huperLab®

Go Green Go Small

Gaia 404/408/416
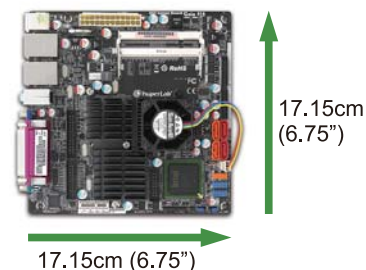## huperVision 4000 DSS Server Board
Small, Low Power & Big Performance

Key Features

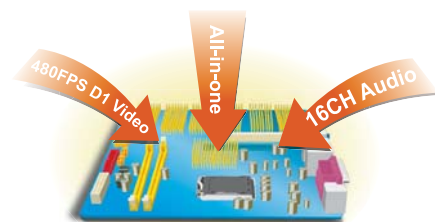## ▪ Small Form Factor & Low Power Consumption

- ▪ Mini-ITX form factor
- ▪ Save hardware space
- ▪ Suitable for various applications
- ▪ System power consumption lower than 60 Watts*

    Note: *Power consumption may vary across different system configurations. The system
        power consumption is measured based on the Gaia 416 16CH DVR system equipped
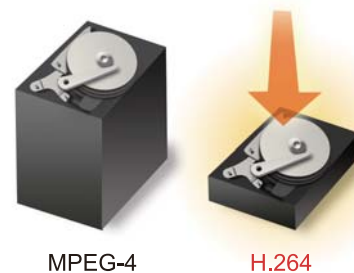   with 1GB memory x2, HDD x2, and Gigabit LAN x2.

17.15cm (6.75")

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▪ Easy Installation & Improved Compatibility

- ▪ Built-in CPU & On-board Video/Audio Capture Chips
    - • Guarantee full integration of system board and capturing devices
    - • Improve compatibility
    - • Save testing efforts
    - • Reduce the Total Cost of Ownership
- ▪ Microsoft® XP Embedded ready to save software installation efforts

480FPS D1 Video   All-in-one   16CH Audio

▪ H.264 & HM (MPEG-4 Like) Recording

- ▪ High Quality Software Compression
    - • H.264
    - • HM (MPEG-4 Like)
    - • Motion-JPEG
- ▪ Flexible bit rate settings fulfill various compression requirements
- ▪ Low CPU consumption on video compression

MPEG-4   H.264

▪ Hybrid DVR & IP Surveillance Ready

- ▪ True Hybrid functionality allows the connection of both analog and IP cameras as well as any hybrid combinations, or all IP cameras connection without any additional costs.
- ▪ Support a wide range of IP cameras, megapixel cameras and video servers.

Analog Camera
IP Camera
Megapixel Camera

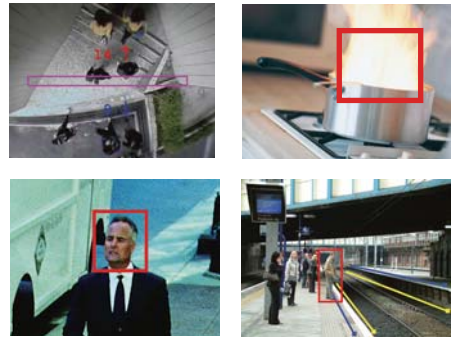## ▪ Industrial-level Board Design for Surveillance Use

- ▪ Industrial Board Design for 24/7 & Longer Operation Time
    - • Durable System Fan
    - • Industrial-level Solid Capacitor
- ▪ On-board Hardware Watchdog for automatic system rebooting when DVR freezes
- ▪ Surge Protection design provides protection against damage from static electrical charge or suddenly dramatic power-flow change.
- ▪ Dual Gigabit Lan provides wider bandwidth to speed up data transmission on NAS access and IP surveillance

▪ Full Channel D1 Real-time Display Up to 16CH 480/400 FPS

- ▪ 10 bit ADC Video Capture Chips
    - • Raw Data Capture guarantees complete data capture against from data loss problem
    - • Superior Video Quality
- ▪ Up to 16CH Audio Inputs

■ Intelligent Surveillance Software Suite

- ■ Supported by huperVision 4000 intelligent surveillance software suite, including missing & left object detections, virtual fence detection, smart search, etc.
- ■ Remote surveillance and Central Management Solution Ready
- ■ Support PTZ camera auto tracking
- ■ Up to 4 Spot Monitor TV-out Support

Product Description

huperVision 4000 DSS Server Board Gaia Series, built in with Intel® Atom™ processor and high quality video/audio capture chips, is the smallest and lowest power server board designed exclusively for security surveillance use. As the word "Gaia" (meaning Mother Earth) represented, huperLab strives to minimize energy use on DSS Server Board for an eco-friendly environment on Earth. Consuming less than 60 watts[*1] system power, this huperVision 4000 Gaia Server Board based surveillance system reduces electricity expense and promotes greener environment. Running with huperVision 4000 surveillance software suite, the Gaia DSS Server Board not only provides up to 16CH D1 real-time video display, and rich intelligent surveillance features, but enables the connections of both CCTV and IP cameras to the newly-built or existing surveillance system.

- ■ Low Power & Small Form Factor
- ■ Built-in Intel® Atom™ Processor & Video/Audio Capture Chips
- ■ Industrial-level Board Design Exclusively for Surveillance Use
- ■ True Hybrid Surveillance Ready
- ■ Up to 4 Spot Monitor TV-Out Support
- ■ huperVision 4000 Intelligent Surveillance Software Suite[*2]

Easy Installation
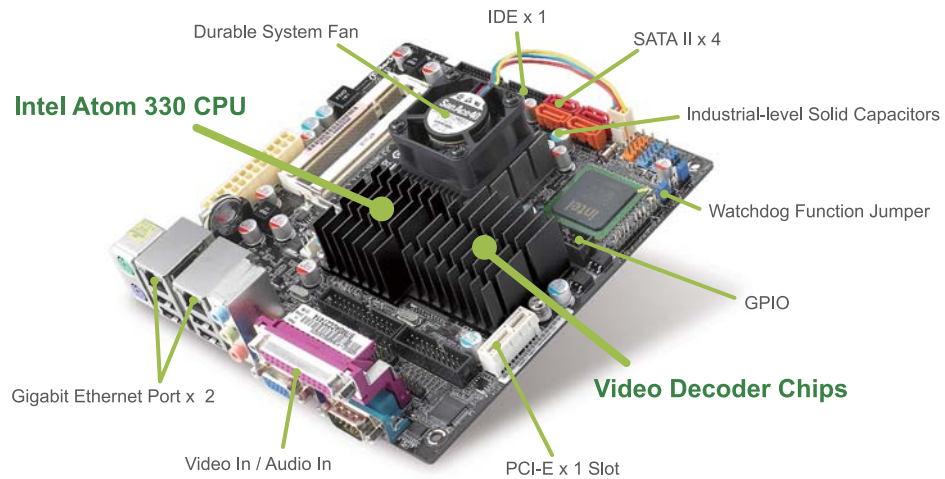
High Reliability

Flexible Configuration

Long-term Board Supply

Note:
- *1 Power consumption may vary across different system configurations. The system power consumption is measured based on the Gaia 416 16CH DVR system equipped with 1GB memory x2, HDD x2, and Gigabit LAN x2.
- *2 Some of huperVision 4000 intelligent video analytics are optional. Please refer to huperVision 4000 product specifications for details.

■ Gaia DSS Server Board Layout

IDE x 1

Durable System Fan

SATA II x 4

Intel Atom 330 CPU

Industrial-level Solid Capacitors

Watchdog Function Jumper

GPIO

Gigabit Ethernet Port x 2

Video Decoder Chips

Video In / Audio In

PCI-E x 1 Slot

■ Product Models

Product Model	Gaia 404	Gaia 408	Gaia 416-120 *³	Gaia 416-60
Video Input (Analog)	4	8	16	16
Audio Input	4	8	16	16
Display Rate (NTSC/PAL)	120FPS/100FPS @ D1	240FPS/200FPS @ D1	480FPS/400FPS @ D1	480FPS/400FPS @ D1
Recording Rate (NTSC/PAL)				
720x480 / 720x576	120FPS/100FPS	120FPS/100FPS	120FPS/100FPS	60FPS/50FPS
720x240 / 720x288	120FPS/100FPS	240FPS/200FPS	240FPS/200FPS	120FPS/100FPS
320x240	120FPS/100FPS	240FPS/200FPS	480FPS/400FPS	240FPS/200FPS
TV-Out Support *¹	2	2	4	4
Max. IP CH Support *²	4	8	4	4
GPIO	8	8	8	8
Surveillance Software	huperVision 4000 v1.53 Intelligent Surveillance Software Suite			

■ Server Board Specification

Item	Description
CPU	Intel® Atom™ Processor 330
Chipset	Intel® 945GC + ICH7
FSB	533 MHz
Memory Type	DDR2 667/800 (Dual Channel)
Max. Memory	4 GB
Memory Slot	SO-DIMM x 2
Expansion Slots	PCIe x 1 x 1
Video In	4/ 8/ 16CH Video Inputs (10 bit ADC)
Graphics	Intel® Integrated Graphic GMA 950
Storage Interface	IDE (Primary/Slave) x 1 / S-ATA x 4
LAN	Dual 10/ 100/ 1000 LAN (RTL8168 x 2)
Audio	AC97 (Realtek ALC662)
Internal I/O	USB2.0 x 2 / Front Audio x 1 / COM x 1
Rear I/O	USB2.0 x 4 / PS2 x 2 / LAN x 2 / Audio x 3 / COM x 1 / 16CH Video In (LPT Port) x 1
Form Factor	Mini ITX

■ Digital Video Specifications

Item	Description
Video Inputs	4/ 8/ 16
Audio Inputs	4/ 8/ 16
Video Resolution	720x480HD/720x576HD, 720x480/ 720x576, 720x240/720x288, 640x480HD, 640x480, 640x240, 320x240
Display Rate (NTSC/PAL)	Up to 480FPS/400FPS @ D1 resolution
Recording Rate (NTSC/PAL)	Up to 480FPS/400FPS @ 320x240 or 120FPS/100FPS @ D1
GPIO	8
Watchdog	Yes, hardware & software reset for anti-freeze protection

Note:
- *1 TV-Out cable with bracket is optional.
- *2 Running with huperVision 4000 v1.53 intelligent surveillance System.
- *3 Gaia 416-120 is not available currently.
- The 16CH audio connector is not included in the standard package, and requires extra purchase.
- Product specifications and pictures are subject to change without prior notice.
- For accessories and other product details, please visit our website at www.huperlab.com

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