ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Foresight Imaging Accustream Express 170* at our website: *Click HERE*

FORESIGHT IMAGING®

ACCUSTREAM EXPRESS 50, 75, & 170

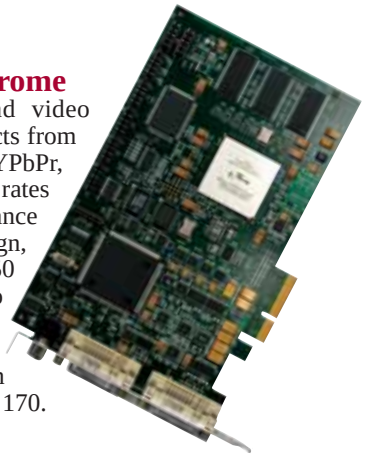
Key Features:

Extreme Accuracy
- ±0.5 ns pixel jitter
- 47 dB S/N ratio
- Gain, black level, and phase adjustments

High Performance
- Real-time video streaming with AVI file creation
- 750 MB/second sustained PCI Express x4 bus transfers
- Simultaneous real-time transfer to memory and display

Video
- Up to 170 MHz pixel rate
- Up to 2048 x 2048
- Includes 1080p, 1600 x 1200 x 60 Hz, & 1280 x 1024 x 85 Hz
- Non-standard and standard video inputs
- 24 bit DVI, RGB, YPbPr, HDTV & 8 bit monochrome
- Video output (loop-through)
- DDC compliant

Software
- Windows XP, Vista
- Auto-SYNC
- Video for Windows driver
- Example programs with source code



High Resolution DVI, RGB, HDTV & Monochrome

The AccuStream™ Express Series of frame grabbers and video streamers is the most advanced, most versatile series of products from Foresight Imaging. AccuStream Express captures DVI, RGB, YPbPr, HDTV, and monochrome video signals at up to 170 MHz pixel rates and up to 2048 x 2048 pixel resolution. The extreme performance of AccuStream Express is due to the PCI Express x4 bus design, delivering sustained performance to system memory of 750 MB/second. For example, AccuStream Express can stream to memory 1080p HDTV video without dropping any frames. The AccuStream Express Series is available in three versions, differing only in maximum pixel rate input: AccuStream Express 50, AccuStream Express 75, and AccuStream Express 170.

Accuracy

The AccuStream Express continues in the Foresight Imaging tradition of delivering extreme accuracy and image quality for demanding customers with high resolution and precision applications. Extremely low pixel jitter of ±0.5 ns, superior analog design, and a 47 dB signal-to-noise ratio provide the accuracy and image fidelity required of high performance applications. Color video digitization is performed at 8 bits each of R, G, and B (24 bits per pixel) or 24 bit YPbPr. Monochrome acquisitions are at 8 bits per pixel. Pixel formats include RGB 24, RGB 32, RGB 5:5:5, RGB 8, YCbCr 4:2:2, YCbCr 4:4:4, and 8 bit monochrome.

Performance

AccuStream Express achieves its extreme 750 MB/second sustained performance via its PCI Express x4 bus mastering design, scatter-gather technology, and double buffering. This high performance requires minimal CPU intervention so that the processor is free to work on other tasks or process the data immediately. Real-time display is simultaneously enabled by real-time transfer of image data directly to display card memory over the bus. AccuStream Express also features independent, dual video data paths, allowing for the simultaneous DirectDraw display of YCbCr 4:2:2 color video and the transfer of full 24 bit RGB video data for processing.

Video

AccuStream Express acquires images and video streams from both non-standard and standard video inputs up to 170 MHz DVI, RGB, YPbPr, HDTV, and monochrome. Input resolution is up to 4 megapixels total area. Active DVI, RGB, YPbPr, or monochrome loop-through output is provided. This feature eliminates the need for a separate, active video splitter to ensure high quality video input. For fine-tuning of the video signal, gain, black level, white balance, and phase controls are provided. Separate H and V sync are supported. An external trigger is available. AccuStream Express is fully compliant with the Display Data Channel (DDC) specification of DVI. It also features DVI Hot Plug Detect and Digital Monitor Emulation.

Software

AccuStream Express is supported by Auto-SYNC™, Foresight Imaging's flagship automatic configuration software. Auto-SYNC ensures quick and simple installation and image capture by automatically configuring AccuStream Express to the incoming standard or non-standard video signal. Auto-SYNC automatically analyzes the incoming video signal and builds a configuration file. Use the configuration file as created or utilize the Auto-SYNC Wizard for simple, step-by-step video adjustments. AccuStream Express is supported by the IDEA (Imaging Development Environment for Applications) software development kit. By using IDEA™, developers have the confidence of knowing that they can write their applications once and have support built-in for the entire AccuStream Series. A Video for Windows driver and a TWAIN driver are included to further simplify development and use of AccuStream Express. With IDEA, ActiveX controls are provided to facilitate easy development with Visual Basic, Visual C++, and Visual J++. Extensive example programs (with source code) are provided with IDEA. Functions of the example programs include triggered acquisition, video streaming to AVI files, integration with Pegasus Imaging compression for streaming, overlays, and much more. Auto-SYNC, IDEA, example programs, and drivers are provided free of charge with each AccuStream Express.

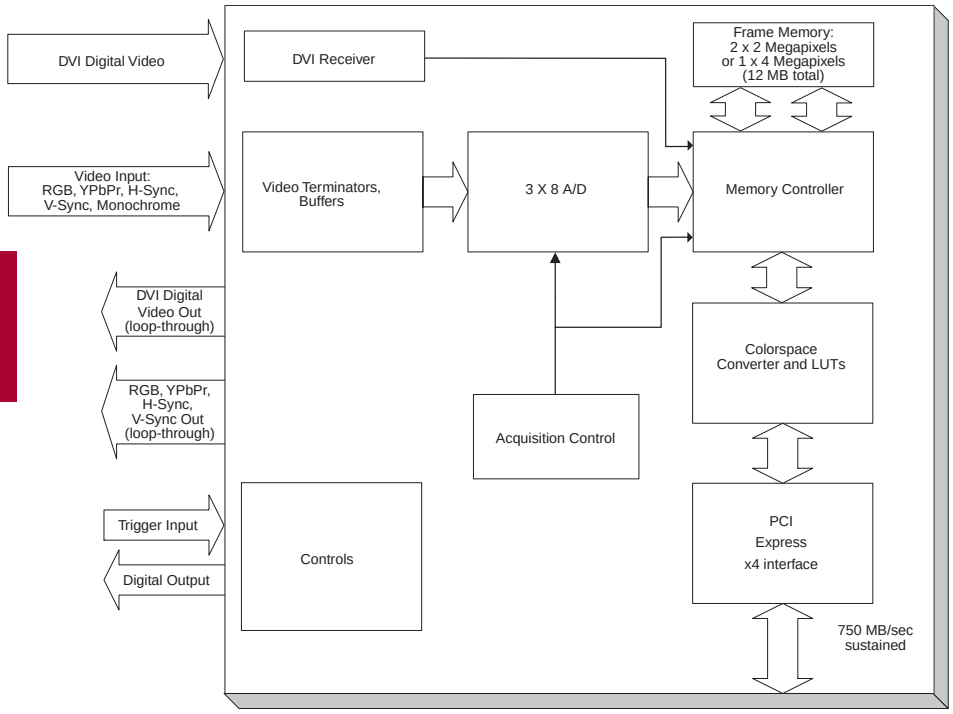
Applications

AccuStream Express is ideal for any application requiring high resolution and high performance imaging. With the lower priced AccuStream Express 50 & 75, AccuStream Express is also perfect for those high performance applications involving lower resolution video formats. Some of the popular applications for AccuStream Express include voyage data recorders (maritime imaging), military imaging, flight simulation, display monitoring, high-end multimedia, medical imaging, display monitoring, multimedia testing, and much more.

Voyage data recorders: Acquire from high resolution ship radar screens.
Flight simulation: Acquire from high resolution simulation displays.
Medical imaging: Acquire from virtually any medical imaging device.
Display monitoring: Acquire from high resolution displays.
Military imaging: Acquire from high resolution video screens for command & control.

AccuStream Express 50, 75, & 170 Specifications

AccuStream Express 50, 75, & 170 Block Diagram



Video - Analog

- Video input: RGB (one), YPbPr (one), or monochrome (up to three)
- Non-standard and standard video resolutions and frequencies
- Input range: 0.5 V pp to 1.0 V pp
- Offset: -1.0 V to 2.0 V DC
- 75 ohm termination
- 8 bit gain, 8 bit black level, white balance, phase adjustment
- AC coupled with DC restoration
- H and V sync input
- Bandwidth: 330 MHz
- Pixel rate: up to 170 MHz,
  50 MHz for AccuStream Express 50,
  75 MHz for AccuStream Express 75
- Horizontal frequency: up to 105 kHz
- Pixel resolution: up to 4 megapixels total area

Video - Digital

- DVI 1.0 compatible receiver
- Supports display resolutions up to UXGA (1600 x 1200 at 60 Hz)
- The receiver operates with true color (24-bit) panels in 1 or 2 pixel(s)/clock mode and features an intrapair skew tolerance of up to one full clock cycle
- 170 MHz operation,
  50 MHz for AccuStream Express 50,
  75 MHz for AccuStream Express 75

Controls

- Trigger input

Pass-Thru

Analog

- The Red, Green, Blue, H and V Syncs from the input connector are buffered and sent out through a second DVI-I connector
- Pass-thru R, G, B signals output impedance - 75 Ohms

Digital

- The four differential DVI pairs from the input connector are retransmitted by means of a DVI 1.0 compliant transmitter and sent out the second DVI-I connector
- Transmitter differential voltage single-ended peak to peak amplitude 310 mV min, 370 mV typical, 430 mV max

Image Quality

- Pixel jitter: ±0.5 ns
- S/N ratio: 47 dB
- Linearity: Better than 99%
- Gain and offset stability: 1% from 15°C to 40°C
- Synchronization time: less than 250 µs
- A/D conversion: 8 bits each of R, G, & B (24 bits per pixel), 24 bits YPbPr
- Color formats: RGB 24, RGB 32, RGB 5:5:5, RGB 8, YCbCr 4:2:2, YCbCr 4:4:4, 8 bit monochrome

Performance

- 750 MB/second sustained to system memory via PCI Express x4 bus master
- Real-time video streaming
- Real-time transfer to VGA memory
- Storage memory: 4 megapixels, 12 MB total

Physical

- Half-size PCI Express card (length 6.6 inches, height: 4.2 inches)
- Two female DVI-I connectors
- PCI Express x4
- One female phono connector for trigger

Cabling

- DVI to DVI cable (optional)
- DVI to VGA cable (15 pin D-shell) (optional)
- DVI to VGA cable (5 BNC) (optional)
- Trigger cable (optional)

Software

- Windows XP, Vista
- WDM driver
- Auto-SYNC automatic configuration software
- Example application programs (source code included)
- Real-time video streaming with AVI file creation
- IDEA software development kit
- ActiveX controls
- TWAIN driver

Foresight Imaging®

978-458-4624
info@fi-llc.com
www.fi-llc.com

Copyright © 2009 by Foresight Imaging, LLC. All specifications are subject to change without notice.

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP