

## Analog / Digital Signal Processing (ADC/DAC), Video / Image Compression & Processing, IP Cores

엘케이테크원 Embedded Products는 Military, Aerospace, Satellite & Telecom, Broadcasting, UAV, Surveillance, Robot등 다양한 Application 개발에 적용되고 있습니다.



**Leader in Data Acquisition & DSP Signal Processing Solutions**  
[www.4dsp.com](http://www.4dsp.com)

- Xilinx Virtex, Kintex device-based PMC, XMC Modules, ADC(Analog-to-Digital) & DAC(Digital-to-Analog) FMC Modules, VPX Backplanes, IP Cores (Floating-Point & Fixed-Point FFT, Serial FPDP 등)
- **Applications ;**  
Software Defined Radio (SDR), RADAR/SONAR Image Processor, Satellite Communication, JPEG2000, Wireless Communication Receivers, Medical & Aerospace Equipment, Direct RF Down Conversion



**Video Graphic Experts for Military, Aerospace industries**  
[www.wolf.ca](http://www.wolf.ca)

- Military-grade Embedded AMD and NVIDIA Video Graphic Modules (XMC, PMC, MXM, VPX, MXC, PCIe COTS & MCOTS Configuration Options)



**The Embedded Video Experts**  
[www.ampltd.com](http://www.ampltd.com)

- H.264/MPEG-4 Codecs, Video Capture – Frame Grabbers, DVR & Video Streaming, Video Annotation and Overlay, Video Display Format Converters, Single Board Computers, Communication & Peripherals, Legacy Board Products
- PC/104-Plus, miniPCI, Compact PCI, PMC Mezz, PCI-104, PCI, PMC Modules



**Real-time, Long-duration, High-speed recording and playback experts**  
[www.conduant.com](http://www.conduant.com)

- Ultra fast digital data recorders and storage units (Modular-based & System-based)



**H.264, JPEG2K IP Cores, AES IP Cores, Memory control & Peripheral Interfaces IP Cores**  
[www.alma-technologies.com](http://www.alma-technologies.com)

- Silicon IP Cores (Video Compression, Still Image Compression, Cryptographic Functions, Memory Controllers, Peripheral Interfaces)
- Image Processing System Design, Development of Prototype Systems

[www.lktechone.com](http://www.lktechone.com)

문의 ; 070-7124-0588, 010-4018-9228, [info@lktechone.com](mailto:info@lktechone.com)

**Real-time, Long-duration, High-speed recording and playback experts**

[www.conduant.com](http://www.conduant.com)

PCI Express form factor Multi-lane High-speed data transfer를 지원하는 Ultra fast digital data recorders and Storage System-based & Module-based Products

**Worldwide Customers**

- Northrop Grumman
- MIT-Lincoln Laboratory
- Agilent
- Boeing
- General Dynamics
- Lockheed Martin
- Mitsubishi
- Panasonic
- MIT Haystack Observatory
- Navair
- US Navy, US Army, US Air Force
- EarthData

**What is StreamStor (Real-Time Disk Recording Technology) Sub-Systems and Board Solution?**

- Advanced, adaptable technology ; Onboard Real-time OS and deep memory buffer (Recording and Playback of digital data at sustained up to 1.6 GB/s, Capacities over 32TB in a single system)
- Direct H/W to H/W Recording and Playback (peer-to-peer)
- Flexible interfaces ; collected or output data via a wide variety of COTS H/W
- Flexible media ; supports solid state disk(SSD), 2.5- and 3.5-inch SATA drives
- Playback while recording
- Wrap recording
- Longest duration
- Multi-channel Recording
- Sisk Space Partitioning
- Outstanding reliability and scalability
- SATA vs SCSI ; StreamStor is designed to maximize the data throughput of each disk used for recording
- StreamStor vs RAID ; StreamStor is a special purpose recording solution

**Chassis System**

**Big River DM-125-3U Storage Unit**

- PCI Express form factor with capacity up to 2 TB
- Onboard PXI Express SATA controller and Compatible with major operating systems (Spec 확인) [www.conduant.com/products/dm-125-3u-storage-unit.html](http://www.conduant.com/products/dm-125-3u-storage-unit.html)

**Big River DM-8M-3U mSATA – PXI Storage**

- Capacity up to 8 TB (up to 8 mSATA modules)
- Onboard PCI Express SATA controller and Compatible with major operating systems (Spec 확인) [www.conduant.com/products/dm-8m-3u-msata.html](http://www.conduant.com/products/dm-8m-3u-msata.html)

**LTX e PCI Express Storage Array**

- PCI Express Storage Array supporting up to 16 2.5” SATA Drives
- Sustained Transfer rate over 800MB/sec
- PCI Express cabling – 8 Lane Gen 2
- Scalable data storage capacities up to 32 TB (Spec 확인) [www.conduant.com/products/ltxe.html](http://www.conduant.com/products/ltxe.html)



### **Big River LTX3 Portable Recorder**

- Sustained recording and playback at up to 800MB/s and Scalable data storage capacities to 8 TB
  - Compact data recorder based on StreamStor Amazon Express
  - Standalone operation via Ethernet or host system command / control
  - 8 lane cabled PCIe interface
  - Multiple external interfaces available including Serial FPDP, LVDS, SerialLite II, 10GigE
- (Spec 확인) [www.conduant.com/products/ltx3.html](http://www.conduant.com/products/ltx3.html)



### **Big River RTX16 Rack Mount Streaming Data Recorder**

- StreamStor high speed recording and playback technology
  - Available interfaces ;  
PCI, Optical High Speed Serial, Copper High Speed Serial, LVDS, PCI Express
  - Multiple terabytes of data storage capacity ranging up to 32 TB
  - Redundant power supplies
  - StreamStor Application Program Interface (API) for integration of StreamStor Storage Controllers
- (Spec 확인) [www.conduant.com/products/big-river-rtx16.html](http://www.conduant.com/products/big-river-rtx16.html)



### **Big River NTX16 PCI Express Recorder**

- Peer-to-peer PCI Express recording and playback capability
  - Standalone capable operation with network command/control
  - Sustained recording and playback at over 800MB/s
  - Scalable data storage capacities over 48 TB
- (Spec 확인) [www.conduant.com/products/ntx16.html](http://www.conduant.com/products/ntx16.html)



### **Big River LTX2 Small Form Factor Recorder**

- Data rate ; 500MB/s sustained
  - Capacity ; 5.1 TB (using 320 GB drives)
  - Duration ; over 3 hours at 320 MB/s
  - External interfaces ;  
Star Fabric (PCI Bridge), FPDP, FPDP2, Serial FPDP (2.5 Gb/s Optical),  
LVDS, Camera Link
- (Spec 확인) [www.conduant.com/products/bigriverltx2.html](http://www.conduant.com/products/bigriverltx2.html)



### **Big River DM-425-3U**

- Capacity up to 4 TB
  - Onboard PCI Express SATA controller
  - Multilane SATA external connector (Optional)
  - Requires only 3 open slots (12 HP)
  - Software RAID capable
- (Spec 확인) [www.conduant.com/products/bigriver-dm-425-3u.html](http://www.conduant.com/products/bigriver-dm-425-3u.html)



### **Mark 5B+ VLBI Data System**

- Intel server motherboard with Intel Xeon processor
  - Data rate ; Sustained VLBI data recording at 2+ Gb/s
  - Disk drivers ; 2x hot-swappable 8-drive modules (Total 16 drives), 8 TB of capacity
  - Duration ; 24 x 7 recording in Pendulum mode
  - Media ; Solid-state, 2.5" or 3.5" IDE or SATA
  - Internal interface ; PCI Bus 66 MHz/64bit
  - External interface ; Mark 5B VSI interface board
- (Spec 확인) [www.conduant.com/products/mark5vlbi.html](http://www.conduant.com/products/mark5vlbi.html)



### **Mark 5C VLBI Data System**

- Intel server motherboard with Intel Xeon processor
- Data rate ; Sustained VLBI data recording at 4+ Gb/s
- Disk drivers ; 2x hot-swappable 8-drive modules (Total 16 drives), 32 TB of capacity
- Duration ; 24 x 7 recording in Pendulum mode
- Media ; Solid-state, 2.5" or 3.5" IDE or SATA
- Internal interface ; PCI Bus 66 MHz/64bit
- External interface ; Mark 5B VSI interface board

(Spec 확인) [www.conduant.com/products/mark5c-vlbi.html](http://www.conduant.com/products/mark5c-vlbi.html)



### **PCI Express Module**

#### **SNAP12 Optical FPGA Card**

- PCI Express half-length card form factor
- 8-lanes PCI Express Gen2.0 (5Gb/s/lane)
- Xilinx Virtex-6 XC6VLX130T-2FF1156 (larger and faster FPGAs optional)
- SNAP12 optical transmitters up to 3.3Gb/s per channel, 850nm (5.0Gb/s optional)
- 8GB DDR3 SDRAM arranged as 512 M x 128 bits @ 312.5 Mhz
- Xilinx eFUSE or battery-backed 256-bit AES bitstream encryption

(Spec 확인) [www.conduant.com/products/snap12.html](http://www.conduant.com/products/snap12.html)



### **PCI/PCI Express Module**

#### **StreamStor Amazon Express**

- Sustained recording and playback at more then 800 MB/s (data rate)
- Multi source card-to-card PCI Express recording
- Full size PCI Express form factor (8 lane bus interface)
- Capacity from 250 MB to 16 TB (using 16 – 1 TB drives)
- Duration ; 8 hours (500 MB/s using 16 TB)
- 16 SATA disk drive interfaces and 2048 MB (2 GB) on-board memory buffer

(Spec 확인) [www.conduant.com/products/amazonexpress.html](http://www.conduant.com/products/amazonexpress.html)



#### **StreamStor Amazon**

- Full length PCI form factor with sustained recording and playback at 500 MB/s (guaranteed data rate)
- Most powerful and flexible data interface system based on Conduant's modular mezzanine architecture
- 2 to 16 Disk Drives and 1 GB SDRAM Memory Buffer
- Duration ; More than 8 hours at 400 MB/s
- Media ; 2.5", 3.5" SATA or Solid-state IDE

(Spec 확인) [www.conduant.com/products/amazon-details.html](http://www.conduant.com/products/amazon-details.html)



## Mezzanine Module

### **Optical High Speed Serial Mezzanine Board**

- Provides 4 optical fiber interface ports
  - 850nm and 1310nm wavelength options for distances to 25km
  - Data rates from 1.06 – 3.125 Gb/s on each port
- (Spec 확인) [www.conduant.com/products/optical%20HSS/](http://www.conduant.com/products/optical%20HSS/)



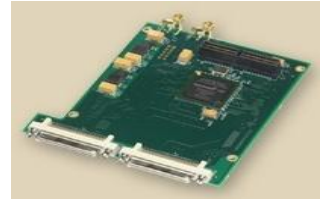
### **Copper High Speed Serial Mezzanine Board**

- Provides 4 serial lanes at up to 3.125 Gbps each and Data rates from 1.06 – 3.125 Gbps on each port
  - XAUI Type high speed connector
  - 10 GigE Ethernet
  - Serial FPDP (ANSI / VITA 17.1 – 2003) and SerialLite II
- (Spec 확인) [www.conduant.com/products/copper-high-speed-serial.html](http://www.conduant.com/products/copper-high-speed-serial.html)



### **LVDS Mezzanine Board for StreamStor Amazon Digital Data Recorders**

- 16 (2) or 32 bit Low Voltage Differential Signal (LVDS) interface
  - Sustained recording of 600 MB/s and Clock speeds up to 200 Mhz
  - 16 bit record and 16 bit playback with optional 32 bit record or 32 bit playback versions
- (Spec 확인) [www.conduant.com/products/lvds.html](http://www.conduant.com/products/lvds.html)



### **StreamStor FPDP2 Mezzanine Board**

- Provides 2 parallel FPDP interface ports
  - 32 bit parallel TTL data bus with TTL or PECL clock at single or double data rate up to 50 MHz
  - Sustained rates of up to 400 MB/s (using double data rate clocking at 50 MHz)
- (Spec 확인) [www.conduant.com/products/streamstor-fpdp2.html](http://www.conduant.com/products/streamstor-fpdp2.html)



### **Conduant Custom Solutions** [www.conduant.com/engineering/default.html](http://www.conduant.com/engineering/default.html)

Conduant는 StreamStor Technology 기반으로 Custom Engineering Service를 제공하며 StreamStor Platform은 Programmable logic hardware와 Real-Time OS가 운용되는 PowerPC- based processor platform을 제공합니다.

- Conduant custom development process, Packaging, New Interface & mezzanine architecture
- Flexible and programmable logic and embedded firmware in StreamStor