



# nVisor MH60 Detailed Datasheet Rev A

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## Product Specifications

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### Optical

|  |                                     |
|--|-------------------------------------|
| FOV, Vertical                                  | 34.4 °                              |
| FOV, Horizontal                                | 43.6 °                              |
| Shape Of View (SOV) Type 1                     | Full Rectangular (Type 1)           |
| Overlap  | 100                                 |
| Pupil Size                                     | 9, Non-Real mm                      |
| Eye Relief                                     | 23 mm                               |
| Geometric Distortion                           | +15% Maximum (Pincushion)           |
| Accommodation (Fixed Or User Adjustable Range) | 0 diopter                           |
| Convergence Angle                              | 0 °                                 |
| Dipvergence (Vertical Misalignment)            | 4 MAX MOA                           |
| Brightness (MAX)                               | 30 fL                               |
| Brightness Levels                              | 10, 14, 18, 22, 26, & 30 fL         |
| Chromaticity (X)                               | .313                                |
| Chromaticity (Y)                               | .329                                |
| Contrast (Min.)                                | 100:1                               |
| Image Defect Criteria                          | <a href="#">See document 102458</a> |
| Spatial Resolution                             | 2.1 arcmn/pxl                       |

### Microdisplay

|                    |   |
|--------------------|---|
| Display Technology | Color Sequential, LCOS (Reflective)                 |
| Resolution         | SXGA 1280 x 1024                                    |
| Pixel Format       | 13.62 micron square pixels (field sequential R G B) |
| Color Depth        | 24-BIT (8 bits per R,G,B)                           |

### Video

|                     |  |
|---------------------|--|
| Video Input Format  | SXGA 1280 x 1024 @ 60 Hz   |
| Video Interface     | Digital over DVI-D: Left and Right channels<br>or<br>Analog over VGA: Left and Right channels  |
| VCU Interface       | Mates with NVIS external Video Control Unit through umbilical independent Left & Right LVDS cables with safety power lock for Stereo / Mono operation. |
| Monitor Out         | Digital over DVI (1X)<br>Analog over VGA (1X)  |
| Latency             | <16.7 ms   |
| Video Image Quality | No visible artifacts, noise or abnormalities   |

## Controls

|  |  |
|--|--|
| On/Off Control                             | Power (Push Button)  |
| Brightness Control                         | Brightness buttons cycle through pre-set levels                              |
| Display Configuration Control              | 4DD SxProg over RS232; Rocker switch toggles between Left and Right channels |
| Interpupillary Distance (IPD) Range        | 53 to 72 (Independent left and right) mm                                     |
| Eye Relief Adjustment Range                | ±14 mm   |
| Vertical Adjustment Range For Head Fitting | ±14 mm   |

## Indicators

|                               |  |
|-------------------------------|--|
| Power On/Off Indicator        | 1x Green LED on power button<br>1x Green LED on back panel     |
| Sync (video Signal) Indicator | Sync indication via LCD panel for both Left and Right channels |

## Power

|                         |   |
|-------------------------|---|
| Power Consumption (TYP) | 20 W  |
| Power Supply            | AVCU-S ROHS(103424):<br>INPUT: 100-240 VAC 1.5 A 50-60 Hz. OUTPUT: +12 V DC 5.5 A<br>AVCU-S W/ BATTERY ROHS(103426):<br>INPUT: 100-240 VAC 1.4 A 50-60 Hz. OUTPUT: +24 V DC 2.5 A           |
| Power Source            | 100-240 VAC, 50-60 Hz, 0.4 A (IEC Type C13 Cord)  |
| Power Input             | AVCU-S ROHS(103424):<br>+12V DC, 5.5A WITH<br>EXTERNAL AC ADAPTER<br>2.5 mm POWER JACK<br>AVCU-S W/ BATTERY ROHS(103426):<br>+24 VDC, 2.5A WITH<br>EXTERNAL AC ADAPTER<br>2.1 mm POWER JACK |

## Physical

|                           |  |
|---------------------------|--|
| Size (envelope)           | 4.4 L x 7.9 W x 6.2 H max in   |
| Mass                      | 955 g  |
| Color                     | Black and Pale Blue  |
| Cable Exit                | Rear sides of display module.  |
| Cable Length              | 4.7 m  |
| Cable Minimum Bend Radius | 1 in   |
| Cable Makeup              | 2x LVDS cables in braided nylon sleeve   |
| Trackers Supported        | IC3, IC2+, Ascension, and Polhemus.  |
| Tracker Mounting          | External; Two mounting holes on left and right rear of housing.                        |
| Logo, Labels, Markings    | One part number label and one serial number label located on the exterior of the unit. |

## Environment

|                             |  |
|-----------------------------|--|
| Operating Temperature Range | 0 to 30 °C                                       |
| Operating Humidity Range    | 90% Relative Humidity, Non-condensing, 240 hours |

Storage Temperature Range

-20 to 60 °C

Storage Humidity Range

90% Relative Humidity, Non-condensing, 240 hours

## **Compliance**

RoHS Compliance

RoHS Compliant

# Drawings

