

ARK-DS520

Advanced (ION2 based) Graphics Digital Signage Platform

Coming Soon



Features

- Integrated nVidia GT218 (ION2) graphic module for Full HD playback
- Rich video I/O combination supports dual display (eg: 2 x VGA, VGA + HDMI, HDMI + DVI)
- Embedded Intel® Atom™ D525 dual-core (fan) or Intel® Atom™ N455 single-core process (fanless)
- Compact, low-profile design for easy installation
- Highly expandable via internal Mini PCIe interface (eg: WLAN, 3G or TV tuner)
- RS-232 and DIO ports convenient for system integration and applications
- Consumer Electronic Control (CEC) implemented on HDMI (*1)



Introduction

With an Intel® Atom™ D525 dual-core/ N455 single-core dual-core and NVIDIA® GT218 graphic module (also known as ION2 technology), the Advantech ARK-DS520 can perform Full HD video hardware decoding and playback; it is an ideal platform not only for digital signage, but also for self-service kiosks and any other graphics-centric applications. ARK-DS520 has a rich combination of video output interfaces (eg: VGA x 2, DVI-D, and HDMI) to provide dual display output simultaneously. For better connectivity, the ARK-DS520 supports two full size mini card slots for add-on functions such as wireless network and TV tuner cards to fulfill different requirements.

Specifications

Processor System	CPU	Intel Atom D525 1.8 GHz, Intel Atom N455 1.66 GHz
	System Chipset	Intel Atom D525/N455 + ICH8M
	L2 Cache	1 MB/512 KB (Depends on CPU Type)
	BIOS	AMI 16 Mbit Flash BIOS
	Front Side Bus	800 MHz/667 MHz
Memory	Technology	2 x DDR3 204-pin DIMM
	Max. Capacity	Max. up to 4GB (w/ D525); or 2GB (w/ N455)
	Chipset	nVidia GT218-ILV-B1
Display	Memory Size	Independent display memory 512 MB
	Resolution (Chipset support)	VGA: up to 2048 x 1536 at 60 Hz; DVI-D: single link 1920 x 1200 at 60 Hz; HDMI: Up to 1080P
	Output	HDMI x 1, DVI-D x 1, VGA x 2
	Dual Display	Any 2 display outputs simultaneously
Storage	Video Format	Blu-ray, MPEG2, MPEG4 Part 2 Advanced Simple Profile, H.264, VC1, DivX version 3.11 and later (*2)
	SATA	2.5" SATA HDD
Ethernet	CF	CompactFlash socket for type I/II
	Interface	Gigabit LAN Controller
	Controller	Intel 82567V for LAN 1, Realtek RTL8111D-GR for LAN2
I/O Interface	Connector	2 x RJ-45
	HDMI	1
	DVI-D	1
	VGA	2 (D-sub 15-pin)
	LAN	2 (RJ-45)
	USB	4 (USB 2.0 compliant)
	Audio	2 audio phone jacks for Line-out, Mic-in (support retasking function)
	Serial	2 x COM (RS-232)
	Digital I/O	1 DB9 (Female type)
	Mini-PCIe (Internal)	2 (for optional expansion modules)
	Power input	1 DC jack
Power Requirement	Management	ACPI 2.0
	Power Consumption Input Voltage	Average 18W, Maximum 30W
	Input Voltage	12 V DC-in (ATX/AT mode)
	Others	Supports Boot on Power Back and Scheduled Boot Up functions
Watchdog Timer	Output	Interrupt, system reset
	Interval	Programmable 1~255sec.
Physical Characteristics	Mounting	Desktop/ Wall Mount
	Dimensions (W x H x D)	220 x 44.2 x 150 mm
	Weight	1.7 kg (3.74 lb)
Environment	Temperature	0 ~ 40° C (32 ~ 104° F), operating -20 ~ 70° C, storage
	Relative Humidity	95% @ 40° C (non-condensing), operating
	Vibration Resistance	TBD
Software Development Kit	Operating System	Supports Microsoft Windows 7, XP with SP3, XP Embedded, Linux
	EFW & WDT SDK	EFW and WDT library for signage stability design in XPE
	Linux	Linux Fedora 14
Certification	Electromagnetic	CE, FCC
	Safety	CCC, BSMI

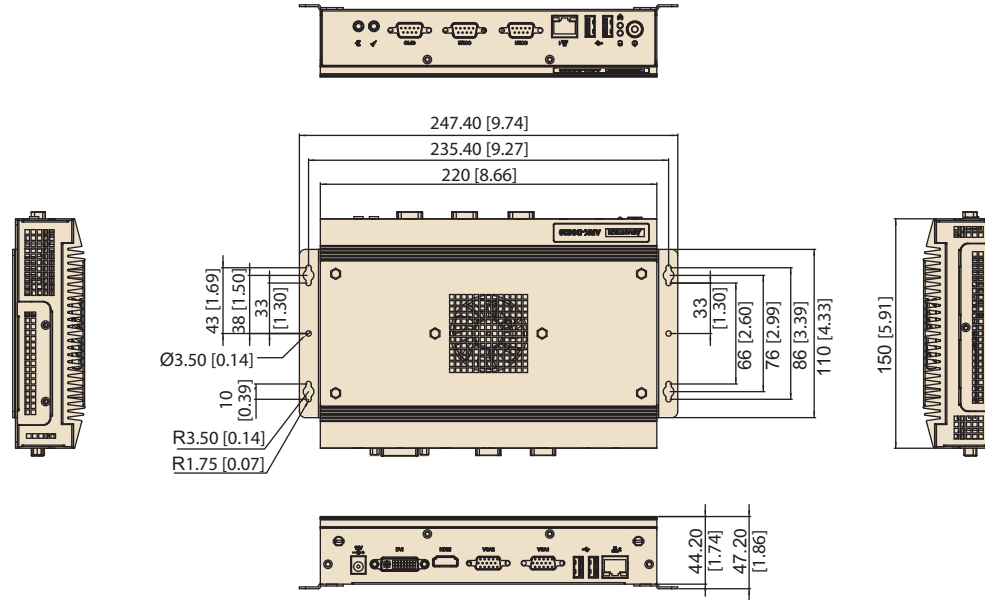
*1: CEC pin define reserved in HDMI, need software to enable it

*2: The playback media format is supported by the player software, not provided by Advantech hardware

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Dimensions

Unit: mm (inch)



ARK-DS520 External I/O



Front



Rear

Fanless Option with Intel Atom N455 Single-core CPU



Ordering Information

Part Number	Description
ARK-DS520F-D6A1E	ARK-DS520, Atom D525, dual display, 2 GbE, 4 USB, 2 COM, DIO, Audio w/ 2 GB RAM + 160G HDD (Fan-based)
ARK-DS520F-N5A1E	ARK-DS520, Atom N455, dual display, 2 GbE, 4 USB, 2 COM, DIO, Audio w/ 2 GB RAM + 160G HDD (Fanless)

Embedded Software

Part Number	Description
TBD	

Accessories

Part Number	Description
AMO-WIFI01E	WIFI 802.11 b/g/n mini PCIe module (w/ antenna)
AMO-HSDPA01E	HSDPA mini PCIe module (w/ antenna)

Power Cord & Specific Power Adaptor

Part Number	Description
1702002600	3-pin power cord (US)
1700018705	3-pin power cord (EU)
1702031801	3-pin power cord (UK)
1702031836	3-pin power cord (AU)
1700000237	3-pin power cord (JP)