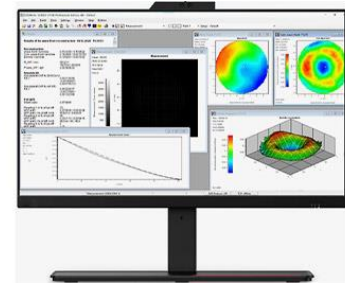


SHSWorks – technical specification

The Shack-Hartmann software SHSWorks offers easy to use wavefront measurement with high accuracy, dynamics and reliability. It is flexible, adaptable, and provides workflows for settings and comprehensive features for evaluation and calibration. The Application plus and Connect packages come as an add-on for SHSWorks CORE to expand functionality as needed (CORE + Application Plus + Connect = PRO).



Measured Data		CORE	Application Plus	Connect	PRO
Wavefront reconstruction (modal / zonal)		X			X
Spot positions and spot intensities		X			X
Beam diagnostics (M^2 , w_0 , z_0 , z_R)		X			X
Zernike analysis	DIN ISO only	X			X
	DIN ISO, Born Wolf, Nijboer, ...		X		X
PSF, MTF			X		X
Refractive data (sph, cyl, prism, axis) & power map			X		X
Refractive data calibration			X		X
Advanced Functionality					
High dynamic range for local wavefront curvature (down to 6mm)		X			X
Absolute tilt feature (up to +/-10°)		X			X
Workspace file format for advanced archiving functions*		X			X
Sanity Checks		X			X
Referencing & Calibration features	basic (spot ref only)	X			X
	advanced		X		X
Import and export of spot positions				X	X
Data export via post evaluation steps				X	X
Pass/Fail analysis				X	X
Integration interface (for script-based or automated work flows) TCP Server, SHSUser.DLL				X	X
Access restriction for production environment				X	X
Application presets for ISO-10110 / contact lenses / IOLs			X		X
Hard- and software properties					
Grabber and Bus Systems	GigE (Genicam)	X			X
Greyscale	Up to 16bit	X			X
Evaluation Rate	Up to 60 Hz in GUI**	X			X

Trigger Function	External/Internal (TTL/software trigger)	X			X
Vision Control Camera (VCC) integration for inspection				X	X
Operating System:	MS Windows 10 or Windows 11	X			X

Additional specialized SW and plugins

SDK SHSWorks.DLL for high speed integration

TCP Client Interface

autoIOL/CL

Barcode reading functionality

Customized features (please ask)

*Save measurement data including all parameter settings and re-load for offline data analysis, export data fields and plots, create individual parameter setups. Easy back-up and restore and transfer of setup to another PC. Import functions for Python and Matlab provided.

**Depending on sensor head model. Higher evaluation rates possible using SHSWorks.DLL, on some SHSCam models.