

Topic of the press release: PluraView 3D stereo visualization with ArcGIS Pro
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Esri ArcGIS Pro certified for 3D stereo visualization with 3D PluraView monitors

Today, ArcGIS Pro from Esri is the most modern and advanced desktop GIS product and is used worldwide for the capture, processing and analysis of high-resolution 3D data. The constant further development of ArcGIS Pro is increasingly blurring the boundaries between Geographical Information Systems (GIS) and classic digital photogrammetry. Important functionalities from photogrammetry, such as importing aerial images, aero-triangulation, and extraction of terrain models, orthorectification and stereoscopic data capture, are now also integrated in ArcGIS Pro. This ensures a continuous GIS workflow, including photogrammetric data capture, directly in the Esri environment, resulting in substantial efficiency gains. The central element here is the complete integration of all existing and newly captured three-dimensional geometries with ArcGIS Pro, and the integrated ability to represent them with full three-dimensionality on stereoscopic output devices. The Software ArcGIS Pro from Esri meets all requirements for the efficient display and processing of GIS, BIM, LiDAR and photogrammetric geodata in a fully integrated 3D-stereo work environment with an outstanding range of functions. The compatibility of ArcGIS Pro with the entire 3D PluraView monitor product family has now been officially certified by the manufacturer Schneider Digital.

Be it professional thematic maps, complex GIS analyses, geodata management or GIS data capture - with the 3D-capable software application ArcGIS Pro from Esri, professional users enjoy the benefits of the world's leading GIS environment. For optimal geodata querying and processing, the capture and analysis of spatially connected and topologically correct features, GIS professionals have a whole range of interactive and automated tools at their fingertips with the Pro version. Locally saved geo-information in 2D and 3D format can for example be compared to or synchronized with Cloud servers and online data services. Topographic terrain features and building models at different levels of detail (LOD) can likewise be extracted and saved to file geodatabases (GDB). ArcGIS Pro also offers a range of powerful tools for the management, editing and analysis of large amounts of data, e.g. large-format aerial images, UAS and satellite images, and LiDAR point-cloud data. Real façade textures can be mapped to 3D building geometries from oblique aerial images and vehicle-based mobile camera systems. Likewise, hybrid 3D terrain models can be generated from orthoimages, combined with synthetic 3D models for vegetation and building objects.

Large data volumes - super-high resolution in 3D-stereo on the 3D PluraView monitors

The prerequisite for the stereoscopic display of 3D geodata is a monitor system with high-resolution, bright and contrast-rich 3D stereo visualization, to best support ArcGIS Pro users. This perfect visualization solution is provided by the 3D PluraView family of monitors by Schneider Digital, which are latency-free and work 'plug-and-play' with professional NVIDIA and AMD graphics cards. As there is no requirement for proprietary graphic drivers, the 3D PluraView displays are a future-proof solution to display geospatial data also with future versions of LINUX and Microsoft operating systems. The extremely large data volumes, which ArcGIS Pro can process, require not only a professional graphics card and a professional workstation, but also a monitor, which can display topographical information and GIS content in top 3-D stereo quality. Only a bright and high-contrast stereoscopic representation of 3D content can ensure a professional analysis and reliable interpretation of data.

For this, the United States software supplier Esri relies on the outstanding performance of the 3D PluraView - the passive, 3D-stereo beam-splitter monitors from Schneider Digital. These dual-screen systems are the de-facto industry standard for all stereoscopic software applications for the past 16 years and are certified for all common 3D-stereo capable photogrammetry and GIS applications. The fold-up beam-splitter mirror allows the flexible use of the 3D PluraView monitors also as a standard monitor for monoscopic tasks. With screen diagonals up to 28", 3D PluraView monitors provide completely flicker-free stereoscopic 3D visualizations. Thanks to one screen per stereo channel, they offer the full stereo resolution up to 4K (UHD) and 10-bit color depth with brilliant brightness. Their passive polarization filter technology provides a fatigue-free ergonomic working environment, even in office daylight conditions, viewing stereo together with several colleagues.

Visualize, capture and edit GIS and BIM models in stereo

ArcGIS Pro users value the accurate, pixel-precise, stereoscopic image display on Schneider Digital's 3D-stereo monitors. The high level of viewing comfort on the flicker-free displays and the intuitive operation facilitate the handling of complex data visualizations, thereby improving overall productivity and accelerating working procedures. In combination with ArcGIS Pro, the technology of 3D PluraView monitors offers the possibility of uploading aerial image stereo pairs to capture 3D points, lines or polygons directly as topologically defined GIS elements. 3D mesh-based geometries, smart BIM models and even 3D CAD models can be edited intuitively in a fully integrated 3D-stereo environment.

ArcGIS Pro users benefit from compatibility with a wide variety of data formats when importing and integrating smart 3D models into existing GIS data sets. For subsequent visualization, the 3DConnexion SpaceMouse is a well-proven device, allowing simple and intuitive 3D navigation within ArcGIS Pro. The additional use of a Stealth 3D mouse is recommended where the focus is on the precise measurement and capture of objects, elevations and distances. One of the biggest challenges for GIS applications is the loading of large amounts of data (e.g. detailed urban models) as digital twins, and then displaying them seamlessly in stereo. This requires reliable photogrammetry and GIS solutions, which are innovative, ergonomic, fast and reliable. The stereo-capable software application ArcGIS Pro and the 3D PluraView monitors by Schneider Digital provide this reliability through the synergy of two high-end products. In combination, they ensure a perfect 3D-stereo experience with excellent display quality. The Software ArcGIS Pro from Esri meets all requirements for efficient stereoscopic working with geospatial 3D datasets and has now been certified officially for compatibility with the entire 3D PluraView monitor product family by the manufacturer Schneider Digital. This 'duo' turns into the perfect workplace solution with the right 3D input tools and a high-performance Schneider Digital workstation, customized for use with ArcGIS Pro.

Find out more at www.pluraview.com

Image:



Caption: The Software ArcGIS Pro from Esri meets all requirements for the efficient display and processing of GIS, BIM, LiDAR and photogrammetric geodata in a fully integrated 3D-stereo work environment with an outstanding range of functions. The compatibility of ArcGIS Pro with the entire 3D PluraView monitor product family has now been officially certified by the manufacturer Schneider Digital.

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We are service partner of:



Schneider Digital – The company:

Schneider Digital is a global full-service solution provider for professional 3D-stereo, 4K/8K and VR/AR hardware. Based on its 25 years of industry and product experience as well as its excellent relationships with leading manufacturers, Schneider Digital offers innovative, sophisticated professional hardware products and customized complete solutions for professional use. Qualified advice and committed after-sales service are the company's own standards.

The Schneider Digital product portfolio includes the right professional hardware solution for the respective requirements in these areas: High resolution 4K/8K to multi-display walls. Schneider Digital is the manufacturer of its own powerwall solution smartVR-Wall and the passive stereo monitor 3D PluraView. Performance workstations and professional graphics cards from AMD and NVIDIA as well as innovative hardware peripherals (tracking, input devices, etc.) round off the product range. Many articles are in stock. This guarantees fast delivery and project realization.

Schneider Digital is an authorised service distributor of AMD FirePRO/Radeon Pro, PNY/NVIDIA Quadro, 3Dconnexion, Stealth int., Planar and EIZO. Schneider Digital products are used primarily in graphics-intensive computer applications such as CAD/CAM/CAE, FEM, CFD, simulation, GIS, architecture, medicine and research, film, TV, animation and digital imaging.

Further information is available at www.schneider-digital.com and www.3d-pluraview.com.

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