Release Notes

V 4.1.0 (release on 2026-04-30)

Features

- **Link the ARCSolver license to the serial number of the measurement hardware**
- **Use the integrated license tool to create and activate a license for another offline ARCSolver installation**

Improvements/Changes

- Added support for Linux on ARM64 architectures
- Added integration example code for Python 3
- More flexible timestamps for ultrasound diameter analysis
- Updated SOUPS:
    - OpenSSL to 3.5.5

Bug fixes

- Fixed an issue with the rpath of libcrypto.3.dylib on macOS (x86_64 only)

Overview of previous releases of ARCSolver

Date	Version	Changes

2025-09-30	**4.0.0**	**Features**
		- **Process instantaneous arterial diameter curves recorded with ultrasound** (new input modality)
		Improvements/Changes
		- Activate the software license without internet connection
		- Control feature usage with different licenses
		- New interface for encrypted signal transfer
		- Numerical optimization to improve inter-platform compatibility
		- Updated SOUPS:
		  - Qt to 6.8.3
		  - OpenSSL to 3.5.0
		  - SoftwareKey to 5.25.1.0 (Desktop)
		  - SoftwareKey to 5.23.4.1 (Android)
		Bug fixes
		- Do not write files into program folder
		- Improved description of input signals band-pass filter
		- Update integration manual to better cover error cases

Date	Version	Changes
2024-02-29	**3.0.0**	**Features** • **first release of ARCSolver under MDR** • ARCSolver is now stand-alone microservice **Improvements** • Added license control for post market surveillance • Removed deprecated input parameter "sigtype" • Separated input parameter "flag" into "calibration" & "huckDetection" for better readability **Bug fixes** • change to 64-bit data types to improve inter-platform compatibility • Minor bugfix in calculation of AIX based on 3rd derivative • Abort when more than 30 pulse waves are detected (to prevent memory overflow) • Abort if hr < 40 or hr > 140 during calculation to stay within defined physiological boundaries
2019-03-19	2.0.2	• Not for general use! • SV calculation optimization
2017-07-06	2.0.1	• check for poor end-diastolic signal quality ("Huck", probably due to wrong recording pressure) set error code to 1 when poor quality detected • enable / disable end-diastolic signal quality detection ("Huck") using map_flag
2015-12-09	**2.0.0**	• **Removed debug output from developer version for production version 1.8.a**
2015-12-03	1.8.a	• DEVELOPER VERSION WITH SENSITIVE DEBUG ISSUE! • Pulse wave analysis identical to 1.7.2 • Conversion to encrypted input data • Instead of the parameter signal of the type double[1000], which represents ADC values, raw data of the type double[1533 .. 2033] are now passed, which represent encrypted and possibly packed byte values.
2015-09-08	**1.7.2.S.1**	• **Release for Schiller AG, Delphi based.**
2014-04-22	**1.7.2**	• **Bugfix: In exceptional cases, the check as to whether the AIx is too high was not carried out** • **Bugfix: Improving the central curve at the inflection point sometimes caused the calculation to crash** • **Bug fix for evaluation with mean pressure calibration**
2013-12-18	1.7.0	• Improvements for central pulse wave form estimation

Date	Version	Changes
2012-02-22	1.6.5	• Improvement of the AIx calculation for large AIx values • Improvement of optimization from rel. 1.6.4
2012-02-10	1.6.4	• Correction for flattening curves (e.g. nitro administration) • Removal of calculation for individual curves
2012-01-25	**1.6.3**	• **Optimization of the calculation of the stroke volume when specifying the mean pressure** • **Correction in the PWV calculation for children**
2011-10-04	1.6.2	• Improved Vascular Age calculation
2011-07-15	1.6.1	• Bugfix: Optional calibration was not applied to the radial pulse curve. Was corrected.
2011-04-08	1.6.0	• Optional transfer and calibration of the central pulse curve with the peripheral mean pressure
2011-04-01	**1.5.2**	• **Optimization in the PWV and AIx calculation**
2011-02-17	1.5.1	• Improved AIx calculation and plausibility check
2010-09-21	1.5.0	• New Feature: Vascular Age calculation
2010-08-18	1.4.5	• First release integrated into commercial 24h blood pressure monitor Mobil-O-Graph (IEM)