



**NAC Image Technology, the most experienced name in high-speed video, introduces the Memrecam fx RX5—a flexible, lightweight, high-speed, Hi-G mega pixel imaging system.**

## NAC's Memrecam fx RX5 Digital High-Speed Color Video System

NAC's Memrecam fx RX5 is a mega pixel camera system that sets industry standards for high-speed imaging flexibility and performance in on-board automotive testing. These cameras provide the ideal solution for image capture in confined spaces such as foot wells or engine compartments.

### The Memrecam fx RX5 System Features

- **Single Camera Operation**—The Memrecam fx RX camera head records images at 1,000 pps with 1280 X 1024 pixel resolution (optional recording rates up to 10,000 fps). Alternatively, the Memrecam fx RX5 uses the Memrecam Micro camera head (21mm X 21mm X 99mm, 0.3kg), recording at up to 500 fps in extremely confined spaces.
- **Remote Head Operation**—The Memrecam fx RX5 camera heads utilize a variety of camera cable lengths (3m, 5m and 9m) and cameras can be mounted up to 18m from the RX5's Digital Recording Processor (DRP).
- **Memrecam fx Product Family**—The Memrecam fx RX5 is a member of NAC's Memrecam fx Product Family and is therefore compatible with the complete range of Memrecam fx products, including: communications, synchronization and multi-camera controls.

The Memrecam fx family of products is easily networked and synchronized using NAC's complete line of accessory items including 2D and 3D Motion Analysis Systems. Choose NAC to help address your high-speed imaging needs and you'll see *The Visible Difference*.



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## Memrecam fx Family Common Features

- **High Resolution, High-Speed Sensor:** 1280 X 1024
- **Electronic Shutter:** OPEN to 1/1,00,000 seconds
- **Bit Density:** 10 Bits
- **Standard Lens Mount:** C-Mount or F-Mount available
- **Live Image:** A live image is generated by the Digital Signal Processor (DSP) and can be displayed on an optional LCD viewfinder or on the monitor of a PC.
- **Standalone Operation:** The Memrecam fx cameras do not require a PC for setup and operation.
- **Operation and Control:** All functions from the camera setup to the recording and slow playback can be controlled using the panel on the back of the camera. Alternatively, the camera can be controlled remotely using NAC's J-Pad II hand-held controller or via a PC-based control system.
- **Trigger Mode:** The Memrecam fx cameras use a START, CENTER, END or CUSTOM trigger. In the CUSTOM mode, the trigger point can be programmed and positioned by the customer (i.e. -100% to +100%).
- **Synchronous Data Recording:** Scene number, date and time of trigger, shutter speed, video process data, comments.
- **Back Panel Connectors:** TRIG IN (Trigger In), Control (J-Pad II connection), AUX (recording synchronous signal and serial operation signal for external products), 100Base-TX (Ethernet connection), Gigabit Ethernet, Remote In (M-Hub connection), D-VGA Out (VGA Viewfinder), CF (Compact Flash).
- **Recording Video Monitor:** In VIEW mode, live images captured by the camera but not saved in memory are reviewed. Images are displayed at a rate of 30 pps. In ARM/REC mode, the images captured by the camera and stored in memory can be reviewed. Image playback speed is adjustable.
- **Video Playback Unit:** Recorded images can be played back and viewed, immediately after image capture, on an optional LCD viewfinder (or NAC's View Box), on a VGA monitor or on the monitor of a control PC. The video playback unit allows for "step" fashion image review, allows the user to set the start and end points for image review, allows the user to "jump" to the trigger point, the START point or the END point of the image area. Image playback can be in a single segment or in a loop.
- **Memory Configuration:** 1.3GB, 4.0GB, 8.0GB and 16.0GB
- **Backup Option:** The memory backup option maintains power to the camera's DRAM in the event of power loss, thereby saving the customer's images. The images will be saved for approximately 1 hour.
- **Image Download:** The recorded images, having been captured to DRAM, can be downloaded directly to a PC via Gigabit Ethernet. Alternatively, images can be saved locally to a Compact Flash.
- **PC Communications:** The customer has the option of selecting from three different modes of PC communications.
- **Control Software:** Control software is provided with each camera system. Alternatively, the customer can develop his own control software. NAC will provide the customer with a Software Development Kit (based upon an ActiveX component). The SDK will support C++, Visual C++ and Visual Basic.
- **IRIG-B:** Memrecam fx cameras support real time IRIG-B time insertion and can be synchronized to IRIG-B.



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<b>Single Camera Head Memrecam fx RX5—Full Resolution</b>						
<b>Resolution</b>		<b>Frame Rate (fps)</b>	<b>Recording Time/Memory Configuration</b>			
<b>Horizontal</b>	<b>Vertical</b>		<b>1.3GB</b>	<b>4.0GB</b>	<b>8.0GB</b>	<b>16.0GB</b>
<b>1280</b>	<b>1024</b>	<b>100</b>	<b>8.1 sec</b>	<b>24 sec</b>	<b>48 sec</b>	<b>96 sec</b>
<b>1280</b>	<b>1024</b>	<b>250</b>	<b>3.2 sec</b>	<b>9.8 sec</b>	<b>19.6 sec</b>	<b>39.2 sec</b>
<b>1280</b>	<b>1024</b>	<b>500</b>	<b>1.6 sec</b>	<b>4.9 sec</b>	<b>9.8 sec</b>	<b>19.6 sec</b>
<b>1280</b>	<b>1024</b>	<b>1000</b>	<b>0.8 sec</b>	<b>2.4 sec</b>	<b>4.8 sec</b>	<b>9.6 sec</b>
<b>1280</b>	<b>512</b>	<b>2000</b>	<b>0.8 sec</b>	<b>2.4 sec</b>	<b>4.8 sec</b>	<b>9.6 sec</b>
<b>1280</b>	<b>344</b>	<b>3000</b>	<b>0.8 sec</b>	<b>2.4 sec</b>	<b>4.8 sec</b>	<b>9.6 sec</b>
<b>1280</b>	<b>256</b>	<b>4000</b>	<b>0.8 sec</b>	<b>2.4 sec</b>	<b>4.8 sec</b>	<b>9.6 sec</b>
<b>1280</b>	<b>200</b>	<b>5000</b>	<b>0.8 sec</b>	<b>2.5 sec</b>	<b>5.0 sec</b>	<b>10.0 sec</b>
<b>1280</b>	<b>168</b>	<b>6000</b>	<b>0.8 sec</b>	<b>2.5 sec</b>	<b>5.0 sec</b>	<b>10.0 sec</b>
<b>1280</b>	<b>120</b>	<b>8000</b>	<b>0.8 sec</b>	<b>2.6 sec</b>	<b>5.2 sec</b>	<b>10.4 sec</b>
<b>1280</b>	<b>96</b>	<b>10000</b>	<b>0.8 sec</b>	<b>2.6 sec</b>	<b>5.2 sec</b>	<b>10.4 sec</b>



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<b>Single Camera Head Memrecam fx RX5—HDTV Resolution</b>						
Resolution		Frame Rate (fps)	Recording Time/Memory Configuration			
Horizontal	Vertical		1.3GB	4.0GB	8.0GB	16.0GB
1280	720	100	11 sec	33 sec	65 sec	131 sec
1280	720	250	4.4 sec	13.2 sec	26.0 sec	52.4 sec
1280	720	500	2.2 sec	6.6 sec	13.1 sec	26.2 sec
1280	720	1000	1.1 sec	3.3 sec	6.5 sec	13.1 sec
1280	512	2000	0.8 sec	2.4 sec	4.8 sec	9.6 sec
1280	344	3000	0.8 sec	2.4 sec	4.8 sec	9.6 sec
1280	256	4000	0.8 sec	2.4 sec	4.8 sec	9.6 sec
1280	200	5000	0.8 sec	2.5 sec	5.0 sec	10.0 sec
1280	168	6000	0.8 sec	2.5 sec	5.0 sec	10.0 sec
1280	120	8000	0.8 sec	2.6 sec	5.2 sec	10.4 sec
1280	96	10000	0.8 sec	2.6 sec	5.2 sec	10.4 sec

<b>Single Camera Head Memrecam fx RX5—Reduced Resolution</b>						
Resolution		Frame Rate (fps)	Recording Time/Memory Configuration			
Horizontal	Vertical		1.3GB	4.0GB	8.0GB	16.0GB
640	512	100	33 sec	98 sec	196 sec	392 sec
640	512	250	13.2 sec	39.2 sec	78.4 sec	156.8 sec
640	512	500	6.6 sec	19.6 sec	39.2 sec	78.4 sec
640	512	1000	3.3 sec	9.8 sec	19.6 sec	39.2 sec
640	512	2000	1.6 sec	4.9 sec	9.8 sec	19.6 sec
640	344	3000	1.6 sec	4.9 sec	9.8 sec	19.6 sec
640	256	4000	1.6 sec	4.9 sec	9.8 sec	19.6 sec
640	200	5000	1.7 sec	5.0 sec	10.0 sec	20.0 sec
640	168	6000	1.7 sec	5.0 sec	10.0 sec	20.0 sec
640	120	8000	1.7 sec	5.2 sec	10.4 sec	20.8 sec
640	96	10000	1.7 sec	5.2 sec	10.4 sec	20.8 sec



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