

# **MEMRECAM ACS-1** **M60/ M40**



## **World's First 60 GPixel/sec High Speed Camera System**

**1280×896 pixels @ 100,000 fps (M60)  
@ 65,000 fps (M40)**

**1 Mpixel Resolution at Ultra-Fast Framing Rates** ※ In boost mode

**Ultra High Sensitivity**  
**Color ISO 20,000**  
**Mono ISO 100,000**

**500% brighter than conventional models** ※ Compare to MEMRECAM GX-8F

**USB 3.0B Fast download**

**400% faster data transfer** ※ vs LAN connection

**Up to 256GB Built-in memory**

**For longer recording time & memory segmentation for repetitive events**

## Features

|                              |                                                                                               |
|------------------------------|-----------------------------------------------------------------------------------------------|
| Boost mode <sup>※3</sup>     | For increased FPS or Vertical Resolution                                                      |
| Auto Black Balance           | Mechanical Calibration Shutter                                                                |
| Memory Segment               | Up to 64 Segments                                                                             |
| Built-in SSD <sup>※1</sup>   | Faster Auto Storage into Built-in SSD<br>Backup image data while recording                    |
| Faster Download              | Download via USB3.0B (to PC)                                                                  |
| DOWNLOAD REC                 | Recording to a memory segment in parallel<br>with downloading to another memory segment       |
| Image Trigger                | Triggered by intensity shifts detected in a minimum<br>area of 21x16 pixel                    |
| Dual Framing Rate            | 1x and 1/2 ~ 1/100x                                                                           |
| CAM MODE LED                 | Status LED : READY / VIEW / ARM / REC                                                         |
| SYNC Recording               | Fully synchronized with GX-HUB                                                                |
| Frame straddling<br>shooting | Record continuous image pairs for PIV analysis<br>Support minimum 500ns laser pulse <M60/M40> |
| Fan control<br>mode          | Pause control / auto fancontrol / forced cooling                                              |
| Auto pilot                   | Read sequence and execute automatically                                                       |
| EST SYNC                     | Sync with an external signal                                                                  |

## Specifications

|                          |                                                                                                                                          |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Sensor                   | 1.14M Pixel, CMOS                                                                                                                        |
| Active Pixel             | 1280x896                                                                                                                                 |
| ISO (REI)                | ISO 5,000 - 40,000 (color)<br>ISO 25,000 - 200,000 (Mono)                                                                                |
| Electric Shutter         | <M60>1/100 ~ 1/2,500,000 sec. 1/100 ~ 1/909,090 sec. <sup>※4</sup><br><M40>1/100 ~ 1/1,666,666 sec. 1/100 ~ 1/909,090 sec. <sup>※4</sup> |
| Memory                   | 64GB / 128GB / 256GB                                                                                                                     |
| Memory Segment           | Up to 64 Segments                                                                                                                        |
| Bit Depth                | 8bit / 10bit / 12bit                                                                                                                     |
| Lens Mount <sup>※1</sup> | F Mount (Support to Iris ring-less Lens) <sup>※1</sup><br>C Mount <sup>※1</sup> EF Mount <sup>※1</sup>                                   |
| Video Output             | DisplayPort/ 3G-SDI (Level A)                                                                                                            |
| Input Signal             | Trigger (TTL/Contact)/ EST/ IRIG-B/ ARM CMD/ PWR CTL                                                                                     |
| Output Signal            | Status (ARM/FAULT)/ Exp. Pulse/ EPO/ Trigger OUT/ VD OUT                                                                                 |
| Trigger Mode             | NORMAL/ EVENT/ BURST/ MULTI/ LINEAR                                                                                                      |
| Interface                | 1000BASE-T / USB3.0B / 3.0 / 2.0                                                                                                         |
| Control <sup>※1</sup>    | PC, V-PAD (11.6" Touch Panel Monitor)                                                                                                    |
| Power                    | 20-32VDC                                                                                                                                 |
| Dimensions               | Approx. 175Wx175Hx206D mm (without handle)                                                                                               |
| Weight                   | Approx. 7.3kg                                                                                                                            |

Recording Time <sup>※2</sup>

| fps                     | M60                |                 |                    |                 | M40                |                 |                    |                 |
|-------------------------|--------------------|-----------------|--------------------|-----------------|--------------------|-----------------|--------------------|-----------------|
|                         | (Normal mode)      |                 | (Boost mode)       |                 | (Normal mode)      |                 | (Boost mode)       |                 |
|                         | pixel<br>(H) × (V) | Time<br>in sec. | pixel<br>(H) × (V) | Time<br>in sec. | pixel<br>(H) × (V) | Time<br>in sec. | pixel<br>(H) × (V) | Time<br>in sec. |
| 50~25,000               | 1280 × 896         | 3.04            | —                  | —               | 1280 × 896         | 3.04            | —                  | —               |
| 30,000                  | ↓                  | 2.54            | —                  | —               | ↓                  | 2.54            | —                  | —               |
| 35,000                  | ↓                  | 2.17            | —                  | —               | ↓                  | 2.17            | —                  | —               |
| 40,000                  | ↓                  | 1.90            | —                  | —               | 1280 × 800         | 2.13            | 1280 × 896         | 3.80            |
| 45,000                  | ↓                  | 1.69            | —                  | —               | 1280 × 720         | 2.10            | ↓                  | 3.38            |
| 50,000                  | ↓                  | 1.52            | —                  | —               | 1280 × 640         | 2.13            | ↓                  | 3.04            |
| 60,000                  | 1280 × 800         | 1.42            | 1280 × 896         | 2.54            | 1280 × 528         | 2.15            | ↓                  | 2.54            |
| 65,000                  | 1280 × 736         | 1.42            | ↓                  | 2.27            | 1280 × 480         | 2.18            | ↓                  | 2.34            |
| 75,000                  | 1280 × 624         | 1.46            | ↓                  | 2.03            | 1280 × 400         | 2.27            | 1280 × 800         | 2.27            |
| 100,000                 | 1280 × 448         | 1.52            | ↓                  | 1.52            | 1280 × 288         | 2.37            | 1280 × 576         | 2.27            |
| 120,000                 | 1280 × 368         | 1.54            | 1280 × 704         | 1.61            | 1280 × 224         | 2.54            | 1280 × 448         | 2.54            |
| 150,000                 | 1280 × 288         | 1.58            | 1280 × 544         | 1.67            | 1280 × 176         | 2.58            | 1280 × 352         | 2.58            |
| 200,000                 | 1280 × 192         | 1.77            | 1280 × 384         | 1.77            | 1280 × 112         | 3.04            | 1280 × 224         | 3.04            |
| 220,000                 | 1280 × 176         | 1.76            | 1280 × 352         | 1.76            | 1280 × 96          | 3.23            | 1280 × 192         | 3.23*           |
| <sup>※5</sup> 300,000   | 1280 × 96          | 2.37            | 1280 × 192         | 2.37            | 1280 × 48          | 4.73            | 1280 × 96          | 4.73            |
| <sup>※5</sup> 400,000   | 1280 × 48          | 3.55            | 1280 × 96          | 3.55            | 1280 × 32          | 5.32            | 1280 × 64          | 5.32            |
| <sup>※5</sup> 500,000   | 1280 × 32          | 4.26            | 1280 × 64          | 4.26            | 1280 × 16          | 8.52            | 1280 × 32          | 8.52            |
| <sup>※5</sup> 700,000   | 1280 × 16          | 6.09            | 1280 × 32          | 6.09            | 1280 × 16          | 6.09            | 1280 × 32          | 6.09            |
| <sup>※5</sup> 1,000,000 | 1280 × 16          | 4.26            | 1280 × 32          | 4.26            |                    |                 |                    |                 |

## Configurations

## Standard

- ACS Camera
- Tripod Plate
- Standard Comm. Cable
- NAC Control Software MLink
- Operation Manual

## Options

- AC Adapter (Power Supply)
- F-Mount Adapter
- C-Mount Adapter
- EF-Mount Adapter
- V-PAD
- Analog Wave Inserter
- Built-in SSD 1TB
- AUX Cable
- SYNC Cable
- Carrying Case



V-PAD\*1



\*1 Option

\*2 Recording Time is 128GB model at 12-bit recording

\*3 Only monochrome

\*4 Export Control Model

\*5 Required Export License

Visit our website at [www.nacinc.com](http://www.nacinc.com)

Please Note: Specifications described above are preliminary and subject to change.

Contact Us in Americas:

**nac Americas Inc.**  
 193 Jefferson Ave, Suite 102  
 Salem, MA 01970 U.S.A.  
 Tel: (833) 600-0280  
 E-mail: [sales@nacinc.com](mailto:sales@nacinc.com)