Introducing NAC's newest Memrecam, the *GX-1* ...

The most experienced name in high-speed video introduces the GX-1—the first member of the new GX family of high-speed digital cameras. The Memrecam GX-1 is a rugged, ultra light sensitive, mega pixel camera developed for demanding Testing Environments!

NAC's **Memrecam GX-1** provides ultra high light sensitivity, Mega pixel resolution and ultra high speed . The **GX-1** is a fully self-contained, digital, high-speed video system that records brilliant color images or crisp monochrome images with ***over 1.3 million pixels***! Using the very latest CMOS sensor technology, the Memrecam GX-1 captures brilliant images at frame rates up to 200,000 fps.

The robust **GX-1** is perfect for a variety of applications including: Automotive Crash, Ballistics, Combustion, Materials Research, Machine Design, Microscopy, PIV, Flow Visualization, Spray Analysis, and many, many more...

- **Superior Light Sensitivity: >20,000 ISO monochrome, > 5,000 ISO color (SMPTE TV Standard)**
- **High Resolution: 1280 X 1024 pixels**
- **Adjustable Frame Rates from 50fps to 200,000fps in 1fps increments**
- **1:1 aspect ratio at 3,000 fps.**
- **Selectable Bit Density: 12 bits (extended dynamic range) / 10 bits / 8 bits (extends recording) STANDARD**
- **Variable Region of Interest with Continuously adjustable resolution in 16 x 4 pixel increments**
- **Gigabit Ethernet Laptop Friendly Interface**
- **Continuous Live Video Output (NTSC / PAL) during setup, recording and playback**
- **Auto Exposure Control**
- **Dynamic Range Expansion Shutter (pixel level shuttering)**
- **Versatile Recording: Burst-Trigger, Multi-Trigger and Event-Trigger Modes**
- **Memory Segment with automatic segment change capability**
- **External Sync Recording**
- **IRIG-B Timing Capture and Synchronization with Phase Shift**
- **Built-in Memory Backup**
- **USB2 for direct download to external storage (HDD, Flash Memory Card, etc.)**
- **Convenient functions for FOV setting: Low Light Mode, Low Light Segment Frame Display, Fiducial Mark**
- **Compact and Ruggedized Body (able to withstand >100G)**

Visit our website at www.nacinc.com

Memrecam GX-1
Preliminary Specifications:

Camera Features

Auto Exposure Control
Adjustable Frame Rates
Automatic Temperature Calibration
Selectable Bit Density
Variable Region of Interest
Continuously Adjustable Resolution
Gigabit Ethernet Interface
Continuous Live Video Output
Dynamic Range Expansion Shutter
Multiple Trigger Modes
Memory Segmentation
External Sync Recording
IRIG-B Timing Capture and Sync with Phase Shift
Built-in Memory Backup
USB2 Direct Download to non-volatile storage media
Hi-G Rated
Compact, Rugged Design

Sensor: 1280 X 1024 pixel CMOS
Bit Depth: 12-bit, 10-bit and 8-bit (customer selectable) - STANDARD
Sensitivity: >20,000 ISO monochrome and >5,000 ISO color at 1000fps, F4, using SMPTE TV Standard
Electronic Shutter: Adjustable in 1-micro second increments
Resolution: Continually adjustable resolution with recording rates from 50fps to 200,000fps.
Formats: Image formats supported include 5:4, 4:3, 16:9, SXGA, XGA, VGA, QVGA and customer selectable.
Lens Mount: F-Mount is standard, other mounts, including C-Mount are available.
Memory Backup: Memory backup comes standard.
Standalone Operation: Cameras do not require a PC for setup and operation.
Camera Control: 1000Base-T/100Base-TX and RS232.
Operation Control: The camera can be controlled using NAC's optional J-Pad III hand-held controller or via a PC-based control system.
IRIG-B: Cameras support real time IRIG-B time insertion and can be synchronized to IRIG-B.
Data Storage: Recorded images can be downloaded directly to a PC via Gigabit Ethernet or to a non-volatile storage medium (e.g. HDD, Flash Memory Card, etc.) via USB2.

I/O Connectors and LED Indicators:

J1: Supports power input, trigger input (TTL/contact closure), ARM status output (hardware), Fault status output and External Synchronous Trigger input.
J2: Supports video output (NTSC and PAL), viewfinder power, RS232 control input (for J-Pad III), USB2 and ARM command in.
J3: Supports Gigabit Ethernet, trigger input (photo isolation), IRIG-B input (modulated) EST/EVENT input and exposure pulse output (strobe output pulse).
Status Indicators: Power, Ethernet, USB, Memory Backup and Camera Status.

Mechanical and Environmental

Size: 100(W) X 100(H) X 230(D) mm
Weight: <4kg (approximately 7.5lbs).
Connectors: Integrated, quick-release.
Power: 20-32Vdc
Operating Temperature: 0°C to 40°C
Storage Temperature: -10°C to 60°C
Hi-G Operation - **The Memrecam GX-1** is specifically designed to function effectively in Hi-G and other hazardous environmental conditions (>100G)

Software

Camera Control: Camera connection, VIEW, set recording parameters, ARM, Trigger, playback, image download, modify image settings and format conversion.
Synchronous Data Recording: Scene number, date and time of trigger (including IRIG time), shutter speed, date and time of test (including IRIG time), camera settings, video process data and comments.
Image Processing: Image quality adjustment (e.g. white balancing, adjustments for gain, knee, gamma, and edge enhance), select region of interest, display of stored image information and format conversion.
Playback: Variable playback speed in forward and reverse, including freeze frame and endless loop. Single images can be reviewed or multiple images in split screen. Zoom function is available for image playback.
Measurement: XY Coordinate information is exportable to a CSV file and is therefore compatible with a variety of spreadsheet packages. Linear or angular measurements are available including displacement, velocity and acceleration.
Software Developers' Kit: NAC provides a standard SDK based upon an ActiveX component. The SDK will support C++, Visual C++ and Visual Basic.

Image Technology

Contact Us in the Americas:

NAC Image Technology
15 McCoy Place
Simi Valley, CA 93065
Tel: (800) 969-2711
E-mail: sales@nacinc.com

Contact Us in Europe:

NAC Deutschland GmbH
Hedelfingerstr. 54-70
70327 Stuttgart, Germany
Tel: +49(0)711 2201 885
E-mail: sales@nacinc.com