HDCS–7003
Fanless Embedded System with SDI 1080p Full HD Video Capture Solution

New

Features

- 2nd Gen Intel® Core™ i7 with on-board 2GB DDR3 memory and one DDR3 SO-DIMM slot (system max. 8GB)
- Dual combo (10/100/1000 BASE-T(X) or 1000BaseSFP slot) Gigabit LAN ports, supporting Intel® AMT 7.0
- Supports two USB 3.0 ports, four USB 2.0 ports, one SATA 6Gb/s port, one CAN-bus port and eight COM ports (four with isolation)
- Supports maximum 3-channel SDI 1080p real time video capture
- Supports Linux Fedora 16 (v3.4) 32-bit/64-bit V4L2
- Supports Windows® 7 64-bit/32-bit for Microsoft® WDM driver
- Provides SDK compatible with Microsoft® DirectShow and reference sample code for second development
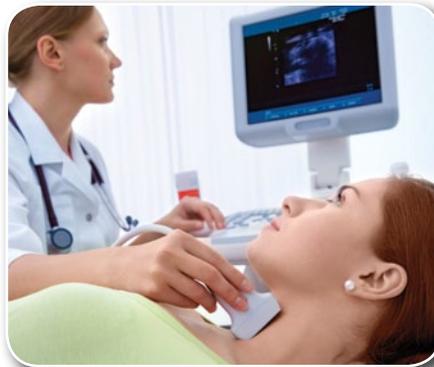
Introduction

The HDCS-7003 series is a high performance fanless embedded system for video processing and video/audio analyzing with full HD video format. The HDCS-7003 series supports one to three channels of Serial Digital Interface (SDI) video and audio inputs. The SDI interface is currently available and popular in professional video equipments and devices to provide precise and high quality video. The HDCS-7003 series is capable to perform 30fps in each channel with full HD 1080p video format. The target markets of the HDCS-7003 series focus on medical imaging devices, studio HD storage and automatic inspection machines. The software development kit (SDK) makes the HDCS-7003 series an ideal solution for system integrators to facilitate project and product implementation and fulfill a variety of applications and requirements.

Applications

Endoscopy Surgery
Endoscopy typically refers to looking inside the body for medical reasons using an endoscope through video capture devices which require clear and detailed image for precise operations.

Ultrasound Scanner
Ultrasound procedures are done using a transducer on the surface of the body, and the reflection could construct image/video data for diagnosis.
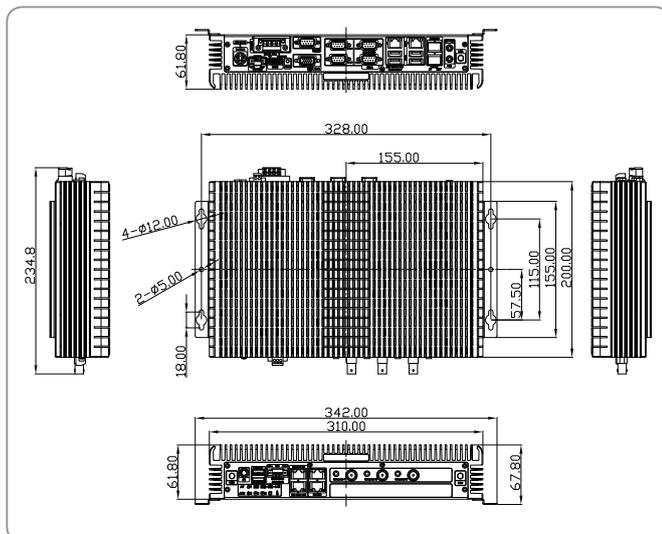
Automatic Optical Inspection
Automated optical inspection (AOI) is an automated visual inspection of a wide range of products. AOI systems are always implemented at image processing through video capture devices. Each industry is different in how image acquisition signals are transferred to the camera.

Specifications

Model Name	HDCS-7003-R10 Series	HDCS-7002-R10 Series	HDCS-7001-R10 Series
Platform	TANK-700-QM67/2G-R10		
Processor	Socket G2 supports Intel@ Core™ i7 processor		
System Chipset	Intel® QM67		
OS	Windows® 7 64-bit (W764) Windows® 7 32-bit (W732) Linux Fedora OS 64-bit (LF64) Linux Fedora OS 32-bit (LF32)		
Display	VGA+HDMI		
Memory	On-board 2GB memory One 204-pin 1333/1066 MHz DDR3 dual-channel SDRAM SO-DIMM slot (system max. 4GB)		
LAN	2 x RJ-45 (one with Intel® AMT 7.0 support)		
Wireless	Optional		
USB Port	4 x USB 2.0 port on the rear panel 2 x USB 3.0 port on the front panel		
COM Port	4 x RS-232 port by DB-9 connector on the rear panel 2 x RS-232 port by RJ-45 connector on the front panel 2 x RS-232/422/485 port with isolation by RJ-45 connector on the front panel		
CAN-bus	1 x Phoenix terminal block on the front panel		
Storage	Built-in 500GB 2.5" SATA 6Gb/s HDD		
Video/Audio Capture	Three SDI video capture cards pre-installed	Two SDI video capture cards pre-installed	One SDI video capture card pre-installed
Audio	Audio jacks (line-out/mic-in) on the rear panel		
Expansions	1 x SO-DIMM slot		
Indicators	Indicators are located on the front panel, including: AT/ATX mode indicator HDD status indicator CPU over-heat warning indicator Power One: 9V~28V DC terminal block input indicator Power Two: 9V~28V DC adapter input indicator		
Antenna Connectors	Two on the front panel One on the rear panel		
Switches	AT/ATX, ACC Mode1 and ACC Mode2 switches on the rear panel		
Chassis Construction	Extruded Aluminum Alloy for fanless support Heavy duty steel sheet		
Chassis Dimensions	310mm x 200mm x 62mm		
Chassis Color	Sliver black		
Operating Shock	Half-Sine Shock Test 5G/11ms, 3 shocks per axis		
Operating Vibration	MIL-STD-810F 514.5 C-2		
Humidity	5% to 95%, no condensation		

Dimension (Unit: mm)

Ordering Information

Part Number	Description
HDCS-7003-R10	Fanless embedded system, Intel® QM67 chipset, 2nd Generation Intel® Core™ i7 processor, 2GB DDR3 on-board memory, 2.5" 500GB HDD, 3 built-in SDI high-definition capture solution
Windows® 7 64-bit HDCS-7003-S/SC/W764-R10	Fanless embedded system, Intel® QM67 chipset, 2nd Generation Intel® Core™ i7 processor, 2GB DDR3 on-board memory, 2.5" 500GB HDD, 3 built-in high-definition capture cards, Windows® 7 64-bit
Linux Fedora 64-bit HDCS-7003-S/SC/LF64-R10	Fanless embedded system, Intel® QM67 chipset, 2nd Generation Intel® Core™ i7 processor, 2GB DDR3 on-board memory, 2.5" 500GB HDD, 3 built-in high-definition capture cards, Linux Fedora 64-bit