DUET & DUET HD

Graphics and Animation Systems
In Duet, the universal Windows interface meets Chyron's sturdy video hardware, legendary for its reliability and impeccable signal quality. Program complex animations in pre-production for real-time operation anywhere from master control facility to remote site.

Duet works hand-in-hand with Chyron's own Lyric composition/playback application for 2D/3D text, graphics and animation. Along with the CAL software development kit, Lyric is custom-made to unleash all of Duet's formidable power. Built-in Lyric features provide compatibility between your current iN FiNiT! Family assets and the Lyric format for Duet.

Standard or high definition, Duet provides world-renowned Chyron reliability and quality with an attractive price-performance ratio.

Chyron hardware has led the industry for three decades; our iN FiNiT! product line has been the heart and soul of television graphics for more than ten years. Now, the company the whole world watches carries that leadership tradition into the 21st century with Duet.

### Duet System Architecture

Duet's real-time digital video performance takes place in an open-system framework. The core video bus architecture simultaneously supports multiple full-bandwidth video streams, connecting with Chyron's proprietary Video Graphics Engines running the VX Works real-time operating system.

The base Duet system includes a 6U rack-mount chassis with high-speed backplane and auto-switching power supply. Seven high-bandwidth Chyron expansion slots accommodate the included 2D/3D Video Graphics Engine, and a sync generator/input/output card, leaving room for additional VGEs, mixers and other signal-processing options. A high-performance Intel® Pentium III CPU powers Duet's Windows processing. For flexible connectivity, 10/100BaseT networking is standard.

Duet combines world-class Chyron components with the Windows® NT operating system for reliability, performance, and compatibility. Seamless distributed processing between Windows NT and the real-time operating system makes for top performance, even at HDTV bandwidths.
**Video Graphics Engine**

Chyron’s proprietary Video Graphics Engine (VGE) is the heart of the Duet system. This object-oriented 2D/3D graphics processor offers geometry calculation and dual rasterizers with dedicated frame buffers and internal keying/compositing for real-time background, video, and animated foreground graphics. Duet’s VGEs support OpenGL operations and acceleration as well as hardware anti-aliasing, overlap, and layers. Any Duet Video Graphic Engine is adaptable to HDTV resolutions.

**Standard Definition Duet**

All SD Duets feature dual SDI channels, internally mixed in a single VGE. The SD Video I/O Board provides video processing for an SDI input with key and 2 independent outputs with key in 10-bit YUV, similar to Duet’s video bus. I/O is software-switchable for 525 and 625 SDI in both 4:3 and 16:9 aspect ratios. Duet’s Video I/O Board supports 1.485 Gb/sec serial digital (SMPTE 292M). Genlock timing services include tri-level sync at 59.95, 60, 24 or 23.98 Hz. HD Duet’s I/O board also incorporates an internal keying facility. All HD Duet systems include a video mixer to combine the power of multiple VGEs for rendering complex HD animations.

**Duet/iN FiNiT! Transition**

**iN FiNiT! Import/Export**

Using the Lyric application, with its custom conversion and browsing tools, Duet leverages your existing iN FiNiT! Family assets. Repurpose SD graphics composed on iN FiNiT! for HD broadcast, or produce new graphics for 4:3 and 16:9 feeds in one pass!

**The Duet Keyboard**

Duet’s dedicated keyboard is based on the familiar iN FiNiT! keyboard, so veteran Chyron operators can readily apply their skills in the Duet environment. Critical function keys and shortcuts occupy familiar locations for quick, sure execution of crucial tasks in live situations.
**Interactive Television**

Chyron's ITV products produce HTML-based, television-friendly interactive content for ITV-enabled set top boxes; the HTML component is encoded into your TV programming by existing Chyron hardware and software. A full suite of ITV creation and deployment tools works with current and future Chyron technology, allowing a single operator to create and coordinate both broadcast and interactive graphics.

**Duet System Chassis Components**

SD and HD Duet both have a modular plug-in power supply that delivers a wide safety margin with 840 Watts. The high-bandwidth scalable backplane acts as the video bus, integrating seven 64-bit expansion slots. Duet's plug-in Intel® CPU board features 10/100Base-T Ethernet, USB, parallel, and two serial ports. Eight PCI slots are provided for sub-systems such as SCSI controllers, modems, and graphic accelerators.

For storage, Duet includes a 10 GB hard disk, CD-ROM and floppy disk drives. Storage options include zip and Jaz drives.

The plug-in Intel® CPU board features 10/100Base-T Ethernet, USB, parallel, keyboard, mouse, and two serial ports. There are eight slots for PCI board sub-systems such as SCSI controllers, modems, and graphic accelerators. For storage, Duet includes a floppy disk drive, CD-ROM drive, and 6.0 GB HD.

**Specifications subject to change**