

jBEAM Lab Starter/ Professional/Ultimate

Type 2897A

Software for data analysis, visualization and report generation

jBEAM Lab is a software for data analysis, visualization and report generation. With jBEAM measurement data analysis are made easy.

The benefits of jBEAM Lab:

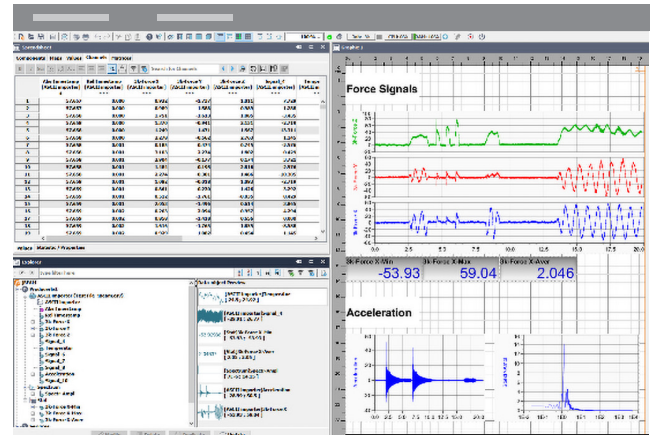
- Better and faster analysis of your data thanks to perfect presentation through extensive visualization tools
- Accomplish the required analysis quickly and efficiently with the interactive toolset
- Save time for creating reports with the automated reporting in different standard file formats

Description

jBEAM Lab is a comprehensive post-processing software with extensive analysis functions and the capability of visualization and report generation. Due to its platform independence and multilingualism, worldwide customers in R&D are using the software for quick analysis as well as for managing complex projects.

jBEAM Lab supports the import of multiple measurement file formats common in R&D and testing labs as well as multimedia formats to combine your measurement data with images, audio and videos. The extensive analysis functions range from simple arithmetic operations, curve analysis and FFT calculations to matrix operations, signal filters and statistics. Thanks to the comprehensive visualization functions, which range from simple text elements, forms and tables to all kind of 2D and 3D graphs there is always a suitable format to display your measurement data and analysis results. In addition, the control elements allow you to create interactive visualizations and reports.

jBEAM Lab is available in the variants "Starter", "Professional" and "Ultimate" as a single-user, a dongle and as a network license that can be used by multiple users in the same network. jBEAM Lab is available either as part of the KiStudio Lab Software Package (Type 2910A, variants "Starter" and "Professional" only) or as stand-alone post-processing software (Type 2897A). For a comparison of the three available variants, please check the section "Technical data".



With the command line interface, folder and file watching as well as script support, there are also various options for automating the evaluation functionality.

System requirements and recommendations

The system requirements for jBEAM Lab Starter/Professional/Ultimate very much depend on your analysis needs. The following system configuration is recommended for a setup that covers most use cases:

Operating system	Windows 10 & 11 Linux MacOS (Intel-based)
Processor	Intel Core i5-7500, 2.7 GHz or better (recommended)
Memory	4 GB (minimum)
Mass storage	SSD (recommended) 2 GB free disk space for installation (minimum)
Display resolution	1920 x 1080 / full HD (recommended)

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This information corresponds to the current state of knowledge. Kistler reserves the right to make technical changes. Liability for consequential damage resulting from the use of Kistler products is excluded.

Technical data

		Starter	Professional	Ultimate
Data import				
Data file	AFT-4Measure (txt)			✓
	Andromeda data file (adf)		✓	✓
	ASAM-MDF (v3/ v4) (mdf, dat)	✓	✓	✓
	ASAM ODS (atf, atfx)			✓
	ASCII (txt, csv, ...)	✓	✓	✓
	ASCII-Matrix			✓
	Automax MDB			✓
	Automax P10179 (raw)			✓
	AVL iFile		✓	✓
	BEAM			✓
	Catalog Container (cml)		✓	✓
	Clipboard import	✓	✓	✓
	DASYLab v7			✓
	Dbase v3-v5			✓
	DCM (BOSCH)			✓
	DeweSoft (d7d, d7x, dxd)		✓	✓
	DIAdem™ (dat, tdm, tdms)		✓	✓
	DiagRA Vehicle Diagnostics (txt, xml)			✓
	EdasWin			✓
	FAMOS (fam, dat, raw)		✓	✓
	Gantner Universal-Bin-File		✓	✓
	HBM Catman (bin)		✓	✓
	HBM Perception (pnrf)		✓	✓
	Hioki HiCORDER (mem)		✓	✓
	ISAAC Instruments (csv)			✓
	jBEAM project data import	✓	✓	✓
	Kistler CSV (csv)	✓	✓	✓
	Kistler HIS combustion indexing	✓	✓	✓
	Kistler open file	✓	✓	✓
	LabVIEW™ (lvm)		✓	✓
	LMS Test Lab (tdf)		✓	✓
	LS-Dyna (dat)		✓	✓
	Matlab (mat)		✓	✓
	messWERK (adf)		✓	✓
	Microsoft Access (mdb)			✓
	Microsoft Excel (xls, xlsx)	✓	✓	✓
	MTS RPC III (rpc, rsp, drv)		✓	✓
	NetCDF (cdf, nc, nc2, he5)		✓	✓
	Nicolet (wft)			✓
	Nicolet FT-IR Spectral Data File (spa)			✓

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		Starter	Professional	Ultimate
	PAtools (Kratzer)			✓
	PEMS (aip)			✓
	PerkinElmer (tma)			✓
	PerkinElmer Pyris data analysis file (txt)			✓
	Racelogic VBox (aft)			✓
	Rohde & Schwarz		✓	✓
	Somat (sie, sit, sif)			✓
	Tektronix ISF			✓
	Uniplot-UTX (dat, adl, tdl)			✓
	Universal File Format (15 & 58) (unv, uff)		✓	✓
	Vehicle Bus Files CAN/ LIN (blf, asc, dbc)		✓	✓
	Yokogawa (hdr, wdf)		✓	✓
	Zwick (erg)		✓	✓
	Zwick testXpert (zs2)		✓	✓
GPS data	Garmin (fit)			✓
	Garmin-Database-File (hst, tcx, crs)			✓
	Google (kml)			✓
	GPS Exchange (gpx)		✓	✓
	NMEA (gps)		✓	✓
Multimedia	Audio (au, rmf, mid, wav, aif, aiff)		✓	✓
	Audio recording		✓	✓
	Audio synthesizer		✓	✓
	Converter numeric channel to playable audio signal		✓	✓
	DIAS Infrared video (irdx)			✓
	G Streamer Video Technology		✓	✓
	Images (bmp, gif, jpeg, jpg, png, svg, wbmp)	✓	✓	✓
	Video (avi, mpg, mov, mp4, m4v)		✓	✓
	Video recording			✓
Number of importers & calculations		100	3.000	10.000
Layouts				
	DIAdem™ Version 9		✓	✓
	jBEAM XML Layout (import & export)		✓	✓
	Multilanguage Protocol-Layouts	✓	✓	✓
	Page Management	✓	✓	✓
	Sublayout Management	✓	✓	✓
Data export				
Data file	ASAM-MDF (mdf)		✓	✓
	ASAM-ODS (atf, atfx)			✓
	ASCII	✓	✓	✓
	Catalog Export		✓	✓

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		Starter	Professional	Ultimate	
	GPS Exchange Format (gpx)		✓	✓	
	Microsoft Excel (xls,xlsx)		✓	✓	
	Microsoft Excel with template (xls,xlsx)			✓	
	Microsoft Excel		✓	✓	
	NetCDF		✓	✓	
	RPCIII		✓	✓	
Report	Graphics (png, jpeg, svg)	✓	✓	✓	
	HTML pages		✓	✓	
	Microsoft Excel (table graphs)		✓	✓	
	Microsoft Powerpoint (pptx)		✓	✓	
	Microsoft Word document		✓	✓	
	PDF document (high resolution)	✓	✓	✓	
	Screen video (recording of dynamic analysis)		✓	✓	
	SVG file		✓	✓	
	Automation				
	Importer utilities	Channel name and unit mapping		✓	✓
Data source manager			✓	✓	
Importer cleaner		✓	✓	✓	
Import-File watcher			✓	✓	
Multiple-File importer			✓	✓	
Measurement					
Measurement modules	Beckhoff PLC			✓	
	HBM QuantumX			✓	
	Kistler LabAmp	✓	✓	✓	
	NI-DAQ			✓	
	OPC DA (needs OPCserver with DA 2.0)			✓	
	OPC UA			✓	
	Vector CAN module (Vector hardware needed)			✓	
Calculations					
Calculation templates	Group of calculations		✓	✓	
Arithmetic	Bit calculations, boolean algebra with relations, FlipFlops	✓	✓	✓	
	Coordinate transformation (polar ↔ cartesian)	✓	✓	✓	
	Formula editor for numeric channels (line by line)	✓	✓	✓	
	Formula editor for numeric objects	✓	✓	✓	
	Integration, Derivative, Double-Integration	✓	✓	✓	
	Matlab wrapper			✓	
	User-defined Java calculations class (needs JDK)		✓	✓	
	User-defined Java function (needs JDK)		✓	✓	
	X-values, Pythagoras	✓	✓	✓	
Curve calculations	Complex channel extractor	✓	✓	✓	

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	Starter	Professional	Ultimate
Envelope curve		✓	✓
Integration of hysteresis curves		✓	✓
Least Mean Square fit		✓	✓
Manual channel adjustment		✓	✓
Memory		✓	✓
Move tests		✓	✓
Offset and drift correction			✓
Partial curve (controlled)	✓	✓	✓
Resample angle-based		✓	✓
Resampling		✓	✓
Resolve Newton formula		✓	✓
Signal calibration		✓	✓
Sort channel values		✓	✓
Spike correction			✓
Split channel by date		✓	✓
Split channel into matrix		✓	✓
Synchronize curves		✓	✓
Synchronize via time channel (date/ time)		✓	✓
Synchronize hysteresis curves		✓	✓
Visual Signal Editor			✓
X-data change	✓	✓	✓
Y (X) synchronization		✓	✓
Curve analysis			
Correlation of 2 signals		✓	✓
Elastic modules (E-Modulus)		✓	✓
Multiple events analysis			✓
Peak area detection		✓	✓
Peak detection		✓	✓
Plateau analysis		✓	✓
Plausibility of channels	✓	✓	✓
Step - response		✓	✓
Value ranges around boolean trigger			✓
Vibration analysis (FFT)			
Auto correlation			✓
Auto spectrum			✓
Conherence quotient			✓
Complex FFT			✓
Convolution			✓
Cross correlation			✓
Cross spectrum			✓
Effective value of an oscillation (RMS)		✓	✓
FFT spectrum (amplitude & phase)	✓	✓	✓
Inverse FFT			✓
Order analysis			✓

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		Starter	Professional	Ultimate
	Real FFT			✓
Signal filters	Analog filters (Butterworth, Bessel, Chebyshev)		✓	✓
	Bandpass (FFT-based)		✓	✓
	CFC filter (FFT-based)		✓	✓
	Filter editor (FFT-based)		✓	✓
	FIR filter		✓	✓
	Moving average	✓	✓	✓
	Universal signal filter		✓	✓
Data filters	Manual value filter	✓	✓	✓
	Matrix columns filter/sorter		✓	✓
	Selections			✓
	Value filter		✓	✓
	View on data objects			✓
Statistics	Append values (event triggered)	✓	✓	✓
	Append values (statistical or formula)	✓	✓	✓
	Box-Whisker statistic		✓	✓
	Extract statistical values	✓	✓	✓
	Extract values by indexlist	✓	✓	✓
	Statistic over channels	✓	✓	✓
	Statistic over matrix columns	✓	✓	✓
	Statistical distributions (normal, Chi2, ...)			✓
Counting procedures	1D classification	✓	✓	✓
	Dwell time			✓
	Min/Max classification			✓
	Pivot table analysis			✓
	Rainflow analysis			✓
	Rainflow superposition			✓
	Reversal points		✓	✓
	Statistical frequency 1D	✓	✓	✓
	Statistical frequency 2D		✓	✓
Conversions	Absolute date time → Relative time	✓	✓	✓
	Change item creation time		✓	✓
	Channel → Group of values		✓	✓
	Channels → Matrix		✓	✓
	Concatenate channels	✓	✓	✓
	Concatenate channels with transition			✓
	Concatenate producers		✓	✓
	Concatenate tests		✓	✓
	Concatenate values	✓	✓	✓
	Convert date time		✓	✓
	Convert string to numeric value		✓	✓
	Counter to physical values	✓	✓	✓

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		Starter	Professional	Ultimate
	Cuts through maps and matrices		✓	✓
	Data objects switch		✓	✓
	Grouping data objects	✓	✓	✓
	Index for relative time		✓	✓
	Integer channel to bit matrix	✓	✓	✓
	Key ↔ Label		✓	✓
	List of properties	✓	✓	✓
	Position vectors ↔ Matrix		✓	✓
	Property ↔ Data item	✓	✓	✓
	Ungroup group of data objects	✓	✓	✓
	Video → Timed images		✓	✓
	YMDHMS → Date/Time	✓	✓	✓
Data mining	Apriori			✓
	Data mining generator			✓
	DBScan			✓
	FP-Growth			✓
	K-Means			✓
	Linear & periodic prediction			✓
	OPTICS			✓
	Principal Component Analysis (PCA)			✓
	Support Vector Machines (SVM)			✓
Geodesy	GPS → Distance/Heading/Speed			✓
	GPS → Distance/Heading (2 point)			✓
	Longitude/Latitude/Altitude ↔ XYZ			✓
Stress analysis	Hole drill 2D-calculation			✓
	Hole drill 3D-calculation			✓
	Ring kernel			✓
	Rosette			✓
Characteristic maps	Characteristic map trace		✓	✓
	Engine map matrix statistics		✓	✓
	Iso torque curves		✓	✓
	Turbocharger map matrix statistics		✓	✓
Number of importers & calculations		100	3.000	10.000
Graphic functions				
Simple forms	Line, Rectangle, Circle, Curved line	✓	✓	✓
	Speechbox	✓	✓	✓
Text elements	Formatted text		✓	✓
	MathML graphic		✓	✓
	Plain string (rotatable)	✓	✓	✓
	Plain text	✓	✓	✓
	Variables as text	✓	✓	✓

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		Starter	Professional	Ultimate
Tables	Chart legend as table		✓	✓
	Free table	✓	✓	✓
	Graphic objects		✓	✓
	Interactive table (multiple column lines for display and controls)		✓	✓
	Item property table	✓	✓	✓
	Matrix table		✓	✓
	Spreadsheet	✓	✓	✓
	Table of content		✓	✓
Realtime graphics	Bar graph (multicolor, voice output)	✓	✓	✓
	Boolean display	✓	✓	✓
	Controlled arrow		✓	✓
	Controlled image	✓	✓	✓
	Curved line (controlled)		✓	✓
	Digital display	✓	✓	✓
	Moving images		✓	✓
	Multi digital display		✓	✓
	Needle indicator	✓	✓	✓
	Realtime table		✓	✓
	Statistic and history dialog		✓	✓
	TY stripchart		✓	✓
	Vector display			✓
Graphs/Charts	Universal 2D chart (accepts any combination of following diagrams)	✓	✓	✓
	- Box-Whisker diagram		✓	✓
	- Bubbles diagram	✓	✓	✓
	- Engine map (characteristic field)		✓	✓
	- Error bars diagram			✓
	- Isoline/Contour diagram		✓	✓
	- Line/Point diagram	✓	✓	✓
	- Graph objects diagram		✓	✓
	- Matrix diagram		✓	✓
	- Moving map (needs a map service)		✓	✓
	- Moving sprites		✓	✓
	- Scaled image	✓	✓	✓
	- Timed images		✓	✓
	- Turbocharger map (characteristic field)		✓	✓
	- Vector field diagram		✓	✓
	Axis charts (reference points and sub axes)			✓
	Box-Whisker graph		✓	✓
	Grid chart		✓	✓
	Isolines/Contour graph (dynamic for 3D matrices)		✓	✓
	Line/Points graph (polar coordinates)		✓	✓

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	Starter	Professional	Ultimate
Net grid chart			✓
Radar chart		✓	✓
Vectorfield graph (incl. difference field)		✓	✓
Number of curves per 2D chart	10	100	1.000
Number of axis per 2D chart	5	50	500
Universal 3D graph (OpenGL based) (accepts any combination of following diagrams)		✓	✓
- 3D bar diagram		✓	✓
- 3D points diagram		✓	✓
- 3D surface diagram (incl. Z projection)		✓	✓
- 3D waterfall diagram		✓	✓
- 4D surface diagram		✓	✓
Other graphs		✓	✓
HTML viewer		✓	✓
Pie graph		✓	✓
Multimedia graphic		✓	✓
Audio player (synchronized)		✓	✓
Dynamic image graph		✓	✓
Image graph	✓	✓	✓
Video mixer graph			✓
Video player (synchronized)		✓	✓
Control elements		✓	✓
Button (to run a command)		✓	✓
Button (to start an action)		✓	✓
Checkbox for boolean values	✓	✓	✓
Combobox(selector for strings)	✓	✓	✓
Command field		✓	✓
Command push button		✓	✓
Data item reference holder		✓	✓
Data item selector	✓	✓	✓
Dialog configurator		✓	✓
Import controller		✓	✓
Iterable graph input controller		✓	✓
Multi-button line (to start different actions)		✓	✓
Property editor	✓	✓	✓
Radio buttons (selector for strings)	✓	✓	✓
Slider (selector for numeric values)	✓	✓	✓
Switch/Toggle button (for boolean values)	✓	✓	✓
Tabbed graphic area		✓	✓
Text input field	✓	✓	✓
Time controller	✓	✓	✓
(Turning) knob		✓	✓
Value input field (for numbers)	✓	✓	✓
Number of graphic objects	500	50.000	79.000

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		Starter	Professional	Ultimate
Miscellaneous				
Configuration management	Component collections		✓	✓
	Data object loop (multiple data objects processor)			✓
	Project analyzer		✓	✓
	Template library (template manager)		✓	✓
Messaging elements	Alarm generator			✓
	Data object observing trigger		✓	✓
	E-mail component			✓
Protocol generator	Page formatter		✓	✓
	Report generator (section types: event analysis, table of contents, template, speed chart)			✓
	Speed chart			✓
Data generator	Actual time	✓	✓	✓
	Basic graphic objects		✓	✓
	Grouped maps		✓	✓
	Numeric channel	✓	✓	✓
	Numeric matrix (2D & 3D)	✓	✓	✓
	Property map	✓	✓	✓
	Signal data		✓	✓
	Text channel	✓	✓	✓
	Text matrix (2D)		✓	✓
	Time channel	✓	✓	✓
Audio	Recording		✓	✓
	Converter (numeric channel → audio)		✓	✓
	Synthesizer		✓	✓
System services	Unit service	✓	✓	✓
	Template manager	✓	✓	✓
	Text resolver service	✓	✓	✓
	Menu service	✓	✓	✓
	Replace data	✓	✓	✓
	E-Mail server			✓
	Axis synchronization		✓	✓
	View-Selection-Manager			✓
Map services	OpenStreetMap (OSM)	✓	✓	✓
	HERE			✓
General				
	Axis synchronization service		✓	✓
	Data analysis window	✓	✓	✓
	EnCom client	✓	✓	✓

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	Starter	Professional	Ultimate
EnCom server		✓	✓
EnCom service		✓	✓
Formular editor with text resolver		✓	✓
Generic unit service	✓	✓	✓
Graphic user interface	✓	✓	✓
GUI language (english & german)	✓	✓	✓
Multi language GUI (11 languages see below)	✓	✓	✓
Reales Notes dialog	✓	✓	✓
Resolver for text embedded formulas	✓	✓	✓
Scripts (Java, Bean shell, Groovy, Python syntax)		✓	✓
Scripts (native Python support)		✓	✓
Toolbox	✓	✓	✓
User-defined menu/ toolbar	✓	✓	✓
Languages			
Arabic	✓	✓	✓
Chinese	✓	✓	✓
Czech	✓	✓	✓
English	✓	✓	✓
French	✓	✓	✓
German	✓	✓	✓
Italian	✓	✓	✓
Portuguese	✓	✓	✓
Russian	✓	✓	✓
Spanish	✓	✓	✓
Swedish	✓	✓	✓