



50" (127 cm) Professional  
QFHD/UD (4k) 3D display

3D Intelligent Display Solution

3D & 2D dual-mode display

DM504MAS

## No-glasses 3D to the next level

### Unprecedented FHD resolution in both 2D and glasses-free 3D

The autostereoscopic 4k 50" LCD display offers a magnificent resolution of 3840x2160 pixels. Combining Dimenco Nabla and Clear View technologies, the 4k display delivers the best depth performance, widest viewing angle, lowest cross-talk, and deepest black levels.

#### Exciting out-of-screen 3D effects

- A stunning and truly 'magical' 3D effect that instantly grabs the attention and enhances the entertaining experience of the viewer
- Increased amount of view-time resulted in 45% higher customer attention (result from a study performed by the University of Tilburg in 2011)

#### State-of-art

- QFHD/UD/4k LCD display, 3840 x 2160 pixels
- Dimenco Nabla, a unique combination of lens design and image processing
- Dimenco Clear View (DCV), patented lenticular lens manufacturing and bonding

#### Autostereoscopic lenticular technology

- No need for special 3D glasses
- Enables the 'look around' effect
- Full brightness, full contrast, true color fidelity

#### Optimized for public locations

- Multi-view allows many viewers to experience 3D simultaneously
- More effective and noticed means of communication
- Edge LED backlight



NABLA

## 50" QFHD no-glasses 3D display

### Technical Specifications

#### Multi-view Lenticular Display

- Autostereoscopic 3D display: 28 view
- 3D Technology: fixed lenticular
- Optimal viewing distance: adjustable
- Image diameter: 50 inch
- Resolution: 3,840 x 2,160 x RGB (QFHD)
- Aspect ratio: 9 : 16
- Display colors: 1.07 Billion colors
- Brightness: 400 cd/m<sup>2</sup>
- Contrast ratio (typical): 5000:1
- Response time gray-to-gray (typical): 6.5 ms
- Input format: 2D-plus-Depth in 3D mode
- Orientation : landscape

#### Connectivity

- Video input:
  - DVI-D dual link
  - 30 Hz, 3840 x 2160 p
- Monitor control via DDC/CI channel
- Power consumption: 130W
- Power supply: Built-in, 90-253 VAC, 50/60Hz

#### Advanced display signal processing

- Integrated 2D/3D display processing hardware
- 3D data interface
- 2D-plus-Depth converted to 28 different views and interwoven into a 3D
- Dimenco rendering is tuned for lenticular optical behavior
- Two modes:
  - 3D rendering mode
  - 2D mode with picture quality improvement

#### Dimensions

- Dimensions (W x H x D): 116 x 68 x 10 cm
- Mounting:
  - Table stand optional
  - VESA 400x400 mm mounting possibility
- Relative Humidity: 20% - 90%
- Temperature range (operation): 0°C to 35°C
- Temperature range (storage): -20°C to 60°C
- Product weight: 45 kg

#### Display Control Tool

The Display Control Tool, running on the PC, offers real-time control of the following monitor functions:

- Offset
- Depth factor
- Optimal viewing distance
- Contrast
- Brightness
- Advanced visualization parameters

#### Media Player

The Media Player is an application to play 3D video clips in the 2D-plus-Depth format on a PC. The Media Player ensures that the monitor switches to 3D mode with the appropriate settings.

#### 3D content enabling products (optional)

- Plug-ins for popular 3D animation software available
- OpenGL Visualizer and Control, DirectX Visualizer
- Player API, Settings API

## DM504MAS

### Product highlights

#### 3D intelligent dual-mode display

Dimenco Displays offers an autostereoscopic 3D display, for professional applications, which provides today's best 3D viewing experiences by using unique technology. The slanted multi-view lenticular lens technology affords full brightness, full contrast and allows multiple users to view 3D content simultaneously. Moreover, a true color representation is ensured by the lenticular lens technology. The display is based on a high-resolution panel, which enables great picture quality in both 2D and 3D mode.

The integrated Dimenco rendering core, which is based on advanced display signal processing, offers content creators and end-users full control over the quality and depth-effect characteristics of the picture.

The flexible 3D data format, in the form of 2D-plus-Depth, allows easy creation or adaptation of applications and content for the display.

The 50" 3D display is specially developed for digital signage and point-of-sale advertising.

#### 3D system solution

The displays can be used in a broad range of 2D and 3D applications, because of its multiple operating modes. While at the same time the system solution is designed for maximum reuse of content/concepts from the 2D world.

The key enabler of this feature is the flexible 2D-plus-Depth format that allows decoupling of content creation and content visualization. This allows applications where different 3D display screen sizes and designs can be applied in the same system. The 3D display selects the best way to visualize the 3D content.

#### 3D content visualization

The 2D-plus-depth format is compatible with existing compression tools, while the additional bandwidth of the depth is small. The Media Player is provided with a 3D display to show the 3D content. The actual 3D content can be created via plug-ins available for popular 3D animation software packages, that allows existing and new content to be exported in this format.

There are many digital signage or narrowcasting software solutions in which the Media Player can easily be integrated.

In addition to real-time and offline content creation tools, there are many applications that operate on a 3D dataset. Most of these applications, such as games, design, etc. use the OpenGL or DirectX API. The OpenGL Control supports real-time extraction and usage of the depth information and thus real-time visualization on the 3D display.

