

ALTA

The first and still the only commercially available software designed for accelerated life data analysis

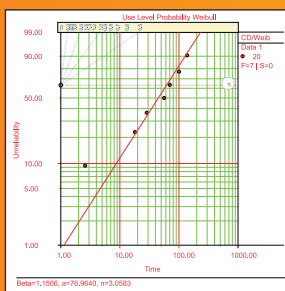
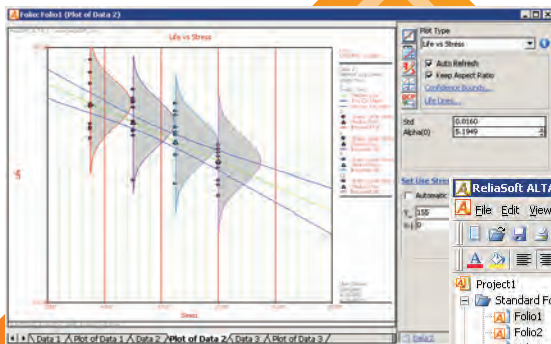
ReliaSoft's **ALTA** provides an intuitive and user-friendly way to utilize tremendously complex and powerful mathematical models. The software is available in two versions:



ALTA Standard provides the life-stress relationships required to analyze accelerated life test data with 1 or 2 constant stresses.

ALTA PRO offers the advanced statistical modeling power to analyze data with up to 8 simultaneous stress types where stress is constant or varies with time!

When you implement quantitative accelerated life testing techniques and use the **ALTA** software for analysis, you can significantly **reduce test times, resulting in faster time to market, lower product development costs and lower warranty costs, as well as other benefits.**



	Number in State	Last Inspected	State End Time	Temperature K
1	1	3700	3850	393
2	2	4300	4340	393
3	5	4700	4760	393
4	6	5300	5320	393
5	7	5700	5740	393
6	2	6000	6160	393
7	5	6400	6580	393
8	4	7100	7140	393
9	1	7800	7980	393
10	22	8500	8960	393
11	2	3100	3300	408
12	4	3700	3720	408
13	6	4000	4080	408
14	8	4400	4560	408
15	10	4800	4920	408
16	15	5000	5280	408
17	9	5600	5640	408
18	6	6100	6120	408
19	15	6800	6840	408
20	6	7600	7680	408



<http://ALTA.ReliaSoft.com>

POWERFUL STATISTICAL MODELS FOR QALT DATA ANALYSIS

Quantitative Accelerated Life Testing (QALT)

In quantitative accelerated life testing, the stresses that cause failure are accelerated under controlled conditions to cause the product to fail in a shorter period of time without introducing failure mechanisms that would not occur under normal use. You can then apply mathematical models to extrapolate to use-level conditions and use this analysis to estimate reliability, mean life, failure rate and other performance measures for the product. This powerful analysis capability can help to significantly reduce test times and thereby achieve a host of related benefits.

ALTA Software for QALT Data Analysis

ReliaSoft's ALTA software provides full support for the analysis of data obtained from quantitative accelerated life tests. The software is available in two versions: ALTA Standard is intended as an entry-level tool for the reliability professional interested in basic quantitative accelerated life testing data analysis applications. ALTA PRO provides advanced capabilities made possible by extensive research and development in complex quantitative accelerated life testing data analysis techniques.

Key features and capabilities are listed below (some are available only in **ALTA PRO**):

Data Types: ALTA's data entry spreadsheets support Complete, Right Censored (Suspended), Interval or Left Censored data, entered individually and in groups -- with up to 8 stress types (depending on the life-stress model). In addition, the Monte Carlo utility provides randomly generated data sets based on a specified model, distribution and parameters.

Distributions and Life-Stress Relationships: ALTA supports data analysis with the Weibull, Lognormal and Exponential distributions combined with the following life-stress relationships: Arrhenius, Eyring, Inverse Power Law, Temperature-Humidity and Temperature-NonThermal. ALTA PRO supports additional multi-stress and time-varying stress models, including Generalized Eyring, Proportional Hazards, General Log-Linear (with user-defined transformations) and Cumulative Damage.

Time-Varying Stress Profiles: In **ALTA PRO**, you can define stress profiles that vary with time, such as step-stress, ramp-stress, etc. Enhanced in Version 7, the Cumulative Damage model now supports analysis of data with *multiple* time-varying stresses!

Parameter Estimation and Calculated Results: ALTA uses Maximum Likelihood Estimation (MLE) for parameter estimation. The QCP and Function Wizard quickly return calculated results based on the data analysis and your inputs (such as reliability given time, mean life, acceleration factor, BX life, etc.). Confidence bounds are available for all calculated results and parameters.

Unparalleled Plotting Capabilities: ALTA automatically generates a complete array of two-dimensional and three-dimensional plots, with customizable plot settings. This includes Probability, Reliability vs. Time, *pdf*, Life vs. Stress, Acceleration Factor vs. Stress, etc. Plots are metafile graphics that can easily be annotated and used in your own reports.

Accelerated Test Planning Utility:

The Accelerated Test Planning utility implements the complex mathematical models required to design an effective accelerated life testing plan, which recommends the appropriate allocation of sample units to be tested at each stress level.

Platform

Windows NT, 2000, XP or Vista.

Languages

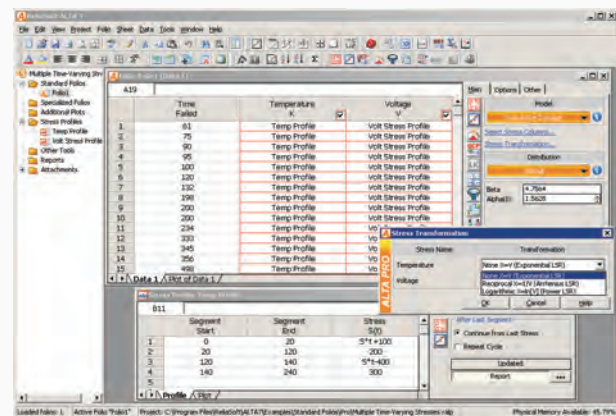
English, German, French, Portuguese, Spanish, Simplified Chinese and Japanese.

Integration

Weibull++, DOE++, BlockSim, Xfmea, RCM++ and RENO.

Support

ReliaSoft's unparalleled after-sale support includes free telephone, fax or e-mail support. Free minor version updates are also included.



ReliaSoft.



**TOOLS TO EMPOWER
THE RELIABILITY PROFESSIONAL**