# Network Video Recorder: Digital Watchdog Blackjack Cube

## 1.0 Description

The recorder shall be a Blackjack model DW-BJCUBE3TB Network Video Recorder. The recorder shall offer network recording for up to 64 Ethernet-linked network cameras using H.264 image compression.

## 2.0 Bid specification

Recorder operation:

- The recorder shall be an appliance based with an embedded real-time operating system
- The OS must reside completely within the hardware and not be installed on the hard disk drives
- Installed disk drives must be dedicated to recording video.
- The recorder shall have the capacity to install a maximum of 3 hard disk drives internally, DW- BJCUBE3TB
- The recorder will have 2 separate network interfaces. One for server (camera) LAN connections, and one for WAN.
- The recorder shall support Digital Watchdog's MegaPIX series of IP camera, and selected Manufacturer's network cameras and ONVIF cameras.
- The recorder shall support H.264.
- Each camera shall support individual Recording Rate settings for Event and Scheduled Recording Modes.
- Pre-event recording: All individual cameras shall support pre and post recording.
- The recorder will automatically detect and assign IP address to all compatible network cameras.
- The recorder will automatically detect Enterprise Controllers' IP addresses within the same network (gateway and subnet mask).
- The recorder shall support NTP server function to synchronise the time in the network to all recorders and cameras
- The recorder shall support motion detection.

Client Viewing:

- The recorder shall be viewable from any properly connected PC using Microsoft Internet Explorer, Google Chrome, Firefox, Safari, and Opera
- The recorder shall provide for user authentication and support different user privileges based on logon ID
- From the client the user should (with proper authentication) be able to do the following:
  - Setup camera
  - Define live viewing, recording rates and quality settings
  - Define recording programs and schedules

- Define Layouts of Different Cameras
- View live video in single to 128 channels, rotate, flip, and manipulate views.
- Search and play recorded video
- Export selected recorded video
- Control connected PTZ cameras
- Search Event Logs

- In addition to the included web viewer, the recorder should provide for optional viewer for mobile devices.

Form Factor:

- The dimensions shall be no larger than 12.80 in (length) x 8.5 in (width) x 7.5 in (height).

Processor:

- 1155-land LGA package
- Intel socket 115 Core i5 processors
- 2 channel DDR3 1333 support
- 8GB per DIMM
- Intel® 64 architecture
- support unbuffered DIMMs
- Intel Hyper-threading technology
- Intel® Turbo Boost Technology
- Support One PCI expressx16 Gen2
- Enhanced Intel SpeedStep technology
- Platform environment control interface 3.0 support

Graphics Processing Unit:

- Next Generation Intel Clear Video Technology HD Support
- DirectX* Video Acceleration (DXVA) support for accelerating video processing
- Full AVC/VC1/MPEG2 HE Decode
- DX10.1, DX10, DX9 support
- OGL 3.0 support

Platform Controller Hub H61:

- 20Gb/s each direction DMI interface
- Ten USB 2.0 ports support
- Intel High Definition Audio Interface
- Six PCI Express 2.0 support
- Low pin count interface
- PCI rev2.3-compliant with support 33MHz PCI operations
- Four SATA ports
- Data transfer rates up to 3.0 Gb/s(300 MB/s)

- Full featured platform clocking without need for a discrete clock chip
- Analog display port
- Three digital display ports capable of supporting HDMI/DVI and Display port

PCI Express Gigabit Ethernet Controller Realtek 8111E:

- (2x) PCI express base specification 1.1a compliant
- Integrated non-valatile memory to store MAC address and other configuration data
- 10/100/1000 IEEE 802.3 cpmpliant
- Supports Wake-On-LAN function

Advanced Power Management:

- Meets ACPI 4.0a requirement
- ACPI sleep states include S3, S4, S5
- System power-up event include: Power Button, RTC Alarm, ,LAN and USB wake-up

Integrated Real Time Clock:

- Supports ACPI Day-of-Month and Month-of-Year Alarm

USB 3.0 Controller (ASM1042):

- Compliant with USB3.0 specification
- Compliant with USB2.0 specification
- Compliant with xHCI specification
- Support SPI type ROM
- Compliant with PCI Express specification

CPU On Board PWM:

- Vcore use RT8859 to support VR12 (3 Phase ) and Vcpu_gpu (1 Phase)
- SVID support

H/W Audio Realtek ALC888:

- 7.1+2 channels high definition audio codec with 24bit resolution
- 16/20/24-bit S/PDIF-out supports 32k/44.1k/48k/88.2k/96k/192kHz sample rate
- 3 jack detection pins each designed to detect up to 4 jacks plugging
- Analog differential CD input

SuperIO (ITE 8772E):

- ACPI v2.0 compliant

- Compliant with LPC interface (Rev 1.1)
- SMBus spec. 2.0
- 8 voltage monitor inputs
- 27 general purpose IO pins
- provide 2 programmable pulse width modulation outputs
- Eco-design of energy-using product(Eup) extra low power S5 control
- support CIR receive port

## 3.0 Specification

*Recommended Specs for Client:*

| WINDOWS | LINUX |
|---|---|
| Processor | Intel Core i5 or greater |
| Video Card | Intel HD Graphics 2500 (or higher) with 1GB Dedicated Memory |
| Resolution | 1920 x 1080 |
| RAM | 4GB |
| NIC | 10 / 100 / 1000 Base-T Ethernet |
| OS | Windows 7, Server 2008, Vista, XP, Linux Ubuntu 10.0 |

*Network Requirements:*

IEEE 802.3ab 1000BASE-T Gigabit Ethernet

** Cameras and servers in the network must be completely isolated*

** NOTE: if you are not connecting to the Blackjack from within the same network, you may be required to perform port forwarding on your router to access the server. Contact your Network Administrator or Installer for additional information*

*Mobile Access:*

| | |
|---|---|
| Web | Internet Explorer, Firefox, Safari, Opera, Chrome |
| Apps | Android OS |