	Intel® 945GSE/ICH7M
CPU	Onboard CPU	Intel® Atom™ E640		Intel® Atom™ N2800	Intel® Atom™ N2600	Intel® Atom™ D510/D410/N450	Intel® Atom™ N270

## ● Three Independent Display Capability

- Three Independent Displays using Intel® Atom's VGA display port and any combination of the S3 Graphics accelerator based DVI, VGA and HDMI display ports provides up to 2560 x1600 resolution
- Multiple Display Outputs - Intel® GMA 3150(VGA)
  - S3 Graphics Chrome® 435 ULP (2x DVI-I or Bottom DVI-I + HDMI, Clone or Extended )
- 1080p video playback capability (MP4/H.264 hardware decoder)



Display modes: - Clone  
- Extended (supports Independent Display)

## ● Display Resolution

	ES121	ES122		DS912/910-CD	DS912/910-QB
<b>Resolution</b>	1920 x 1080	1920 x 1080		1920 x 1080	1920 x 1080
<b>Video Playback</b>	1080p	N/A		1080p	720p
<b>Video Display</b>	1	N/A		2	1

## ● Two Independent Display Capability

- Intel® GMA 950 graphics core
- Provides incredible visual quality, faster graphics performance and flexible display options without the need for a separate graphics card



Display modes: - Clone  
- Extended (supports Independent Display)

## ● Ultra Low Voltage Processor

### ● ES121-LR: 2-Chip Platform



- Powered by Intel® Atom D510/D410/N450 Ultra Low Voltage Processor and ICH8M I/O Controller Hub
- 13.3 Watt TDP and low power consumption
- Integrated 2-chip solution combines both CPU and graphics
- Intel® GMA 3150 supports VGA display resolution up to 2048x1536
- HD 720P Playback



- S3 Graphics Chrome® 435 ULP accelerator with dual-independent 1080p video display
- Enables hardware acceleration for H.264, VC-1, MPEG-2, WMV- HD, and AVS
- Supports HDMI and DVI

### ● ES122-NP: 3-Chip Platform



- Powered by 1.6GHz Intel® Atom N270 Ultra Low Voltage Processor
- Intel® 945GSE GMCH and ICH7M I/O Controller Hub

### ● DS912/DS910-QB: 2-Chip Platform

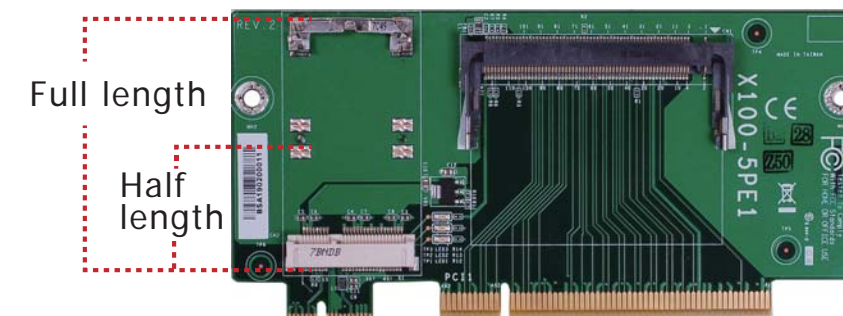


- Powered by Intel® Atom E640 Low Power Processor and EG20T PCH
- 45-nanometer process technology with integrated memory controller and graphics engine

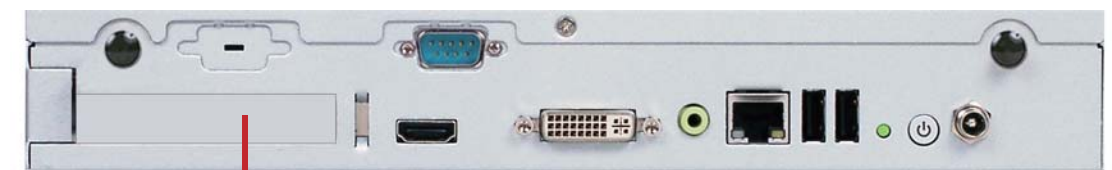
## ● Flexible Expansion

### ● ES121/ES122

Mini PCIe supports half length or full length mini PCIe module. For WiFi and 3G Wireless Connectivity.



### ● DS912-QB/CD



PCIe x16 (x1 Signal)

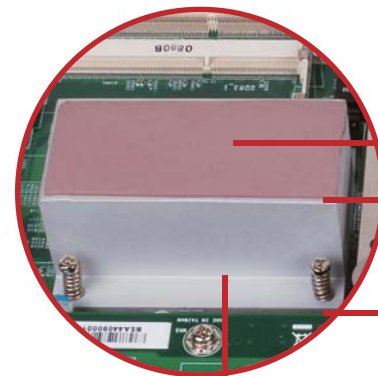
## ● Controls Excessive Vibration During Transfer and Transportation



Damper: Protects the hard drive

- Impact to the chassis which is eventually transmitted to the hard drive is reduced thus protecting the hard drive from damage

## ● Heat Spreader Provides Sufficient Heat Dissipation



Thermal Pad

The height of the heat spreader + the thermal pad on top of it covers wide surface area of heat dissipation.

Heat Spreader



- High thermal conductivity efficiently dissipates heat throughout the system
- Ensures optimum thermal condition
- Better cooling solution than the fin-type heat sink

## ● Wide Range of Applications





## System Specifications

### Processor System

- CPU
  - Intel® Atom™ N450 (single-core, 1.6GHz, 512K cache)
  - Intel® Atom™ D410 (single-core, 1.6GHz, 512K cache)
  - Intel® Atom™ D510 (dual-core, 1.6GHz, 1M cache)
- Chipset
  - Intel® ICH8M

### Memory

- 2 DDR2 667MHz (Intel® Atom™ N450) or 667/800MHz (Intel® Atom™ D410/D510) SODIMM sockets
- Supports up to 4GB (Intel® Atom™ D410/D510) or 2GB (Intel® Atom™ N450) memory
- Single channel memory interface

### Graphics

- Intel® GMA 3150 + S3 Graphics Chrome® 435 ULP GPU
- VGA display resolution up to 2048x1536 (Intel® Atom™ D410/D510) or 1400x1050 (Intel® Atom™ N450)
- DVI display resolution up to 2560x1600
- HDMI display resolution up to 1920x1080
- Display outputs
  - VGA + Bottom DVI-I + Top DVI-I; or
  - VGA + Bottom DVI-I + HDMI

### Storage

- 1 2.5" SATA drive bay
- 1 CompactFlash socket

### Ethernet

- Realtek® RTL8111DL Gigabit Ethernet controller

### Audio

- Realtek ALC262 2-channel High Definition Audio

### COM

- 1 RS232/422/485 COM2 port
- 1 RS232 COM1 port

### Expansion

- 1 mini PCI slot (optional)
- 1 mini PCIe slot (optional)

### I/O Ports

- Front Panel
  - 1 Power LED
  - 1 HDD LED
- Rear Panel
  - 12V DC-in
  - 1 DB-15 VGA
  - 1 HDMI
  - 2 DVI-I
  - 6 USB
  - 1 LAN
  - 1 Line-in
  - 1 Line-out
  - 2 DB-9 COM
  - 1 Reset button
  - 1 Power button

## Features

- Fanless, compact design for industrial applications
- Intel® Atom™ embedded platform; S3 Graphics Chrome® 435 ULP GPU; Intel® ICH8M
- Multiple display outputs
- Supports DDR2 SODIMM; up to 4GB
- 1 2.5" SATA drive bay, 1 CF socket
- 1 VGA, 1 HDMI, 2 DVI-I, 1 LAN, 6 USB, 2 COM, HD Audio

### Power

- Power type
  - Power adapter
    - : AC input: 100-240V, 1.5A, 50-60Hz
    - : DC output: 12V, 5A max (60W max)
- Power input voltage
  - +12V DC

### Environment

- Temperature
  - Operating: 0°C ~ 40°C
  - Storage: -20°C ~ 70°C
- Humidity
  - Operating: 10% to 85% non-condensing
  - Storage: 10% to 95% non-condensing

### Construction

- Aluminum + SECC

### Mounting

- Wall/VESA/Rack mounting kit (brackets and screws) - optional

### Dimensions

- 275mm x 55mm x 181mm (W x H x D)

### Weight

- 2.45 kg

### OS Support

- Windows 7, Windows XP, Windows XP Embedded, Linux

### Other Features

- Watchdog Timer function

### Certification

- CE
- FCC Class B

## System Models

Model	CPU
ES121-LRD510	Intel® Atom™ D510
ES121-LRD410	Intel® Atom™ D410
ES121-LRN450	Intel® Atom™ N450

## Packing List

- 1 x ES121-LR system unit
- 1 x HDD drive bay kit
  - 1 x SATA cable
  - 1 x SATA power cable
  - 4 x HDD screws
- 1 x 60W power adapter
- 1 x Quick Installation Guide
- 1 x CD disk includes:
  - Drivers / Manual

## Optional Items

- 1 x VESA mount kit
  - 1 VESA bracket
  - Bracket screws
- 1 x Wallmount kit
  - 2 wallmount brackets
  - Bracket screws
- 1 x Rackmount kit
  - 2 L-shape rackmount brackets with handle
  - Bracket screws
- 1 x power cord
- 1 Riser card kit (X100-4PE1 + X100-5PE1)
  - Equipped with a Mini PCI slot and a Mini PCIe x1 slot



X100-4PE1  
168.4 x 63.6mm

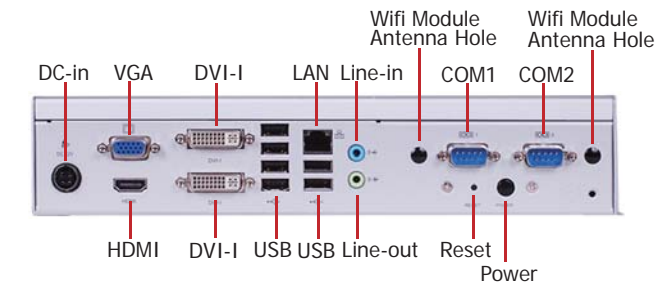


X100-5PE1  
161.1 x 159mm

## Front Panel



## Rear Panel





## System Specifications

### Processor System

- CPU: Intel® Atom™ N270
  - single-core, 1.6GHz, 533MHz FSB
- Chipset
  - Intel® 945GSE GMCH
  - Intel® ICH7M

### Memory

- 1 DDR2 400/533MHz DIMM socket
- Supports up to 2GB memory
- Single channel memory interface

### Graphics

- Intel® GMA 950
- VGA display resolution up to SXGA+ 1400x1050
- DVI display resolution up to 1600x1200
- Display outputs
  - VGA + DVI-I (DVI-D signal only)

### Storage

- 1 2.5" SATA drive bay

### Ethernet

- 2 Realtek® RTL8111C Gigabit Ethernet controllers

### Audio

- Realtek ALC262 2-channel High Definition Audio

### COM

- 2 RS232 COM ports

### Expansion

- 1 mini PCI slot (optional)
- 1 mini PCIe slot (optional)

### I/O Ports

- 1 PS/2 mouse
- 1 PS/2 keyboard
- 12V DC-in
- 2 DB-9 COM
- 1 DB-15 VGA
- 2 LAN
- 4 USB
- 1 Line-in
- 1 Line-out
- 1 DVI-I (DVI-D signal only)
- 1 Reset button
- 1 Power button
- 1 Power LED
- 1 HDD LED

## Features

- Fanless, compact design for industrial applications
- Intel® Atom™ N270 processor
- Intel® 945GSE and ICH7M
- Dual display outputs
- Supports DDR2 DIMM; up to 2GB
- 1 2.5" SATA drive bay
- 1 VGA, 1 DVI-I, 2 LAN, 4 USB, 2 COM, HD Audio

### Power

- Power type
  - Power adapter
    - : AC input: 100-240V, 1.5A, 50-60Hz
    - : DC output: 12V, 5A max (60W max)
- Power input voltage
  - +12V DC

### Environment

- Temperature
  - Operating: 0°C ~ 40°C
  - Storage: -20°C ~ 70°C
- Humidity
  - Operating: 10% to 85% non-condensing
  - Storage: 10% to 95% non-condensing

### Construction

- Aluminum + SECC

### Mounting

- Wall/VESA/Rack mounting kit (brackets and screws) - optional

### Dimensions

- 275mm x 55mm x 181mm (W x H x D)

### Weight

- 2.45 kg

### OS Support

- Windows 7, Windows XP, Windows XP Embedded, Linux

### Other Features

- Watchdog Timer function

### Certification

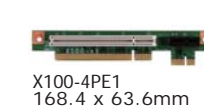
- CE
- FCC Class B

## Packing List

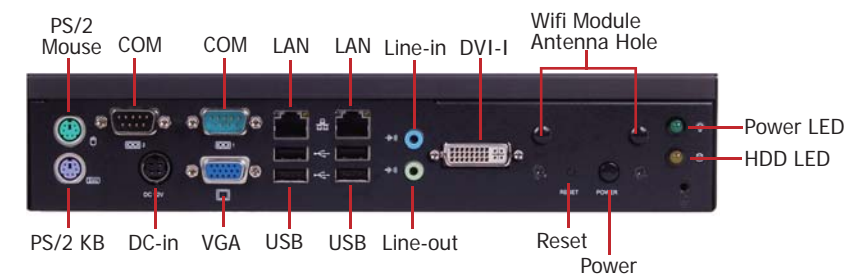
- 1 x ES122-NP system unit
- 1 x HDD drive bay kit
  - 1 x SATA cable
  - 1 x SATA power cable
  - 4 x HDD screws
- 1 x 60W power adapter
- 1 x Quick Installation Guide
- 1 x CD disk includes:
  - Drivers / Manual

## Optional Items

- 1 x VESA mount kit
  - 1 VESA bracket
  - Bracket screws
- 1 x Wallmount kit
  - 2 wallmount brackets
  - Bracket screws
- 1 x Rackmount kit
  - 2 L-shape rackmount brackets with handle
  - Bracket screws
- 1 Riser card kit (X100-4PE1 + X100-5PE1)
  - Equipped with a Mini PCI slot and a Mini PCIe x1 slot
- 1 power cord



## Rear Panel





## Features

- Intel® Atom™ E640; Intel® EG20T
- Dual display output
- 512MB DDR2 SDRAM onboard
- 1 2.5" SATA drive bay, 1 SD/MMC
- Supports mSATA via a mini PCIe slot
- 1 LAN, 1 DVI-I, 1 HDMI, 4 USB, 2 COM, HD Audio, 8-bit DIO

## System Specifications

### Processor System

- CPU
  - Intel® Atom™ E640, 1GHz, 512KB L2 cache
- Chipset
  - Intel® EG20T PCH

### Memory

- 512MB DDR2 800MHz SDRAM onboard (1GB: optional)

### Graphics

- Intel® GMA 600
- Supports Hardware H.264/MPEG-4 video decoder or AVC (Advanced Video Coding)
- DVI-I display resolution up to 1920x1080
- HDMI display resolution up to 1920x1080
- Dual display outputs
  - DVI-I + HDMI

### Storage

- HDD
  - 1 2.5" SATA drive bay
- SSD
  - 1 SD/MMC slot
  - Supports 1 mSATA module via a mini PCIe socket

### Ethernet

- Realtek® RTL8211CL Gigabit Ethernet controller

### Audio

- Realtek ALC262 High Definition Audio

### COM

- 1 5-pole terminal block
  - Supports 2 COM (Tx/Rx only)

### Expansion

- 2 mini PCIe slots
  - One of the slots support mSATA module

### I/O Ports

- Front Panel
  - 1 9-pole terminal block for 8-bit DIO
  - 1 5-pole terminal block supports 2 COM (Tx/Rx only)
  - 2 USB ports (Type A)
  - 1 SD/MMC slot
  - 1 Power LED
  - 1 HDD LED
- Rear Panel
  - 1 HDMI
  - 1 DVI-I
  - 1 Speaker-out
  - 1 LAN
  - 2 USB (Type A)
  - 1 Reset button
  - 1 Power button
  - 2 antenna holes
  - 12V DC-in

### Power

- Power type
  - Power adapter
    - : AC input: 100-240V, 1.5A, 50-60Hz
    - : DC output: 12V, 5A max (60W max)
- Power input voltage
  - +12V DC

### Environment

- Temperature
  - Operating: 0°C ~ 40°C
  - Storage: -20°C ~ 70°C
- Humidity
  - Operating: 10% to 85% non-condensing
  - Storage: 10% to 90% non-condensing

### Construction

- Aluminum + SGCC

### Mounting

- Wall/VESA mounting kit (brackets and screws) - optional

### Dimensions

- 210mm x 35mm x 194.3mm (W x H x D)

### Weight

- TBD

### OS Support

- Windows 7, Windows 7 Embedded, Windows XP, Windows XP Embedded, Linux Kernel 2.6

### Other Features

- Watchdog Timer function

### Certification

- CE
- FCC Class B

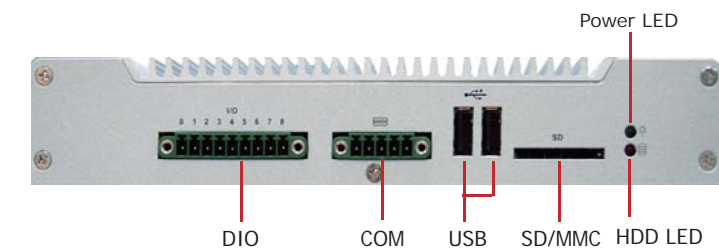
## Packing List

- 1 x DS910-QB system unit
- 1 x HDD drive bay kit
  - 2 x HDD brackets
  - 4 x bracket screws
  - 4 x HDD screws
- 1 x SATA cable
- 1 x SATA power cable
- 4 x anti-shock bumpers
- 1 x 60W power adapter
- 1 x Quick Installation Guide
- 1 x CD disk includes:
  - Drivers / Manual

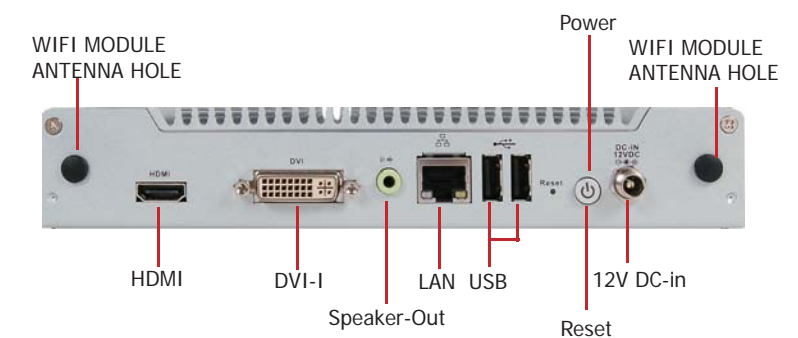
## Optional Items

- 1 x VESA mount kit
  - 1 VESA bracket
  - Bracket screws
- 1 x Wallmount kit
  - 2 wallmount brackets
  - Bracket screws
- 1 x power cord

## Front Panel



## Rear Panel





## System Specifications

### Processor System

- CPU
  - Intel® Atom™ N2600, 1.60GHz, 1MB L2 cache
- Chipset
  - Intel® NM10 PCH

### Memory

- 2 DDR3 1066MHz SODIMM
- Supports up to 4GB memory
- Single channel memory interface

### Graphics

- Intel® GMA
- Supports Hardware H.264/MPEG-4 video decoder or AVC (Advanced Video Coding)
- 1080p video playback capability
- DVI-I display resolution up to 1920x1080
- HDMI display resolution up to 1920x1080
- Dual display outputs
  - DVI-I + HDMI

### Storage

- HDD
  - 1 2.5" SATA drive bay
- SSD
  - 1 SD/MMC slot
  - Supports 1 mSATA module via a mini PCIe socket

### Ethernet

- Realtek® RTL8211DL Gigabit Ethernet controller

### Audio

- Realtek ALC262 High Definition Audio

### COM

- 1 5-pole RS232 COM terminal block

### Expansion

- 2 mini PCIe slots
  - One of the slots support mSATA module

### I/O Ports

- Front Panel
  - 1 9-pole terminal block for 8-bit DIO
  - 1 5-pole RS232 COM terminal block
  - 2 USB ports (Type A)
  - 1 SD/MMC slot
  - 1 Power LED
  - 1 HDD LED
- Rear Panel
  - 1 HDMI
  - 1 DVI-I
  - 1 Speaker-out
  - 1 LAN
  - 2 USB (Type A)
  - 1 Reset button
  - 1 Power button
  - 2 antenna holes
  - 12V DC-in

## Features

- Intel® Atom™ N2600; Intel® NM10
- Dual display output
- Supports DDR3 SODIMM; up to 4GB
- 1 2.5" SATA drive bay, 1 SD/MMC
- Supports mSATA via a mini PCIe slot
- 1 LAN, 1 DVI-I, 1 HDMI, 4 USB, 1 COM, HD Audio, 8-bit DIO

### Power

- Power input voltage
  - +12V DC

### Environment

- Temperature
  - Operating: 0°C ~ 40°C
  - Storage: -20°C ~ 70°C
- Humidity
  - Operating: 10% to 85% non-condensing
  - Storage: 10% to 90% non-condensing

### Construction

- Aluminum + SGCC

### Mounting

- Wall/VESA mounting kit (brackets and screws) - optional

### Dimensions

- 210mm x 35mm x 194.3mm (W x H x D)

### Weight

- TBD

### OS Support

- Windows 7, Windows 7 Embedded, Windows XP, Windows XP Embedded, Linux Kernel 2.6

### Other Features

- Watchdog Timer function

### Certification

- CE
- FCC Class B

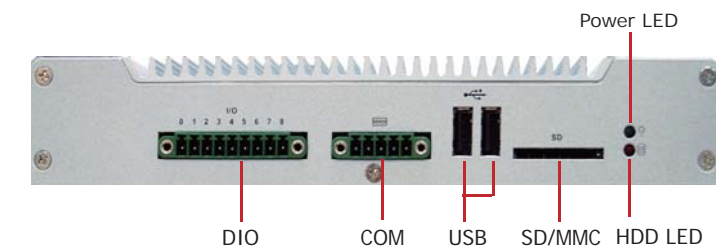
## Packing List

- 1 x DS910-CD system unit
- 1 x HDD drive bay kit
  - 2 x HDD brackets
  - 4 x bracket screws
  - 4 x HDD screws
  - 1 x SATA cable
  - 1 x SATA power cable
  - 4 x anti-shock bumpers
- 1 x 60W power adapter
  - AC input: 100-240V, 1.5A, 50-60Hz
  - DC output: 12V, 5A max (60W max)
- 1 x Quick Installation Guide
- 1 x CD disk includes:
  - Drivers / Manual

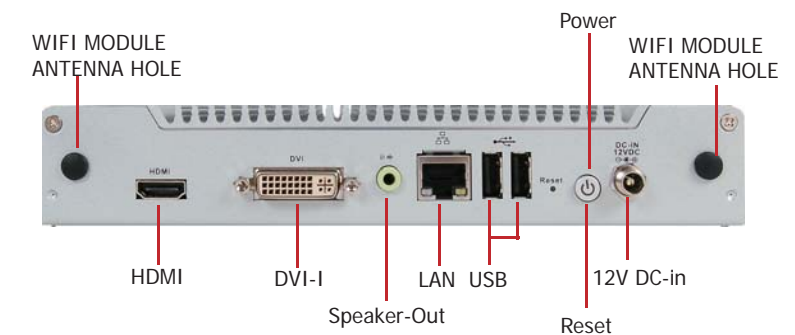
## Optional Items

- 1 x VESA mount kit
  - 1 VESA bracket
  - Bracket screws
- 1 x Wallmount kit
  - 2 wallmount brackets
  - Bracket screws
- 1 x power cord

## Front Panel



## Rear Panel





## System Specifications

### Processor System

- CPU
  - Intel® Atom™ E640, 1GHz, 512KB L2 cache
- Chipset
  - Intel® EG20T PCH

### Memory

- 512MB DDR2 800MHz SDRAM onboard (1GB: optional)

### Graphics

- Intel® GMA 600
- Supports Hardware H.264/MPEG-4 video decoder or AVC (Advanced Video Coding)
- DVI-I display resolution up to 1920x1080
- HDMI display resolution up to 1920x1080
- Dual display outputs
  - DVI-I + HDMI

### Storage

- HDD
  - 1 2.5" SATA drive bay
- SSD
  - 1 SD/MMC slot
  - Supports 1 mSATA module via a mini PCIe socket

### Ethernet

- Realtek® RTL8211CL Gigabit Ethernet controller

### Audio

- Realtek ALC262 High Definition Audio

### COM

- 1 5-pole terminal block
  - Supports 2 COM (Tx/Rx only)
- 1 DB-9 RS232/422/485 COM

### I/O Ports

- Front Panel
  - 1 9-pole terminal block for 8-bit DIO
  - 1 5-pole terminal block supports 2 COM (Tx/Rx only)
  - 2 USB ports (Type A)
  - 1 SD/MMC slot
  - 1 Power LED
  - 1 HDD LED
- Rear Panel
  - 1 DB-9 RS232/422/485 COM
  - 1 HDMI
  - 1 DVI-I
  - 1 Speaker-out
  - 1 LAN
  - 2 USB (Type A)
  - 1 Reset button
  - 1 Power button
  - 2 antenna holes
  - 12V DC-in

## Features

- Intel® Atom™ E640; Intel® EG20T
- Dual display output
- 512MB DDR2 SDRAM onboard
- 1 2.5" SATA drive bay, 1 SD/MMC
- 1 PCIe x16 slot (x1 signal) for graphics expansion
- Supports mSATA via a mini PCIe slot
- 1 LAN, 1 DVI-I, 1 HDMI, 4 USB, 3 COM, HD Audio, 8-bit DIO

### Expansion

- 1 PCIe x16 slot (x1 signal)
  - Supports PCIe graphics card (low profile)
- 2 mini PCIe slots
  - One of the slots support mSATA module

### Power

- Power type
  - Power adapter
    - : AC input: 100-240V, 1.5A, 50-60Hz
    - : DC output: 12V, 5A max (60W max)
- Power input voltage
  - +12V DC

### Environment

- Temperature
  - Operating: 0°C ~ 40°C
  - Storage: -20°C ~ 70°C
- Humidity
  - Operating: 10% to 85% non-condensing
  - Storage: 10% to 90% non-condensing

### Construction

- SGCC

### Mounting

- Wall/VESA/Rack mounting kit (brackets and screws) - optional

### Dimensions

- 275mm x 43.5mm x 194.5mm (W x H x D)

### Weight

- TBD

### OS Support

- Windows 7, Windows 7 Embedded, Windows XP, Windows XP Embedded, Linux Kernel 2.6

### Other Features

- Watchdog Timer function

### Certification

- CE
- FCC Class B

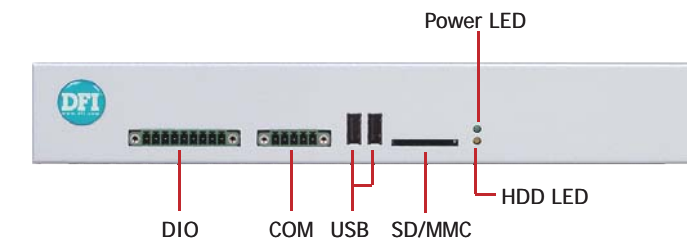
## Packing List

- 1 x DS912-QB system unit
- 1 x HDD drive bay kit
  - 2 x HDD brackets
  - 4 x bracket screws
  - 4 x HDD screws
  - 1 x SATA cable
  - 1 x SATA power cable
  - 4 x anti-shock bumpers
- 1 x 60W power adapter
- 1 x Quick Installation Guide
- 1 x CD disk includes:
  - Drivers / Manual

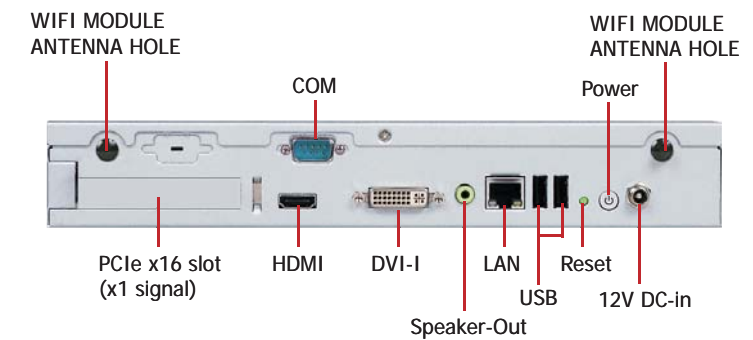
## Optional Items

- 1 x VESA mount kit
  - 1 VESA bracket
  - Bracket screws
- 1 x Wallmount kit
  - 2 wallmount brackets
  - Bracket screws
- 1 x Rackmount kit
  - 2 L-shape rackmount brackets with handle
  - Bracket screws
- 1 x power cord

## Front Panel



## Rear Panel





## System Specifications

### Processor System

- CPU
  - Intel® Atom™ N2800, 1.86GHz, 1MB L2 cache
- Chipset
  - Intel® NM10 PCH

### Memory

- 2 DDR3 1066MHz SODIMM
- Supports up to 4GB memory
- Single channel memory interface

### Graphics

- Intel® GMA
- Supports Hardware H.264/MPEG-4 video decoder or AVC (Advanced Video Coding)
- 1080p video playback capability
- DVI-I display resolution up to 1920x1080
- HDMI display resolution up to 1920x1080
- Dual display outputs
  - DVI-I + HDMI

### Storage

- HDD
  - 1 2.5" SATA drive bay
- SSD
  - 1 SD/MMC slot
  - Supports 1 mSATA module via a mini PCIe socket

### Ethernet

- Realtek® RTL8211DL Gigabit Ethernet controller

### Audio

- Realtek ALC262 High Definition Audio

### COM

- 1 5-pole RS232 COM terminal block
- 1 DB-9 RS232/422/485 COM

### I/O Ports

- Front Panel
  - 1 9-pole terminal block for 8-bit DIO
  - 1 5-pole RS232 COM terminal block
  - 2 USB ports (Type A)
  - 1 SD/MMC slot
  - 1 Power LED
  - 1 HDD LED
- Rear Panel
  - 1 DB-9 RS232/422/485 COM
  - 1 HDMI
  - 1 DVI-I
  - 1 Speaker-out
  - 1 LAN
  - 2 USB (Type A)
  - 1 Reset button
  - 1 Power button
  - 2 antenna holes
  - 12V DC-in

## Features

- Intel® Atom™ N2800; Intel® NM10
- Dual display output
- Supports DDR3 SODIMM; up to 4GB
- 1 2.5" SATA drive bay, 1 SD/MMC
- 1 PCIe x16 slot (x1 signal) for graphics expansion
- Supports mSATA via a mini PCIe slot
- 1 LAN, 1 DVI-I, 1 HDMI, 4 USB, 2 COM, HD Audio, 8-bit DIO

### Expansion

- 1 PCIe x16 slot (x1 signal)
  - Supports PCIe graphics card (low profile)
- 2 mini PCIe slots
  - One of the slots support mSATA module

### Power

- Power input voltage
  - +12V DC

### Environment

- Temperature
  - Operating: 0°C ~ 40°C
  - Storage: -20°C ~ 70°C
- Humidity
  - Operating: 10% to 85% non-condensing
  - Storage: 10% to 90% non-condensing

### Construction

- SGCC

### Mounting

- Wall/VESA/Rack mounting kit (brackets and screws) - optional

### Dimensions

- 295mm x 43.5mm x 205mm (W x H x D)

### Weight

- TBD

### OS Support

- Windows 7, Windows 7 Embedded, Windows XP, Windows XP Embedded, Linux Kernel 2.6

### Other Features

- Watchdog Timer function

### Certification

- CE
- FCC Class B

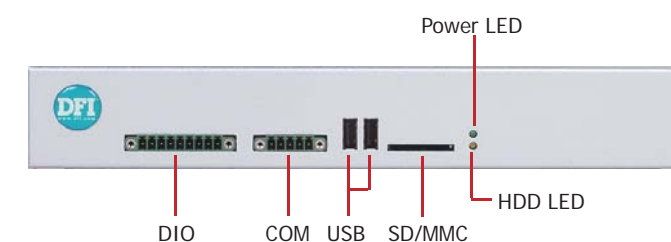
## Packing List

- 1 x DS912-CD system unit
- 1 x HDD drive bay kit
  - 2 x HDD brackets
  - 4 x bracket screws
  - 4 x HDD screws
  - 1 x SATA cable
  - 1 x SATA power cable
  - 4 x anti-shock bumpers
- 1 x 60W power adapter
  - AC input: 100-240V, 1.5A, 50-60Hz
  - DC output: 12V, 5A max (60W max)
- 1 x Quick Installation Guide
- 1 x CD disk includes:
  - Drivers / Manual

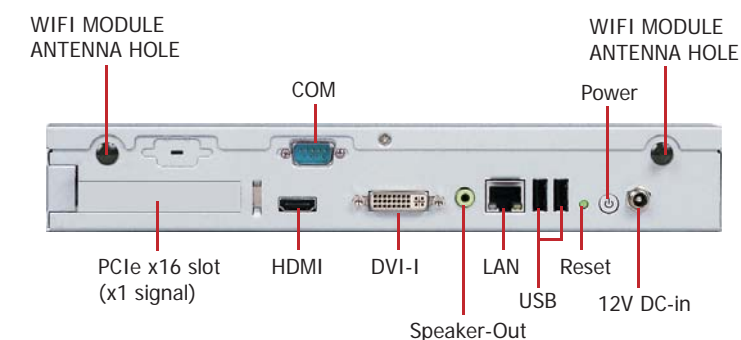
## Optional Items

- 1 x VESA mount kit
  - 1 VESA bracket
  - Bracket screws
- 1 x Wallmount kit
  - 2 wallmount brackets
  - Bracket screws
- 1 x Rackmount kit
  - 2 L-shape rackmount brackets with handle
  - Bracket screws
- 1 x power cord

## Front Panel



## Rear Panel





Established in 1981, DFI® is a leading supplier of high-performance computing technology worldwide. With more than 29 years of experience, DFI® focuses on innovative design and manufacture of leading-edge board and system level products for embedded applications requiring strict revision control and long life availability. DFI® uses the latest technology platforms and manufacturing techniques to produce cost-effective products for use in medical diagnostic & imaging, ATM/POS, industrial control, kiosk, security & surveillance, digital signage, gaming, and other embedded applications. As an Associate member of the Intel® Embedded Alliance (IEA), DFI® works closely with Intel® on development of next-generation standards-based building blocks, platforms and solutions for the communications and embedded market segments.

All product specifications are subject to change without notice.

Intel® and Atom™ are registered trademarks of the Intel® Corporation in the U.S. and other countries.

For more information on the Digital Signage Series ,  
please visit: [www.dfi.com](http://www.dfi.com)

**DFI Inc.**

100, Huanhe St., Xizhi Dist.,  
New Taipei City 22154, Taiwan (R.O.C.)

Tel: +886(2)2694-2986

Fax: +886(2)2694-5815

E-Mail: [inquiry@dfi.com.tw](mailto:inquiry@dfi.com.tw)

Website: <http://www.dfi.com>