

FHD - 2,5K - 4K
NVIDIA 3D Vision Replacement

 **schneider**
d i g i t a l
Professional 3D-Hardware

3D PluraView

The Reference of 3D-Stereo Monitors



- Flicker free for professional continuous use
- Highest brightness – Daylight suitable
- Two housing designs: 22"/24" or 27"/28"
- Wide visual angle – Multi-user capability
- Certified for photogrammetry and GIS
- Resolution FullHD, 2,5K or 4K

3D PluraView | Passive 3D-Stereo Monitor



The innovative stereo photogrammetry monitor

Flicker free and high-resolution visualization for a perfect 3D-Stereo experience

The 3D PluraView from Schneider Digital is the further developed successor of the canceled PLANAR Beamsplitter-Series. Innovative, reliable technology is the foundation for precise, pixel accurate, stereoscopic image evaluation in highest quality, even in daylight. The 3D PluraView Beamsplitter technology delivers full monitor resolution up to 4K / UHD @ 10-bits in brilliant brightness thanks to one display per eye. This allows the user a comfortable, fatigue-free working in all 3D stereo applications.

That allows users to work comfortable and effortless in all 3D-Stereo-Applications. The new BlackTuner technology of the 3D PluraView supports the user to capture his objects even in dark areas of the image. A response time of only 1 ms reduces blurring in moving pictures. Newly developed polarization glasses with optimal channel separation also prevent “ghosting”. This is the key to perfect 3D stereo visualization in all professional GIS applications.

3D PluraView - The Reference of 3D-Stereo Displays

- Flicker free for relaxed 3D-operation professional continuous use
- Highest Brightness – Suitable for working near windows, one monitor being available for each eye
- Wide Visual Angle – suitable for meetings of groups of up to 5 people
- Highest resolution - up to 4K/UHD (8,3 MP per Eye) @ 10-Bit
- Certified for Photogrammetry and GIS (AGISOFT, ESRI, HEXAGON, TRIMBLE, etc.)
- Elegant design & highest quality – made in Germany
- Plug & Play Technology established for 14 years

Designed for GIS-Professionals

Unique 3D-Stereo experience – Daily continuous operation experience

The new Schneider Digital 3D PluraView monitor provides an innovative Beamsplitter-Technology for highest quality in stereoscopic illustration at desktop monitors. The 3D PluraView is ideally suited for all Stereo-Software-Applications in highly diverse branches:

- 3D City model visualization
- Photogrammetry
- GIS / Mapping
- Industrial Measuring / Laser Scanning
- Oil & Gas prospecting
- Archeology
- Crystallography / biochemistry
- Computed tomography & surgical planning
- Biochemistry / Microscopy
- CGI / 3D Video editing
- Mechanical Design / CAD
- Simulation & VR training

Any software that supports Nvidia 3D Vision Pro works Plug & Play with the 3D PluraView.

3D PluraView supported applications:

 3D Zephyr	 Summit Evolution	 Stereo Analyst	 ESPA 3D	 ArcGIS
 ArcGIS Pro	 StereoCAD	 Photomod	 PhotoScan	 Socet Set / Socet GXP
 SCI-X	 GeoMedia	 WinATLAS	 TNTgis	 3DM Content Manager
 uSMART	 Match-AT / DTMaster / UASMaster	 ContextCapture	 Vr Two	 LIMON Viewer PRO
 Scene	 CloudCompare Stereo	 TerraStereo	 LaserControl	 RhinoTerrain
 Softplotter / KDSP	 ERDAS IMAGINE	 ImageStation	 VirtouZo	 HxMap
 Digi3D	 PurVIEW	 Gcarto	 Petrel	 VoxelGeo
 GoCAD	 GeoProbe	 Kingdom	 JewelSuite	

3D PLURAVIEW MONITOR SPECIFICATIONS

	22" FHD	24" FHD
Display	21,5" (546 mm) Screen Size 2x 1.920 x 1.080 Resolution (2.1 MP) 16,7 Million Colours (8-Bit) 250 cd/m ² Brightness	24" (610 mm) Screen Size 2x 1.920 x 1.080 Resolution (2.1 MP) 16,7 Million Colours (8-Bit) 350 cd/m ² Brightness
	LED BackLight-Technology 2 ms Response Time 170°/160° Viewing Angle (H/V)	LED BackLight-Technology 1 ms Response Time 170°/160° Viewing Angle (H/V)
	Contrast Ratio: 200.000: 1 ACR	Contrast Ratio: 1.000 : 1 static
Frame rate	60 Hz	144 Hz
3D-Characteristics	160 cd/m ² Brightness Frame rate glasses 1.920 x 1.080 per Eye Resolution	210 cd/m ² Brightness with glasses 1.920 x 1.080 per Eye Resolution
	Linear Polarization 45°/135° Beamsplitter: half transparency mirror	
3D-Formats	Quad Buffered OpenGL, Side-by-Side, Top-Bottom, Quad Buffered DirectX	
Operating Systems	Windows / Linux / macOS-Compatibility, Windows-10 Certification	
Power Consumption	Power Consumption 53W typical, max. 1W in Power Management Mode Annual Power Consumption 94 kWh / year	Power Consumption 61W typical; max. 1W in Power Management Mode Annual Power Consumption 135 kWh / year
	Power Management VESA DPMS™, Energy Star 6.0 Efficiency Class B	
Weight	23 kg, set weight with stand	26 kg, set weight with stand
Measurements	54 x 59 x 46 cm (WxHxD)	61 x 60 x 49 cm (WxHxD)
Interfaces	2x DisplayPort 1.1 cable 2,5m (integrated)	2x DisplayPort 1.2 cable 2,5m
	1 x main plug AC 100 - 240 V, 50 / 60 Hz	
Audio	Integrated Speaker 2 x 2 W	
Design	Diamond Dark Alu/Steel Construction Integrated Electronics Adjustable Stand Made in Germany	
Technical Notes	2x DisplayPort 1.1 output to the graphics card is required, optionally available as dual DVI version	2x DisplayPort 1.2 output on the graphics card is required for 144Hz, with DP 1.1 is 120Hz operation possible. FreeSync support with AMD
Graphics Card Requirements	Any QuadBuffer capable NVIDIA Quadro and AMD FirePRO / RadeonPRO cards, which have at least 2x DisplayPort 1.1 monitor outputs. The use of an additional, It is recommended to use the side view monitor for the 3D PluraView, which is adapted to the polarization of the stereo system.	
Warranty	1 Year Warranty without exclusion, with carepack extended up to 5 Years	



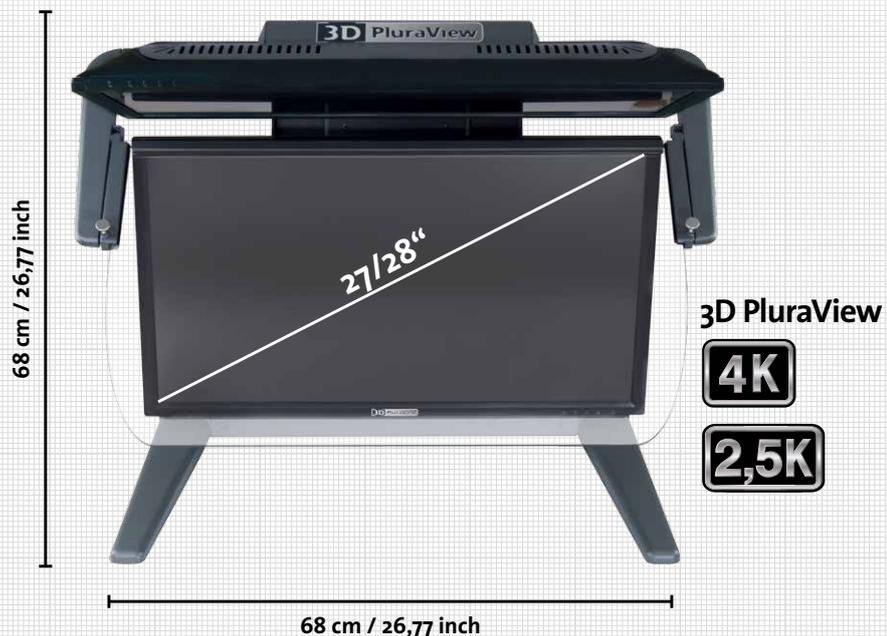
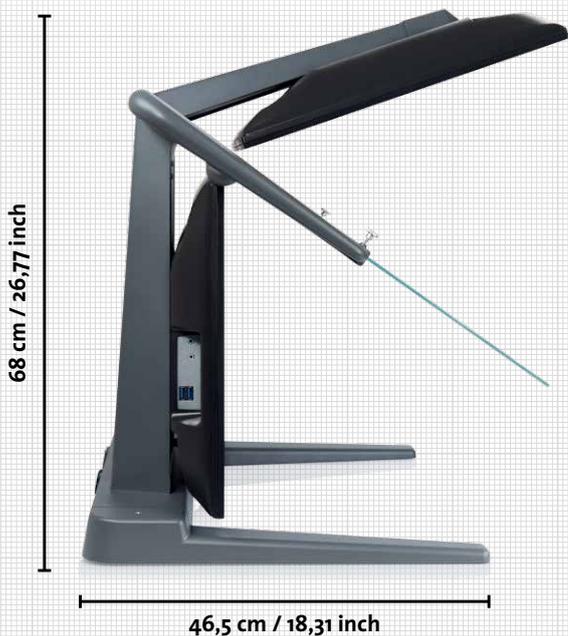
3D PluraView supporting
QuadBuffer Graphics Cards



3D PluraView
FHD

3D PLURAVIEW MONITOR SPECIFICATIONS

	27" 2,5K	28" 4K/UHD
Display	27" (686 mm) Screen Size 2x 2.560 x 1.440 Resolution (3,7 MP) 16,7 Million Colours (8-Bit) 350 cd/m ² Brightness	28" (711 mm) Screen Size 2x 3.840 x 2.160 Resolution (8,3 MP) 1,073 Billion Colours (10-Bit*) 300 cd/m ² Brightness
	LED BackLight-Technology 1 ms Response Time 170 °/160 ° Viewing Angle (H/V) BlackTuner for lightening of the shades	
	Contrast Ratio: 80 000 000 : 1 ACR	Contrast Ratio: 12 000 000 : 1 ACR
Frame rate	60 Hz	60 Hz
3D-Characteristics	210 cd/m ² Brightness with glasses 2.560 x 1.440 per Eye Resolution	180 cd/m ² Brightness with glasses 3.840 x 2.160 per Eye Resolution
	Linear Polarization 45°/135° Beamsplitter: half transparency mirror	
3D-Formats	Quad Buffered OpenGL, Side-by-Side, Top-Bottom, Quad Buffered DirectX	
Operating Systems	Windows / Linux / macOS-Compatibility, Windows-10 Certification	
Power Consumption	Power Consumption 75W typical; max. 1W in Power Management Mode Annual Power Consumption 131 kWh / year	Power Consumption 98W typical; max. 1W in Power Management Mode Annual Power Consumption 173 kWh / year
	Power Management VESA DPMS™, Energy Star 6.0 Efficiency Class B	
Weight	25 kg, set weight with stand	26 kg, set weight with stand
Measurements	80 x 68 x 54 cm (WxHxD)	80 x 68 x 54 cm (WxHxD)
Interfaces	2x DisplayPort 1.2 cable 3m 2x USB 2.0	2x DisplayPort 1.2 cable 3m 2x USB 3.0
	1 x main plug AC 100 - 240 V, 50 / 60 Hz with power switch and fuse 3.15 A	
Audio	Integrated Speaker 2 x 2,5 W	Integrated Speaker 2 x 3 W
Design	Diamond Dark Aluminum Construction Integrated Electronics Adjustable Stand Made in Germany	
Technical Notes	2x DisplayPort 1.1 output to the graphics card is required AMD FreeSync support	2x DisplayPort 1.2 output on the graphics card is required for 60Hz, with DP 1.1 is 30Hz operation possible. AMD FreeSync support
Graphics Card Requirements	Any QuadBuffer capable NVIDIA Quadro and AMD FirePRO / RadeonPRO cards that have at least 2x DisplayPort 1.1 monitor outputs. It is recommended to use an additional side view monitor for the 3D PluraView, which is adapted to the polarization of the stereo system. * The feature 10Bit color depth with QuadBuffer 3D stereo only works with AMD graphics cards.	
Warranty	1 Year Warranty without exclusion, with carepack extended up to 5 Years	





The reference of passive 3D stereo monitors

3D PluraView Family - For the highest requirements in GIS and Mapping

Especially for GIS applications, users are faced with the challenge of quickly loading large amounts of data and visualizing them in a stereoscopic display on a suitable 3D monitor. Those who have been working daily in their professional environment, e.g. in the GEO computer science or in laser point cloud applications on high-resolution 3D-Stereo-visualization relies, wishes a flicker-free, daylight-suitable 3D-Display, which allows him an almost fatigue-free stereoscopic work over the whole day.

These are precisely the requirements of Schneider Digital's 3D PluraView family of passive stereo displays based on the long-established beam splitter technology. The 3D PluraView monitors are specifically designed for the stereoscopic display of 3D software applications in industries such as photogrammetry, point cloud visualization of laser scans, and 3D data visualization. Only with the linear passive stereo filters are homogeneous, closed surfaces and textures reproducible down to the smallest detail.

3D PluraView - Advantages & Benefits

- Passive Stereo Monitors have the highest user acceptance of any 3D display technology available on the market
- Long-term experience of highly-qualified, satisfied users who have been working with it for 14 years proves the user-friendliness
- Thanks to their high brightness, 3D PluraView users can work relaxed even in window seats
- The flicker-free 3D stereo display with the highest resolution measurably increases the motivation of the users
- The 3D PluraView models with 4K resolution per eye provide new application possibilities in the display of point clouds and 3D city models.
- NEW! Professional supplement to the HMD:
PluraView PluraView with head & object tracking

Certified for leading GIS software

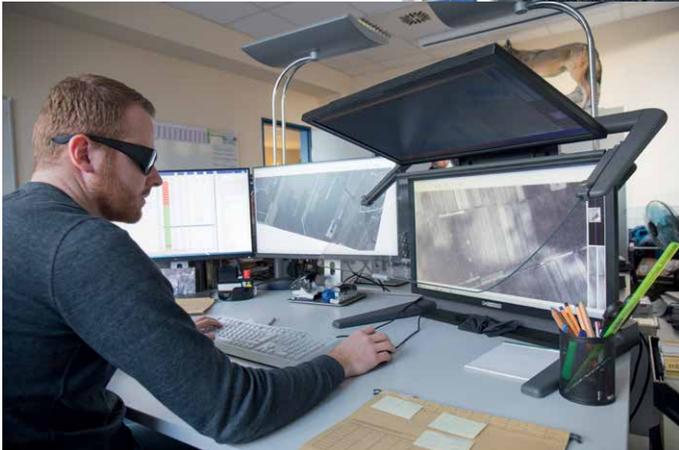
3D PluraView application and practice examples



Trimble DTMaster



Terrasolid TerraStereo



esri ArcGIS



esri ArcGIS



DATEM Summit Evolution



Hexagon Geomedia



RhinoTerrain



3D PluraView functions and advantages

With the involvement of experienced users, we have with our engineers the beam splitter technology of PLANAR further developed:

- State-of-the-art DisplayPort 1.2 mirror card with Free-Sync / G-Sync / ULMB support guarantees a synchronous, latency-free image signal with up to 4K / 10bit color depth.
- The mirror card integrated in the 3D PluraVIEW eliminates any build-in in the workstation and even allows operation on a mobile workstation, provided there certified graphics cards are installed.
- Greatly reduced ghosting, thanks to the polarization goggles, which have been optimized precisely for the monitors and mirror glasses used
- Innovative BlackTuner technology for secure object detection in dark areas of the 27/28 "model
- Central power supply with integrated power switch for complete network separation, thereby 0 Watt power consumption when switched off (27/28 "model)
- Mirror fine adjustment for exact image overlay
- Highest product quality - Made in Germany

Limitations of alternative 3D-Displays

- The active shutter technology of LCD-Monitors produces a very dark stereo image.
- High-frequency shuttering puts strain on the eyes and leads to rapid fatigue. Daylight or neon light amplifies the flicker.
- "Nvidia 3D Vision" is no longer supported by the manufacturer
- The color representation distorted by anaglyph glasses with red-blue filters is extremely stressful in the long term. In addition, a dark, low-contrast stereo image is generated.
- Reduce line-wise circularly polarized displays the stereo resolution by 50%. Fonts and menus are hard to read at half resolution. Pixelaccurate work impossible. The filters on monitor and 3D glasses lead to a dark stereo image.

Choose the reference in stereo visualization!



GIS Performance-Workstations

Schneider Digital has been specializing in tailor-made hardware solutions for professional 3D graphics since 1995. The company's expertise is focused on the conception, build and configuration of performance workstations, which are exceeded by flexible upgrade options and long-term upgrade ability.

By the collaboration with many hardware manufacturers, software companies and independent research institutes we're informed at first-hand about the most recent developments. Our close contacts to various users are equally valuable for us. The result is a workstation solution from practical experience for practical application.

The challenge for GIS-applications is the combination of loading quickly large data quantities and visualizing them in a stereoscopic image on a suitable 3D monitor. Only if all hardware components display the required capacities and specialization, a fast motion within orthophotos is possible.

We not only know your applications in the main area of application for photogrammetry or geodesics, but also right up to the creation of 3D city models, digital GIS landscape models or even special tasks like architecture and accident photogrammetry.



By additional sound isolation and customized cooling solutions our workstations are furthermore very pleasant "employees".

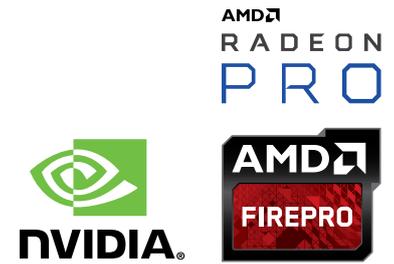


High-End workstation solutions for complex GIS requirements

- Newest Intel® Xeon®, AMD EPYC™ or AMD Ryzen™ Threadripper™ processor technology
- Up to four High-End graphic cards for CUDA or OpenCL applications in one workstation
- High speed processors (up to 2x 56 Cores on Intel platform, up to 2x 64 cores with AMD EPYC)
- Up to 8 TB fast DDR-4 ECC memory
- Latest U.2 NVMe SSDs with 32Gbit / s. Interface and allow up to 15TB per drive, super fast internal High performance RAID systems with more than 120 Terabytes To form data volume. Of course you can also configure M.2 NVMe as well as SAS 3.0 drives.
- Optional ultra-fast 10Gb LAN for connection to the file server
- Highest quality of used components
- 19" Rackmount compatible
- Also server and cluster solutions possible



Most powerful graphic cards for GIS



AMD RadeonPRO WX9100 and NVIDIA Quadro RTX 5000

The right choice of graphics card decides many times about quality and productivity. With 16GB of superfast HBM2 ECC RAM, OpenGL 4.6 support and 4,096 OpenCL enabled, parallel processing units AMD FirePRO WX9100 provides an excellent Performance and scalability to large data sets evaluate and visualize.

The six monitor outputs of the AMD RadeonPRO WX9100 allow you to simultaneously control two monoscopic monitors and a 3D PluraView evaluation screen with just one professional graphics card. Even two 3D PluraView stereo monitors can be operated with just one graphics card.

NVIDIA Quadro RTX 5000 delivers outstanding performance and quality With up to 3,072 CUDA/OpenCL programmable, parallel processing units and a graphic memory of 16GB GDDR6 ECC, the Quadro RTX 5000 is the perfect solution for complex applications such as biomedical sciences and seismic research, oil and gas prospection or photogrammetry.

The use of the correct driver is just as important, because only the ideal interaction between graphic card driver and application ensures full graphic card performance. It takes constant adapting of hardware drivers to guarantee a smooth operation with perfect results thus explaining the immense development effort from AMD and NVIDIA.

If the OpenGL core is up to date the graphic memory bandwidth measured by GB/sec and main memory size of the graphic card is more significant. Modern OpenGL commands are loading the complete model into the graphic card RAM. All further changes are triggered by short OpenGL commands to the GPU and being utilized directly at the graphic memory. The finished result is transferred to the monitor outputs immediately.

All GIS graphics cards are suitable for multi-monitor operation.



3D-Mice

The perfect measurement device for GIS, photogrammetry and mapping

3D mice are ergonomic high performance 3D controllers to increase productivity and comfort in demanding 3D applications. With 10 freely programmable buttons The user has up to 32 functions and macros „at hand“. This allows 3D mice a Efficient operation in GIS and photogrammetry applications, helping to reduce fatigue to reduce symptoms.

Functions & advantages

- USB: plug and play compatibility. (COM versions still available)
- Supported by ALL photogrammetry software applications
- Made in USA with patented design
- Warranty and hardware & software support through our STEALTH Sales & Service Center Europe
- Comfortable ambidextrous usability for GIS, photogrammetry and surveying applications
- The optical mouse with its high-resolution laser works excellently on all non-reflective ones surfaces and requires no maintenance
- The Z-wheel with a resolution of 1024 steps per rotation allows fast and accurate measuring function
- Accurate X-Y laser navigation for exact attitude control.
- Programmable buttons with tested 10 million clicks ensure a long service life



 *Stealth 3D Mouse*



softmouse 3D



**Support for ALL Windows, Linux & macOS
including 32 & 64 bits.**



High resolution
FullHD, 2.5K or 4K
per eye



Flicker free
for professional
continuous use



Daylight suitable
through two bright and
high-contrast displays



Wide Visual Angle
for comfortable work
even in a team



Compact design
Two different housings for
optimal space utilization



Noble design
Highest quality
Made in Germany



Supported graphics cards
all NVIDIA Quadro &
all AMD FirePRO / RadeonPRO



Plug & Play
Works without driver with
Microsoft / LINUX / macOS



Software Certified
for all 3D stereo
applications



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