



Introduction to the  
**NSD7200**  
**2 HDD Compact Server platform**

v1.0a  
Jerry Yuan, 2009.04.17

# Agenda

- **Basic introduction about the NSD7200**
- **The benefits of the NSD7200**
- **Customization information**
- **Appendix: reference data**

# What is the NSD7200 ?

- **a desktop storage platform ideal for**
  - home media server
  - media center
  - Microsoft Windows® Home Server (WHS)
  - small size server
  - other storage oriented applications

# What is the NSD7200 ? (cont.)

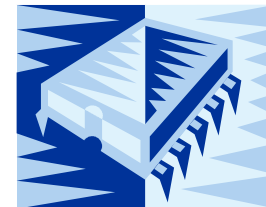
- **an industrial grade system platform solution with**
  - high quality
  - high reliability
  - low power consumption
  - low noise

# What is the NSD7200 made of?

- **hardware that supports up to two 2TB 3.5" SATA hard drives in a small 135x120x260mm box**
- **hardware based on the popular x86 architecture**
- **hardware that provides Gigabit LAN performance**

# Basic specification

- **CPU**
  - VIA C7-D 1.5GHz with PadLock security engine
- **Chipset**
  - VIA VX800 highly integrated chip
- **RAM**
  - Supports up to 2GB of SODIMM DDR2 RAM
- **Storage**
  - Supports up to two 2TB 3.5" SATA HDD
  - easy installation design



# Basic specification (cont.)

- **SSD**
  - Bootable CF socket for embedded OS & firmware
- **LAN**
  - VIA VT6130 Gigabit LAN
- **WLAN**
  - Optional VIA WLAN module providing support for the 802.11b/g standard



# Basic specification (cont.)

- **Power**
  - AC100~240V power adapter
- **Supported OS**
  - Windows XP/Vista
  - Windows XP Embedded
  - Windows Home Server
  - Linux
  - FreeBSD

# NSD7200

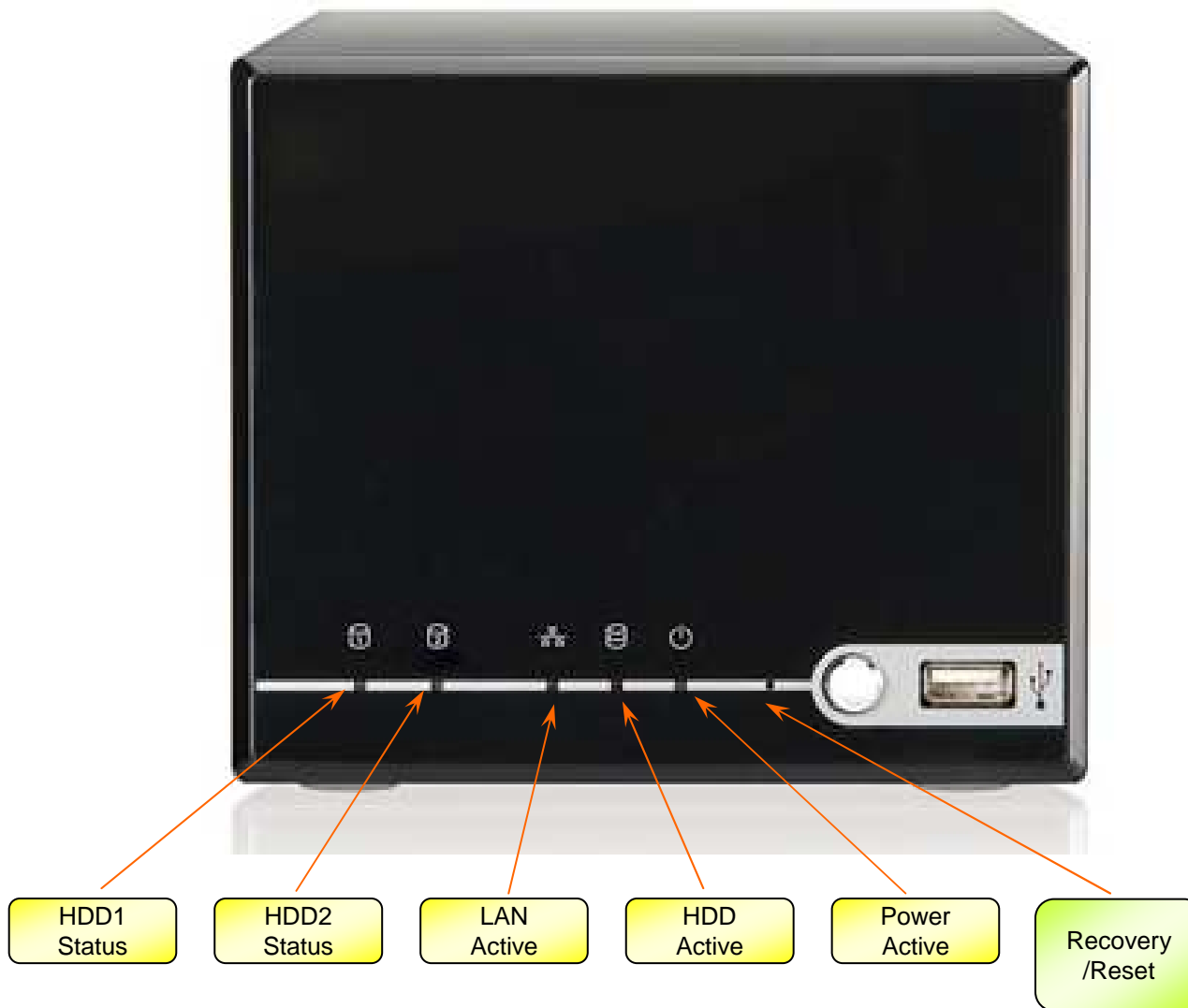
# Introduction

# Front Panel (Overview)

embedded in your success



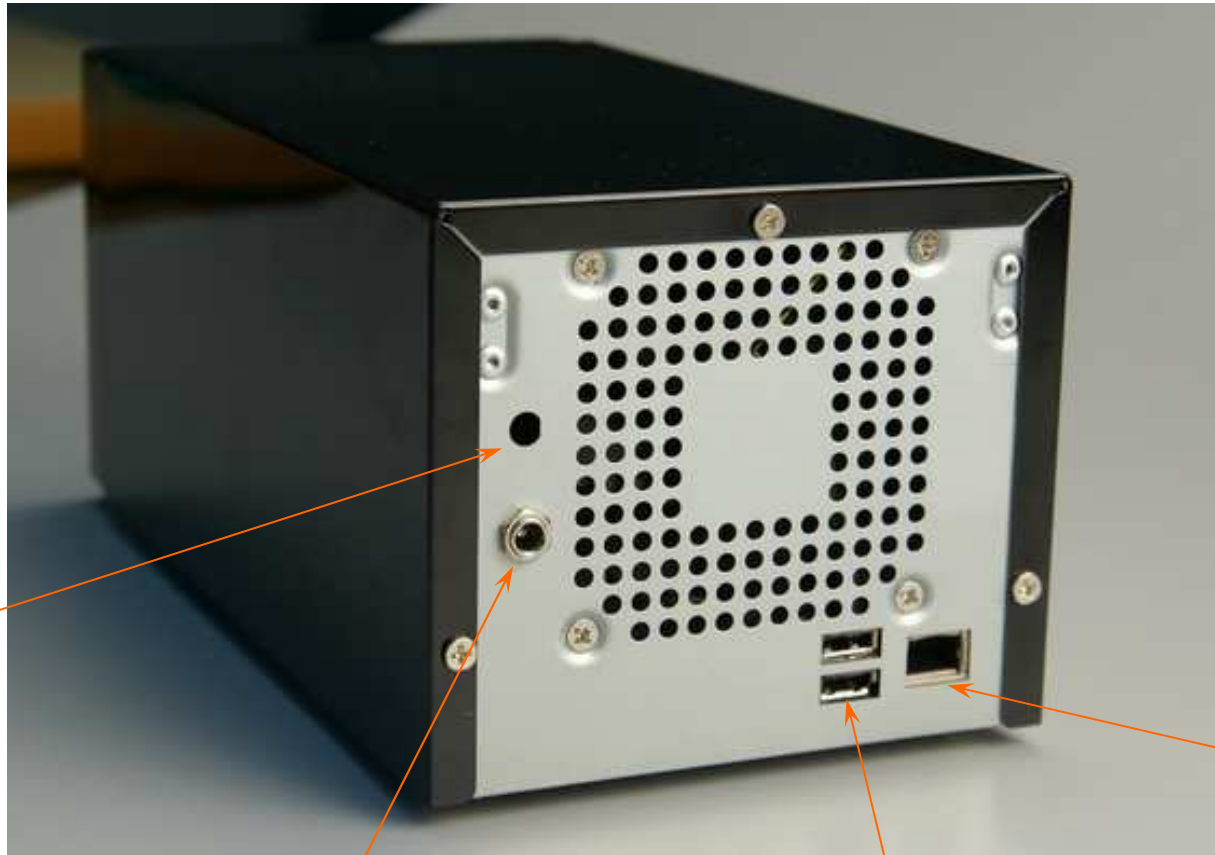
# Front Panel (Indicators)



# Front Panel (USB & Power SW)



# Rear view



WLAN Ant.  
(Optional)

DC Power

USB 2.0

GbE LAN

# Top cover

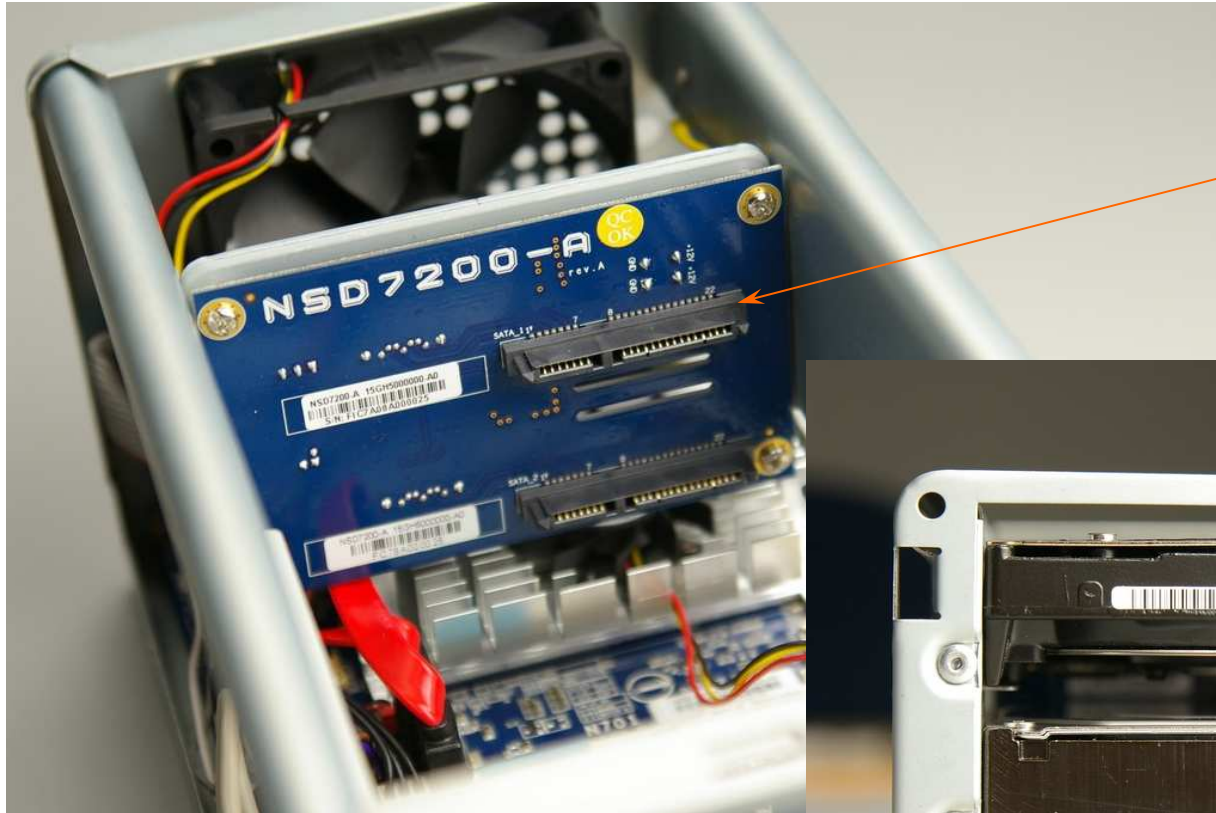


# Internal overview



# Two 3.5" SATA HDDs

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SATA Backplane



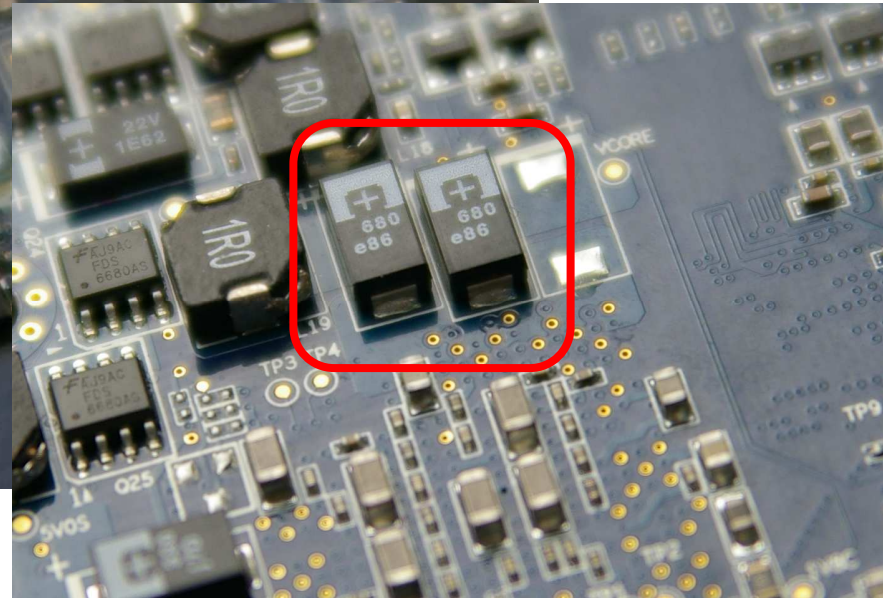
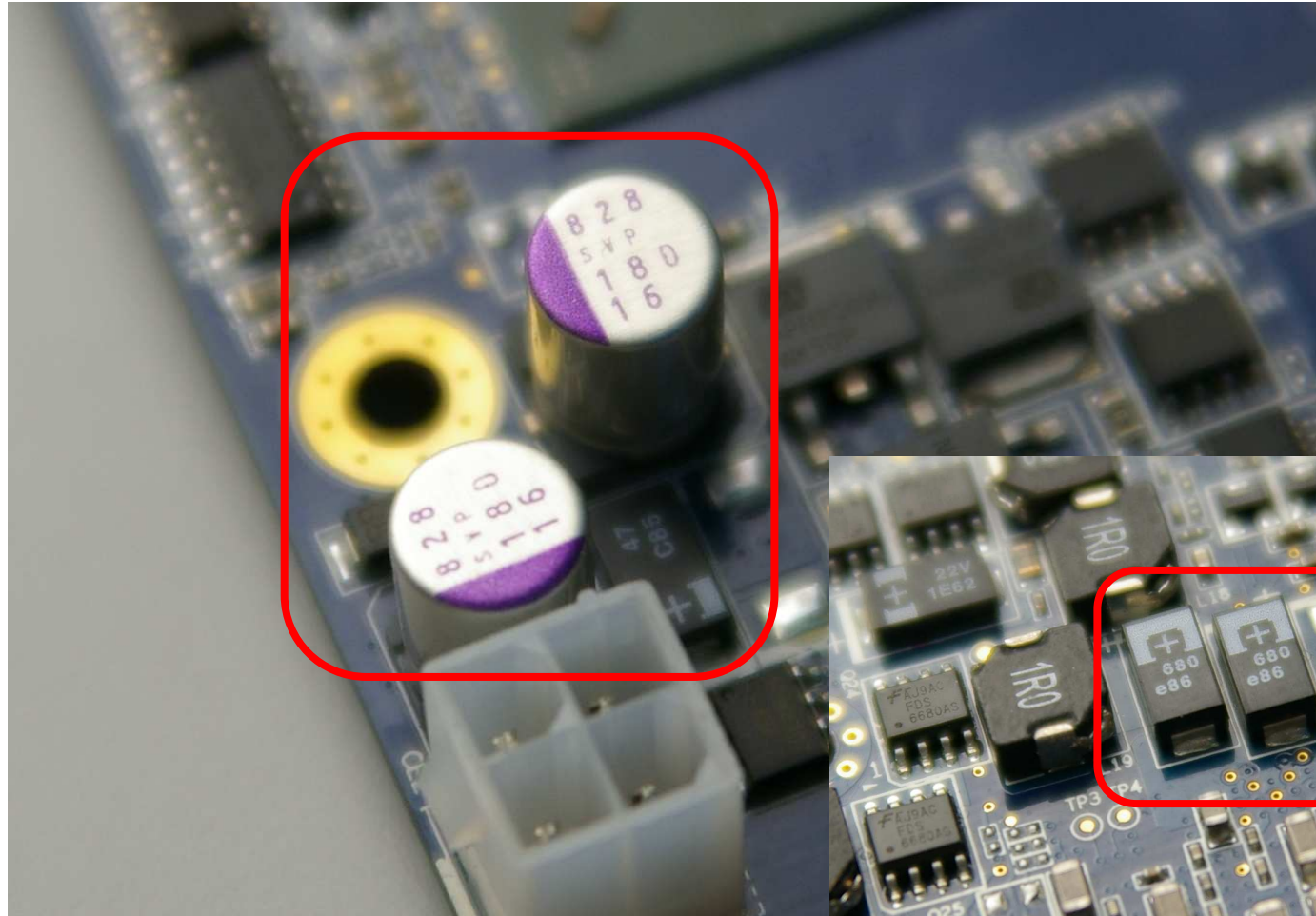
# 8cm ball bearing system fan

embedded in your success



VIA Confidential and Proprietary

# High quality solid state capacitors



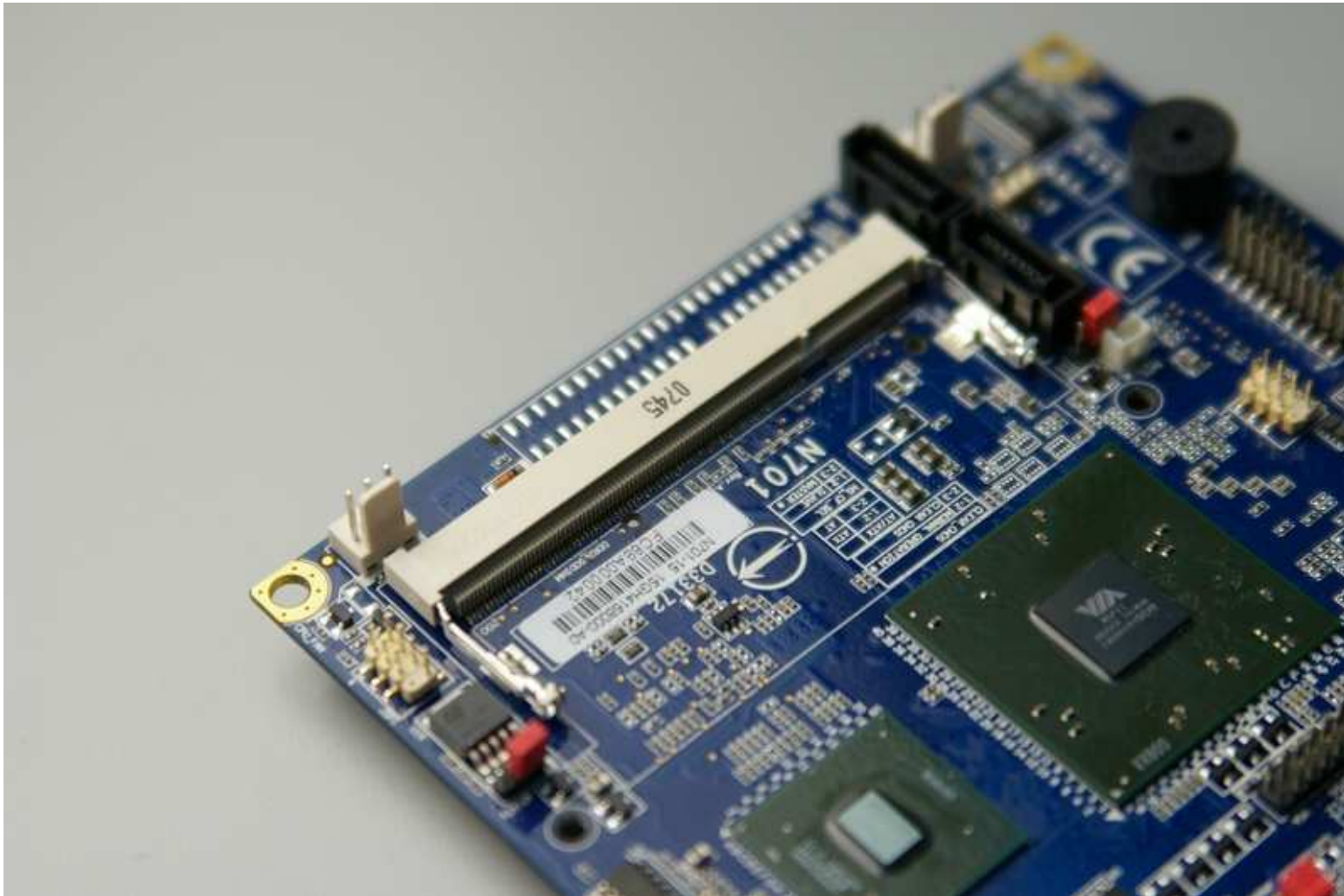
# VIA VT6130 PCI-e GbE LAN

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# SODIMM RAM socket

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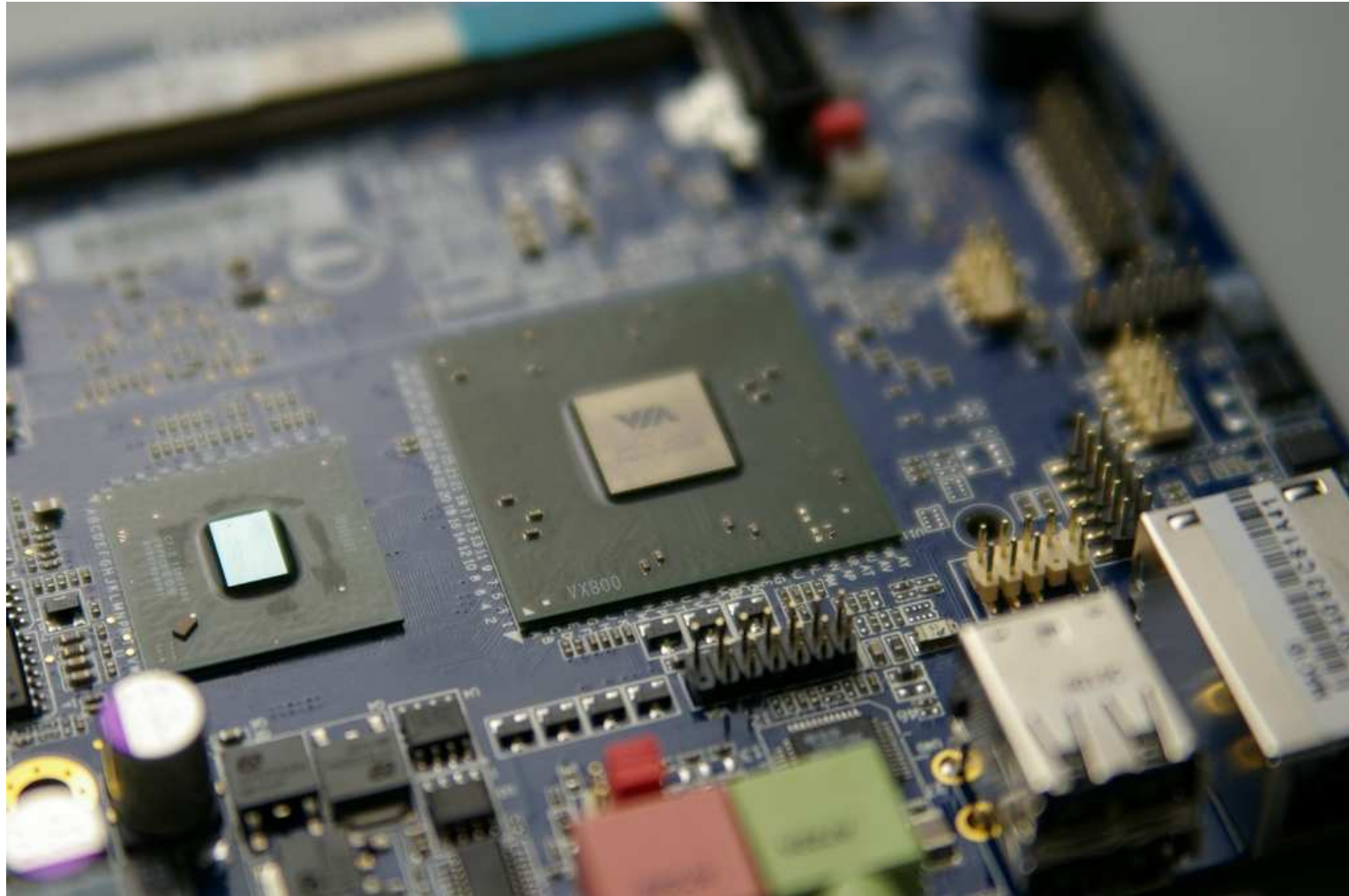


# Bootable SSD (CF Socket)



\* The CF socket is located on the backside of mainboard 21

# VIA VX800 Chipset



# The benefits of NSD7200

# Benefits of the NSD7200

- **3.5" hard drive**
  - Best Capacity/Cost value (almost half the cost of 2.5" HDDs)
  - Bigger capacity (2TB max. now!)
  - Easy to find and purchase
- **Big capacity in a small size**
  - Up to 4TB\*<sup>1</sup> of storage in only 13.5cm x 12cm x 26cm (5.3"x4.7"x10.2")



\*1 The max. HDD capacity is 2TB until 2009.04.17

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# Benefits of the NSD7200 (cont.)

- **Compact Flash**

- Solid State Disk for increased storage options
- Bootable CF can provide the environment for:
  - embedded OS (such as Linux/FreeBSD/XPe)
  - customer firmware
  - built-in recovery image

# Benefits of the NSD7200 (cont.)

- **High reliability**
  - Solid state capacitors
  - Ball bearing cooling fans
- **Better performance**
  - PCI Express bus Gigabit Ethernet
  - Hardware security engine for faster encryption/decryption (RNG/AES/SHA)
  - SATA (3 Gbps) interface
- **Low power and low noise**
  - 25 W max. power consumption (w/o HDD)
  - around only 26 dB

# Benefits of the NSD7200 (cont.)

- **With VIA, you get**
  - a total solution design from CPU to system
  - the best service for driver and SDK-related support
  - the experience of leadership in
    - low-power solutions
    - “green” technology
    - power efficiency



# More details about the NSD7200

# More details...

- **Business model**

- The NSD7200 is designed for OEM/ODM businesses.

- **BIOS**

- includes software protection function and a recovery function for WHS
- can be customized according to customer requirements



# More details... (cont)

- **Front panel**

- Can be customized with or without a logo
- HDD status LEDs are controlled by GPIO
  - VIA can provide the programming guide for the this feature.
  - VIA also supplies the driver to the GPIO function for WHS.



# More details... (cont)

- **VGA (video port)**

- The standard NSD7200 does not have a VGA port (DB-15) on the chassis.
  - A VGA pin-header exists on the motherboard.
  - VIA provides a VGA cable for evaluation and testing purposes.
- A VGA port can be added as a customization option if required. \*1.

\*1 Please follow the ODM rules provided by VIA. 31

# More details... (cont)

- **Audio ports**

- The standard NSD7200 does not have audio ports on the chassis.

- Audio ports can be added as a customization option if required <sup>\*1</sup>.

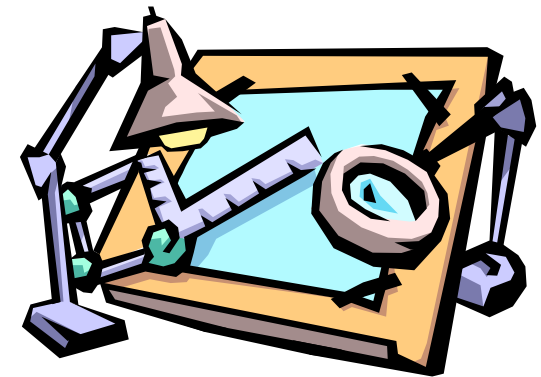
\*1 Please follow the ODM rules provided by VIA. 32

# More details... (cont)

- **Driver support**
  - Microsoft WHS HDD LED driver
  - special customer requirements
- **Packaging**
  - plain white packing box without logo
- **Bundled accessories**
  - AC power adapter
  - screws for HDDs and WLAN module



# Customization Options



# Front Panel

- **custom aluminum logo**
- **plastic cover plate**
  - VIA can design a custom cover plate for different customers
  - Custom cover plate can also contain integrated logo if aluminum logo is not desired



Aluminum logo



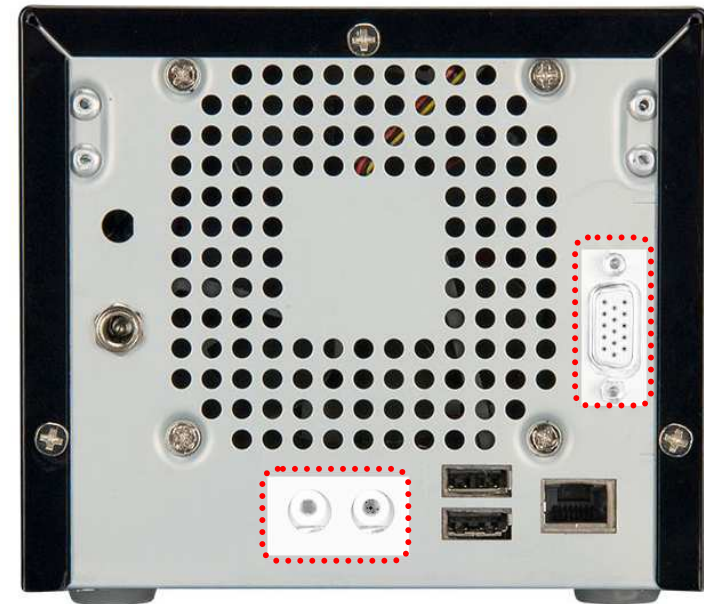
Plastic plate

# Front Panel (cont.)

- **MOQ for logo material**
  - 500 pcs
- **MOQ for plastic plate**
  - 500 pcs
- **MOQ for system (if front panel modified only)**
  - 200 pcs/order
  - 500 pcs/year

# Rear Panel

- **Customizable parts**
  - VGA port
  - Audio port
- **Ports can be kept or removed as necessary but MOQ must be met**
- **MOQ (if customized)**
  - 500 pcs/order
  - 1000 pcs/year



# Thanks !

# Appendix

# What is FreeNAS ?

- **FreeNAS is a free Network-Attached Storage (NAS) server software**
- **Supports**
  - CIFS (samba)
  - FTP
  - NFS
  - AFP
  - RSYNC
  - iSCSI protocols
  - S.M.A.R.T.
  - local user authentication
  - Software RAID (0,1,5)
  - web-based configuration interface

\* Datasource : FreeNAS WEB

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# What is FreeNAS ? (cont.)

- **FreeNAS takes less than 32 MB once installed on a Compact Flash or a hard drive.**
- **FreeNAS is a minimal FreeBSD distribution based on m0n0wall with**
  - web-based interface
  - PHP scripts
  - documentation
- **<http://www.freenas.org/>**

*\* Datasource : FreeNAS WEB*

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# What is Microsoft WHS?

Helps families centralize and connect their digital experiences, providing a familiar, easy and reliable way to store, access, share and automatically protect what is most important

- **File Sharing**
- **Data Protection**
- **Data Centralization**
- **Extensibility**

\* Captured from Microsoft presentation files

# What is MS WHS? (cont.)

- **Targeted at home and small businesses**
  - Windows Home Server (WHS) is an operating system platform for the home and small business markets
- **Focuses on data centralization**
  - Centralizing data
    - is its core function
    - makes it easier to share data
    - makes it easier to protect data because all instances of that data are accounted for

# What is MS WHS? (cont.)

- **Open platform**
  - Unlike a typical NAS, WHS allows 3<sup>rd</sup> party software providers to develop their own software for it
- **A complete environment for existing Microsoft-based systems**
  - highly integrated with MS Windows (XP/Vista) and MS Office
  - easier data backup and protection

# Revision records

- 2009.04.17 : Init. 1.0 modified from Sales kit v1.1