Product Advisory

C-nario Messenger™
Hardware Guidelines Update

Date: 18 September 2006	No.04c

This product advisory contains a QuickGuide tabling hardware recommendations and a more detailed description of the various hardware configurations recommended for the installation and operation of the C-nario Messenger™ software platform.

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Updates
04b - 12 May 2006 – Added Approved Live Video Capture device - Dazzle VideoCollector 2006
04c – 18 Sept 2006 – Updated HW in line with current developments

QUICKGUIDE

Player

Playback	Single Channel Hardware	Dual Channel Hardware
Simple Layout [see: Simple Layout Playback for typical details]	- Intel Celeron D 2.53 2.53GHz - Intel GMA900 based similar motherboard, for example GIGABYTE GA-81945GZME-RH 512 Mbytes of RAM arranged as two channels of memory. Memory should be approved by motherboard manufacturer. - ATA or SATA hard drive – 40GB or more - Ethernet connection	- Intel Pentium D 805 - Motherboard - GIGABYTE GA-8N-SLI or similar motherboard. - ATI X1300 PCIe 128bit or better 512 Mbytes of RAM arranged as two channels of memory. Recommended memory approved by motherboard manufacturer. - SATA hard drive – 40GB or more - Ethernet connection
Sophisticated Layout [See: Sophisticated Layout Playback Sophisticated Layout playback: for typical details]	- Intel Pentium D 805 - Intel GMA950 integrated GPU (945G chipset), for example GIGABYTE GA-81945GZME-RH 512 Mbytes of RAM arranged as two dual channels of memory. be, approved by motherboard manufacturer. - ATA or SATA hard drive – 40GB or more - Ethernet connection	- Intel Pentium D 805 - Motherboard - GIGABYTE GA-8N-SLI or similar motherboard. - ATI X1600XT PCIe 128bit or better 512 Mbytes of RAM arranged as two channels of memory approved by motherboard manufacturer. - SATA hard drive – 40GB or more - Ethernet connection

Master

	Messenger 2.9	Messenger 3.0
Master Station	Intel Pentium D 805 - Intel GMA950 integrated GPU (945G chipset) - Motherboard GIGABYTE GA-81945GZME-RH, Intel BOXD915GAV or similar. 512 Mbytes of RAM arranged as two channels of memory approved by motherboard manufacturer. - ATA or SATA hard drive – 80GB or more - Ethernet connection	Intel Pentium D 805 - Intel GMA950 integrated GPU (945G chipset), - Motherboard - GIGABYTE GA-81945GZME-RH, Intel BOXD915GAV or similar. 1 Gbyte of RAM arranged as two channels of memory approved by motherboard manufacturer. - ATA or SATA hard drive – 80GB or more - Ethernet connection

Note

Motherboard **Bios Power** settings must allow for 'Auto restore on AC power loss' and this must be set as [Always ON]

SINGLE CHANNEL DEPLOYMENT - RECOMMENDED HARDWARE

Playing a single channel from a computer. In this document we present 2 options for this deployment. One is a simple layout option and the other is a more sophisticated layout option.

Simple Layout Playback:

Maximum layout composition:
- ◆ 2 Standard definition windows or a single 720P HD video window [1]
- ◆ Up to 3 text\images windows static or moving

Hardware

- Intel[2] Celeron D 2.53GHz
- Intel GMA900 or better.
- Motherboard – GIGABYTE GA-81945GZME-RH, Intel BOXD915GAV or similar[3]
- 512 Mbytes of RAM arranged as two channels of memory approved by motherboard manufacturer.
- ATA or SATA hard drive – 40GB or more
- Ethernet connection

Sophisticated Layout playback:

Maximum layout composition:
- ◆ 1 High definition video window (MPEG2 HL@HP 19 Mbits/sec 1080i/720P) or up to 4 Standard Definition video windows
- ◆ Up to 6 text\images windows static or moving.

Hardware

- Intel Pentium D 805
- Intel GMA950 integrated GPU (945G)
- Motherboard - GIGABYTE GA-965P-S3, Intel BOXD945GCZL or similar[4]
- 512 Mbytes of RAM arranged as two channels of memory approved by motherboard manufacturer.
- ATA or SATA hard drive – 40GB or more
- Ethernet connection

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[1] Video playback is optimized for MPEG2 video, using WMV or other decoders may require more powerful systems for the same resolution.

[2] AMD processors were tested (Sempron Socket 754) to provide good performance. Currently (September 2006) there is no price performance match to 805D-820D offered by AMD. AMD dual core is much more expensive. In addition, there is no match to Intel 915-945 IGP offered on AMD based motherboards. The exception is nVidia 6100-6150 which is new and will be tested by C-nario during 2006.

[3] There are no known issues with any of the chipset manufacturers as long as it supports Intel dual core processors. We have tested only some motherboards based on Intel and nVidia chipsets.

[4] There are no known issues with any of the chipset manufacturers as long as it supports Intel dual core processors. We have tested only some motherboards based on Intel and nVidia chipsets.

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Dual Channel Deployment - Recommended Hardware

Playing 2 channels from 1 computer using PCIe dual head display. In this document we present 2 options for deploying 2 channels from the same computer. One is a simple layout option and the other is a more sophisticated layout option.

Simple Layout playback:

Maximum layout composition for each of the 2 deployed layouts:

♦ 2 Standard definition windows or a single 720P HD video window [5]
♦ Up to 3 text\images windows

Hardware

- Intel Pentium D 805
- Motherboard - GIGABYTE GA-8N-SLI or similar[6]
- ATI X1300 128bit PCIe
- 512 Mbytes of RAM arranged as two channels of memory. Recommended memory approved by motherboard manufacturer.
- SATA hard drive – 40GB or more
- Ethernet connection

Sophisticated Layout playback:

Maximum layout composition for each of the 2 deployed layouts:

♦ 1 High definition video window (MPEG2 HL@HP 19 Mbits/sec 1080i/720P) or up to 4 Standard Definition video windows
♦ Up to 3 text\images windows

Hardware

- Intel Pentium D 805
- Motherboard - GIGABYTE GA-8N-SLI or similar[7]
- ATI X1600XT PCIe or better
- 512 Mbytes of RAM arranged as two channels of memory Recommended memory approved by motherboard manufacturer.
- SATA hard drive – 40GB or more
- Ethernet connection

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[5] Video playback is optimized for MPEG2 video, using WMV or other decoders may require more powerful systems for the same resolution.
[6] Any motherboard that support the 805D processor and has at list 1 PCIe slot
[7] Any motherboard that support the 805D processor and has at list 1 PCIe slot

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Master station - Recommended Hardware

For Messenger 2.9:
Intel Pentium D 805
- Intel GMA950 integrated GPU (945G)
- Motherboard - GIGABYTE GA-81945GZME-RH, Intel BOXD915GAV or similar[8]
- 512 Mbytes of RAM arranged as two channels of memory approved by motherboard manufacturer.
- ATA or SATA hard drive – 80GB or more
- Ethernet connection

For Messenger 3.0:
Intel Pentium D 805
- Intel GMA950 integrated GPU (945G)
- Motherboard - GIGABYTE GA-81945GZME-RH, Intel BOXD915GAV or similar[9]
- 1 Gbyte of RAM arranged as two channels of memory approved by motherboard manufacturer.
- ATA or SATA hard drive – 80GB or more
- Ethernet connection

Approved Live Capture Devices

Supported live capture devices include web cams and other USB live cards. Only the following cards have been tested and approved. [This is not to say that other live device cards will not work]:
- AverMedia EZMaker (USB2)
- Hauppauge WinTV Express (PCI)
- ATI x600 All in Wonder (used as capture device only, and not also as display device)
- DRC family (PCI)
- V-Box digital TV series (PCI)
- Pinnacle PCTV Rave, 50i and 110i (PCI)
- Dazzle VideoCollector 2006 (PCI)

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[8] Any motherboard that support the 805D processor
[9] Any motherboard that support the 805D processor

Alternative Hardware Guidelines

New Hardware Specification:

o Prefer a motherboard with PCI-Express*16 over AGP
  - Chipsets – Intel 915(G/P), Intel 945(G/P) or Intel 965 (G/P), Radeon X200, nVidia 6100/6150
    Such as:
    Intel BOXD915GEVL, GIGABYTE GA-8I915G, GIGABYTE GA-81945GZME-RH, ASUS P5GL-MX, BIOSTAR I945G-M7, Intel BOXD945GCZL, ABIT LG-81, GIGABYTE GA-8I945G-PRO (945 are preferred having slightly better graphics and supporting the new dual core processors from Intel)
o Graphics:
  - Built in GMA900 or GMA950 (915G or 945G)), Radeon X200, nVidia 6100/6150 provide excellent results for single content channel.
  - ATI X1300 128bit or better for dual content channel. or for PS2.0 enhanced deinterlacing
  - Use Matrox P650 or Parhelia for best composite video output when it is required (DVI and VGA are always better). nVidia 6200 or better also provide an acceptable video output.
o CPU
  - Above 2.0 GHZ (2000+ for AMD), use 2.8 GHZ (2800+ for AMD) for best results.
  - C-nario Messenger benefits from dual core processors (Intel 8xxD, the 820D has exceptional price/performance value, as does AMD's 3800+. Also the new Core2 Duo processors are showing very good results when running Messenger playback). Dual core processors require 945(G/P) based motherboards.
o Memory
  - 512 Mbytes. Use two devices (256 MBytes each) to facilitate dual channel performance. Using 256 Mbytes of memory hampers playback smoothness.

Existing Hardware Specification:

o Graphics
  - Use AGP or PCI-express ATI based graphics – Radeon 9000 or better. PCI graphics cannot be used.
  - Use Intel 9xx integrated graphics for excellent results, 865G (older generation) are compatible but very weak and can not support 1024x768 resolution at 32bit colour depth.
  - nVidia graphics adaptor are compatible but may show stuttering playback in some driver versions
o Processors:
  - Use AMD or Intel processors , better then 1.7 GHZ (AMD don't' specify GHZ values for their CPU's for over 5 years, it's better to give the naming, AMD calls them "2000+" or above)
o Use 512 Mbytes of RAM

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Laptop Specification:

- o Graphics
  - ▪ Built in GMA900 or GMA950 (915G or 945G)), Radeon X200, nVidia 6100/6150 provide excellent results used with a dual channel memory
- o Processors:
  - ▪ The M series of Intel (Celeron and Pentium M) are excellent for regular playback.
  - ▪ C-nario Messenger benefits from dual core processors such as Core Duo or the new Dual Core Turion from AMD
- o Memory:
  - • Use 512 Mbytes of RAM, preferably in two devices (256 MBytes each). It was proven in C-nario tests that dual channel memory is one of the key factors for high performance playback.

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