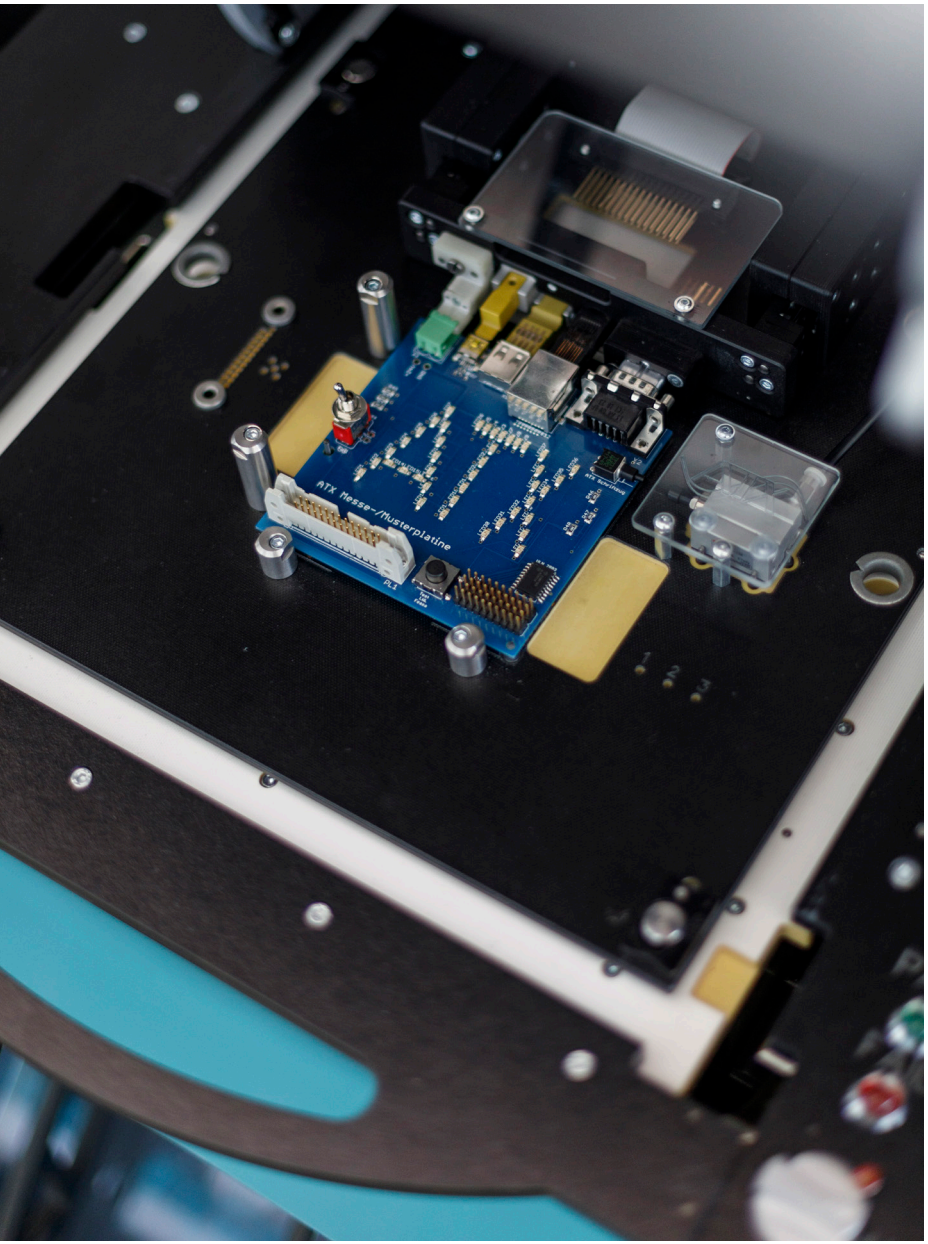
HIGHEND FIXTURE SOLUTIONS
FOR EVERY APPLICATION


ATX Messe-/Musterplatine

YOUR SOLUTION SPECIALIST IN FIXTURE CONSTRUCTION

ATX is a European leader in the development and construction of test fixtures. We are a solid, medium-sized company that employs a large team of developers and designers. Our employees have well over 1,000 man-years of experience in fixture construction. We apply this enormous expertise to every new project in order to develop customised products that optimally support industry-specific processes.

Armin Lindner, sales manager ATX Hardware

INDIVIDUALLY PERFECT SPECIAL SOLUTIONS

Each of our product developments begins with an in-depth consultation. Our sales professionals come from a manufacturing or production background and are extremely technically adept. They want to get to know the customer‘s requirements in detail so that they can utilise ATX‘s design expertise and production engineering performance in a targeted manner. The development of technically first-class special solutions that prove themselves in practice on a daily basis is one of our favourite disciplines, in which we can make full use of our creativity.

MAXIMAL VERTICAL INTEGRATION

We do almost everything ourselves and are therefore not only extremely flexible and fast, but also have complete control over the first-class quality of our products. Our employees ensure enormous performance with a large and ultra-modern machine park. Short distances, a smooth flow of information, flat hierarchies and a consistent focus on the wishes of each individual customer are key factors in our long-term success.

TRAINING IS IMPORTANT TO US

Passing on knowledge and experience to the next generation is particularly important to us. This not only shows that we take our corporate responsibility seriously, but also that we train our own junior staff to the highest level. After successfully completing their training, we offer excellent employment opportunities for cutting machine operators, industrial clerks and technical product designers. We welcome unsolicited applications at any time.

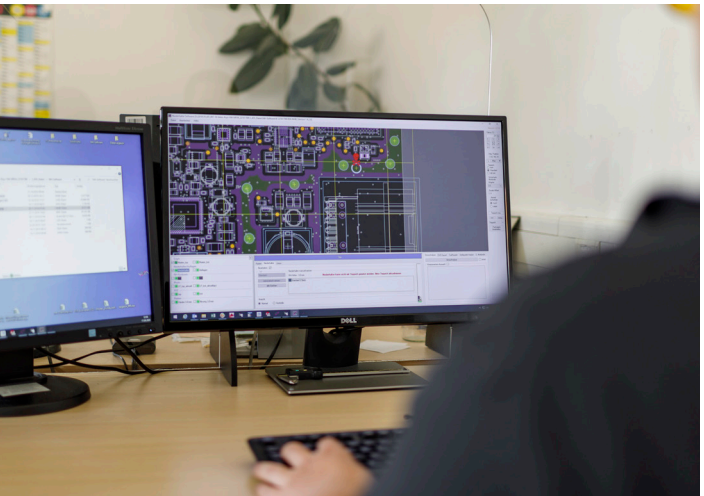
OUR UNIQUE SELLING POINT IN THE FIXTURE BUILDING

DIGITAL ADVANTAGE: THE ATX HOLD-DOWN SOFTWARE

The aim of the software is to increase safety when placing supports and hold-down devices and thus ensure that no test specimen assemblies are damaged by incorrectly placed supports and hold-down devices.

BACKGROUND

A single incorrectly positioned hold-down device or the support on the underside can crush components or damage them so easily that it is not noticeable in the test. The result can be recall campaigns costing millions of euros if, for example, a part fails in a car.



FUNCTIONALITY

Typically, the CAD data of the assemblies is too imprecise to be used for hold-down positioning alone. Components often have a different contour in CAD than in realtiy due to a lack of maintenance of the component library. We therefore superimpose a high-resolution image of the assembly over the CAD data and can thus recognise deviations. Test point sizes can be determined precisely.

The hold-down software creates a „carpet“ with coloured indicators for the designer to make it easier to locate free areas. An indicator shows whether an area is free or whether particularly narrow areas require smaller hold-down devices. A preliminary check of the needle forces enables their precise estimation. The direct output to the FEM (finite element stress analysis) facilitates the output.

CONCLUSION

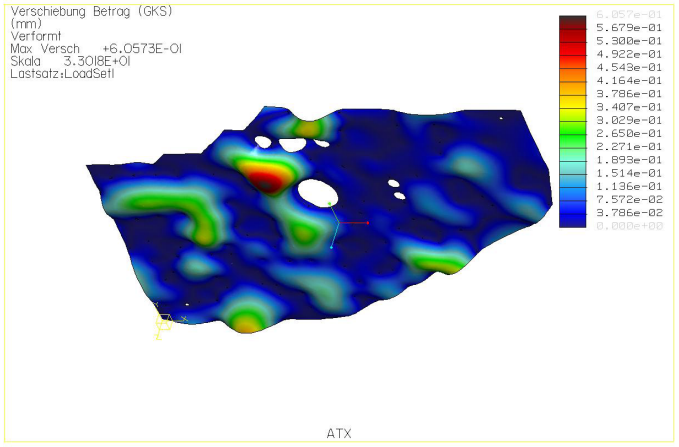
A single incorrectly positioned hold-down device or the support on the underside can crush components or damage them so easily that it is not noticeable in the test. The result can be recall campaigns costing millions of euros if, for example, a part fails in a car.

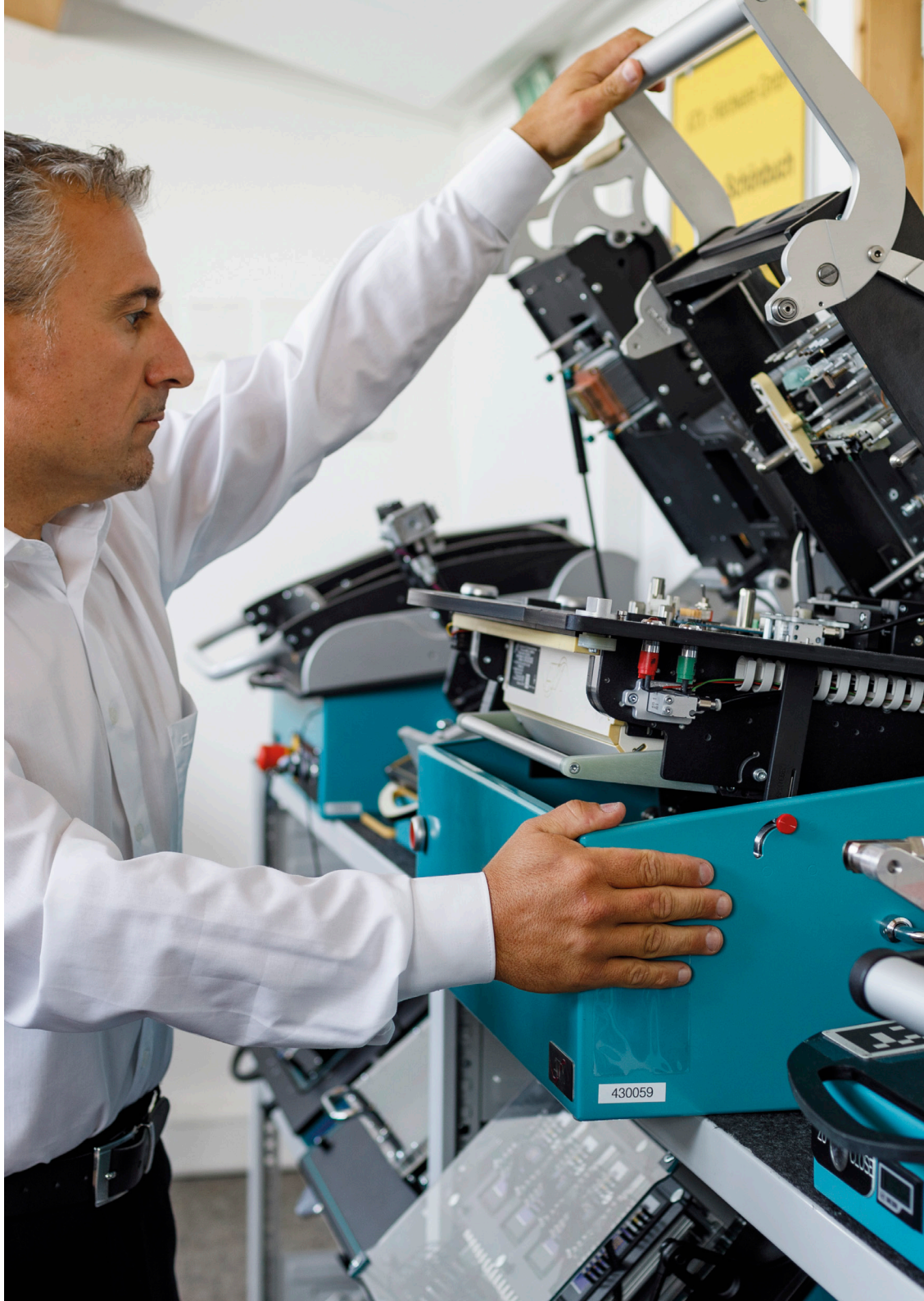
POKA YOKE

Non-interchangeable hold-down clamps and hold-down clamps made of special plastic manufactured exclusively for ATX enable safe hold-down even with tightly assembled components.

STRESS ANALYSIS AND DMS MEASUREMENT

With the ATX stress analysis software, the fixture can already be optimised for a minimum force load on the assembly during design in order to keep the effects on your test specimen as low as possible. With the final strain gauge measurement, the fixture can then be checked in reality to rule out damage to the assembly during the test.

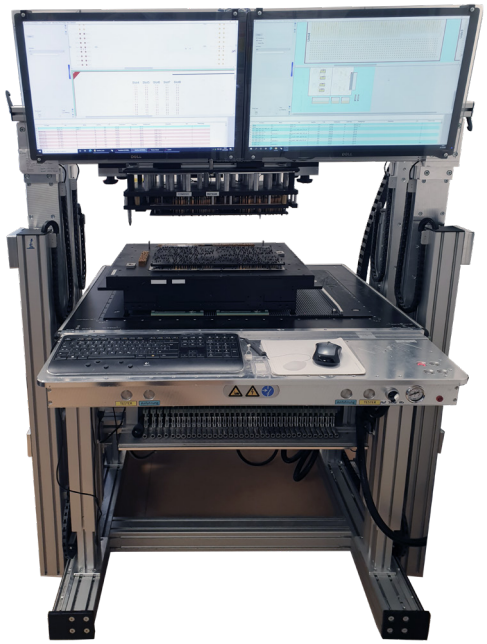


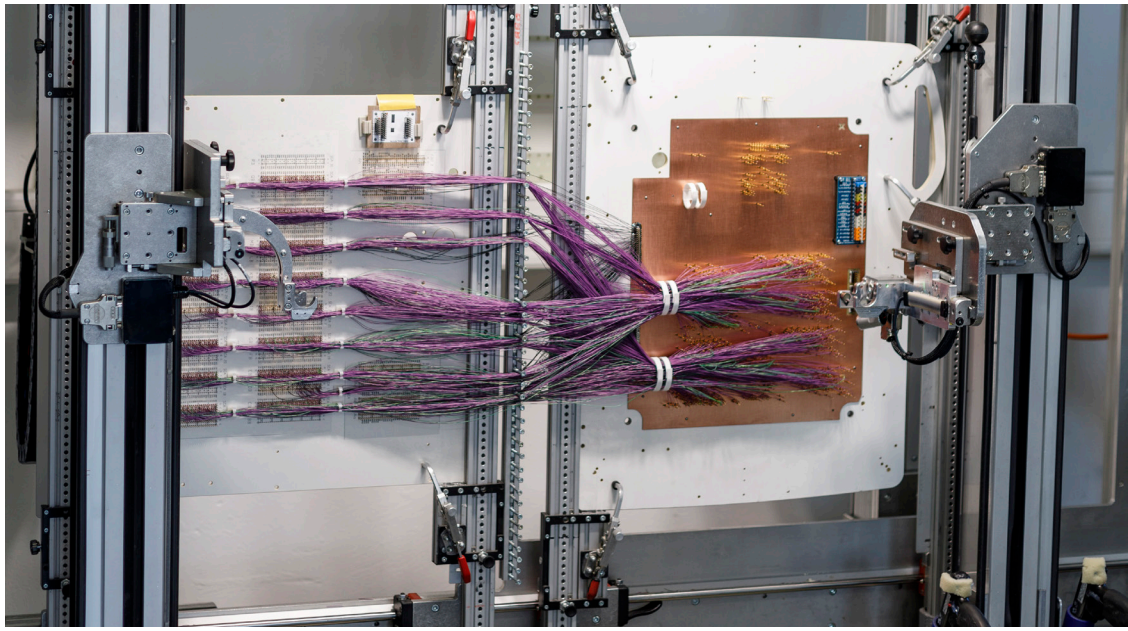


ERROR-FREE WIRING:
THE ATX AUTOMATIC WIRING MACHINES AND WIRING TESTERS

ELIMINATE INCORRECT WIRING

The ATX wiring tester enables the testing of all common adapter types for a wide variety of test systems with different interface adapters. Both offline and in-line adapters can be tested. Short-circuit and presence tests as well as a test of special wiring ensure that you can immediately start production with your adapter without time-consuming troubleshooting.

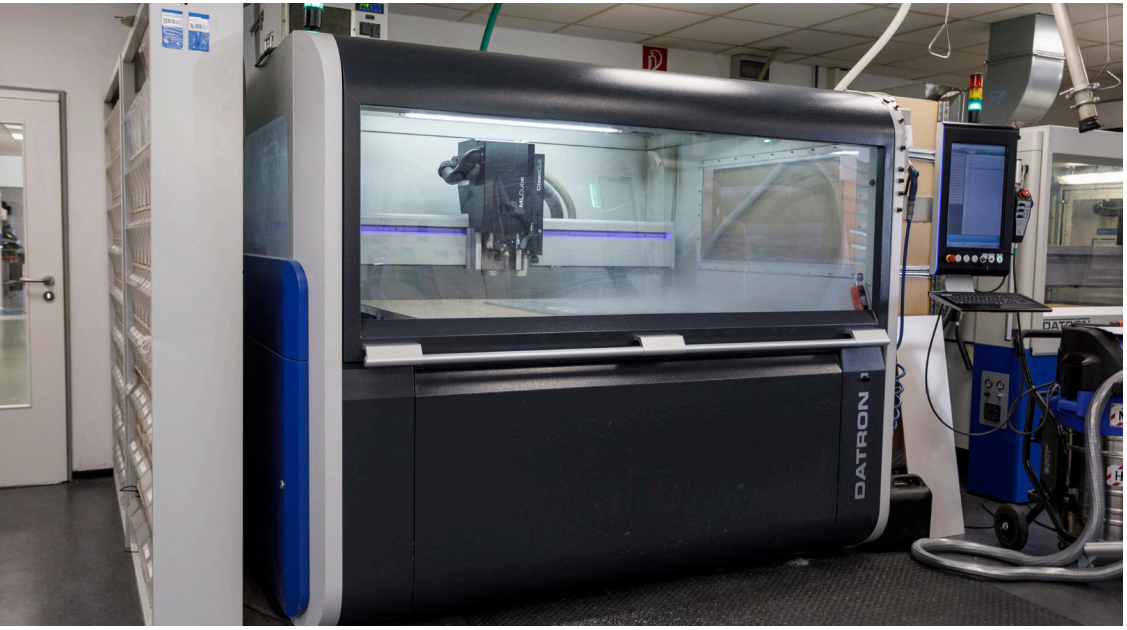




MINIMISE THE POSSIBILITY OF ERRORS

The ATX automatic wiring machines specify the exact position at the interface and needle bed. The new connection is checked 1:1 for correct continuity as soon as it is created. This practically eliminates the possibility of incorrect manual wiring.

STATE-OF-THE-ART MACHINERY FOR A COMPLETE VERTICAL RANGE OF MANUFACTURE



- High-precision, high-speed CNC drilling and milling machines with loading systems for cost-effective production
- CNC milling machines for complex metal and plastic processing
- Automatic lathes for customised and precise guide elements
- Laser labelling system
- Automatic testing machines
- Automatic wiring machines

OUR SUCCESS STORY

1997

FOUNDATION:
Foundation of A.T.i.-Hardware GmbH, Eching, by Hans Drexler and Benedikt Epple.

1998

CHANGE OF NAME:
A.T.i.-Hardware GmbH changes its name to ATX Hardware GmbH.

2000

RELOCATION:
The company moves to the industrial estate in Pürgen.

2002

TAKEOVER OF FIXTURE CONSTRUCTION SIEMENS AG:
The fixture construction division of Siemens AG in Augsburg is taken over by ATX together with its employees and technical equipment. A new warehouse is built at the company headquarters.

2003

FURTHER BUILIDING:
The production and office space in Pürgen is expanded to 1,220 m² with the construction of a further building.

2004

ON-SITE SERVICE:

ATX now also offers its customers the efficient on-site service, which allows fixtures to be serviced directly and efficiently at the customer‘s premises.

2005

REPRESENTATIVE OFFICE IN ITALY:

In addition to the company representation in the Benelux countries, a representative office is now also being set up in Italy.

2006

ATX CONTINUES TO GROW RAPIDLY:

An additional 180 m² is rented in the neighbouring building.

2009

ADMINISTRATION OFFICE SPACE:

New office space (160 m²) will also be rented in the neighbourhood for the administration, while the space that becomes available will be used for production.

2010

EXPANSION OF PRODUCTION:

Production is expanded and completely modernised. The workforce now numbers over 80 people. Well over 10,000 appliances have been delivered to customers all over the world since the company was founded.

2011

OPENING OF THE 2ND LOCATION:

ATX opens a second site in the municipality of Weil im Schönbuch near Böblingen. The successful and completely modernised production facility in Pürgen serves as a model.

2012

RENTAL OF FURTHER STORAGE SPACE:

The rental of a further 240 m² of warehouse space in Pürgen opens up new possibilities for upgrading the existing warehouse and connecting it to production. The high-performance CNC production is thus expanded by 100 m².

2013

SUBSIDIARY:

The 2nd production site in Weil im Schönbuch has an extremely successful track record and is transferred to a wholly owned subsidiary of ATX Hardware. The independent company now trades as ATX Hardware GmbH West.

2014

TAKEOVER OF FIXTURE CONSTRUCTION FROM FEINMETALL (FM):

ATX takes over the complete fixture manufacturing operations of Feinmetall (FM). Joint customer visits enable FM customers to be integrated into ATX as far as possible.

2016

FURTHER STORAGE SPACE EXPANSION:

ATX expands its warehouse space at the Pürgen site by a further 500 m².

2018

HOLD-DOWN SOFTWARE:

ATX uses software developed in-house for the controlled setting of hold-down devices.

2019

EMPLOYEES:

ATX now employs a total of over 150 people at both locations.

2020

MAJORITY TAKEOVER:

Harald Quandt Industriebeteiligungen („HQIB“) acquires a majority stake in ATX Hardware GmbH.

2021

MAJORITY STAKE IN LEITEC:

ATX acquires a majority stake in Leitec Test Solutions GmbH („Leitec“).

2022

25TH COMPANY ANNIVERSARY:

ATX celebrates its 25th anniversary. Today, more than 170 employees belong to the ATX Group.

RELAUNCH OF THE COMPANY LOGO:

The company logo is relaunched, giving it a modern and contemporary touch.

NEW MANAGEMENT:

Robert Schulz and Markus Rauch join the management team.

TEST FIXTURES FOR EVERY INDUSTRY

You set goals - we make them come true! With us, you not only benefit from our wide range of products, but also from our close co-operation right from the product development phase. We develop, design and manufacture high-performance test fixtures for all industries in which electronic assemblies need to be contacted and tested. Our customers are EMS service providers and manufacturers of assembled electronic modules and components in almost all electronics sectors.

Usually, the test specimens to be tested are assembled PCBs that are contacted for a so-called ICT test (in-circuit test) on all or only some defined nets for a functional test (FKT). In addition to these typical test scenarios, we also contact already housed assemblies - usually via the connectors with special connector contact modules. This test variant is known as an end-of-line test (EOL).

Our mechanical fixtures are mostly used for FKT tests, while the vacuum fixtures are mostly used for ICT test series. The difference lies primarily in the number of needles: ICT uses approx. 200-5,000 needles, while FKT uses approx. 50-200 needles. Our in-line fixtures for automatic lines are suitable for both ICT and FKT tests.

PRODUCT OVERVIEW

LINEAR ARM FIXTURE

MECHANICAL, ERGONOMIC FIXTURE

MECHANICAL FIXTURE

MECHANICAL, ELECTRICAL FIXTURE

MECHANICAL, PNEUMATIC FIXTURE

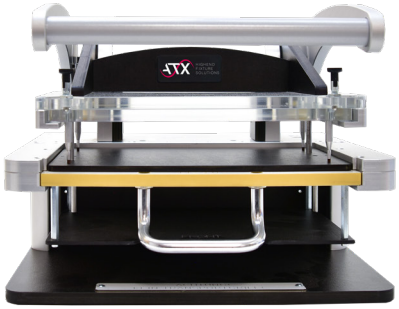
MECHANICAL, ELECTRICAL, HIGH FREQUENCY FIXTURE

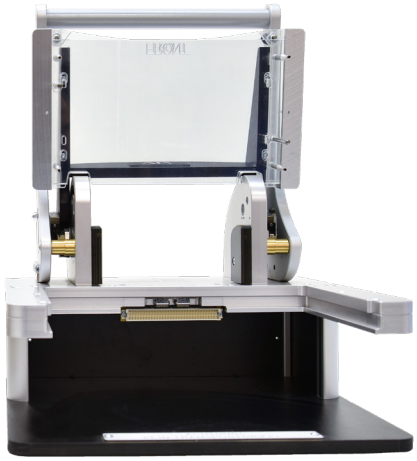
IN-LINE FIXTURE

VACUUM FIXTURE

FINE-PITCH FIXTURE

LHS2-SERIES | LINEAR ARM FIXTURE

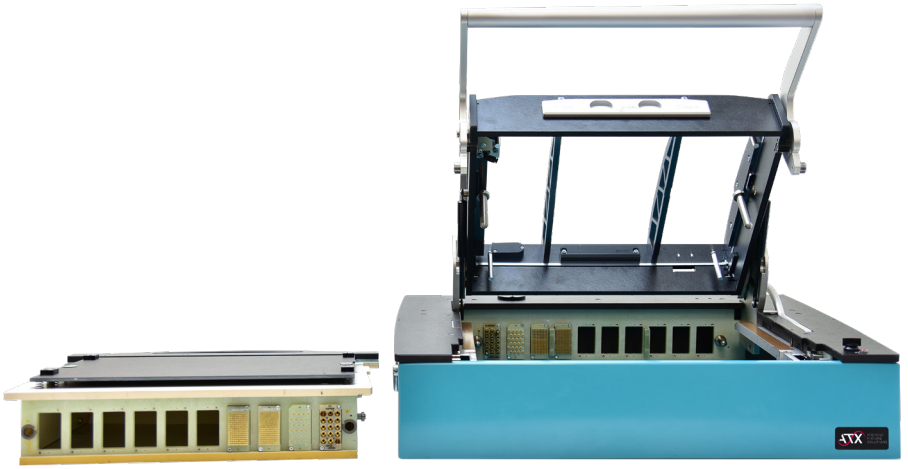




FOR PROGRAMMING, FUNCTION TESTS AND SMALL SERIES

The LHS2 is the perfect solution when smaller adaptations such as flash programming or function tests up to approx. 100 needles (2 N) need to be carried out cost-effectively with minimum space requirements. It is extremely robust and easy to operate. The precise linear stroke enables a clean hit pattern even with smaller test points. An inexpensive exchangeable system makes it possible to swap out many different products. The pressure mechanism developed over several product generations prevents unintentional closing. Additional pneumatic and electric locking options are freely selectable.

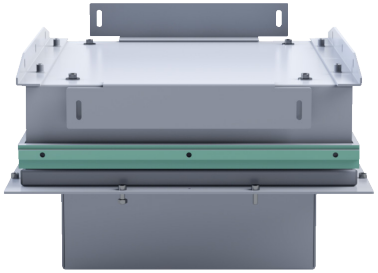
MMI-SERIES | MECHANICAL, ERGONOMIC



THE UNIVERSAL, ERGONOMIC, MECHANICAL FIXTURE

MMI stands for man machine interface. With this in mind, in addition to first-class functionality, we also attach great importance to ergonomically designed operability in a standing or seated position. Whether for functional tests, final tests or ICT applications up to 800 needles (2 N), with an MMI you always have the ideal solution. A fixture for almost all applications, as an MMI stand-alone or as an MMIW exchangeable system for varying products. The MMI is prepared for safety switches with guard locking as well as for electrical interlocking.

ME2-SERIES | MECHANICAL

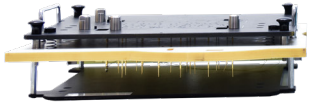


INNOVATION IN PERFECTION

Discover our latest innovative fixture series, which offers you perfect fixture solutions for needle forces of up to 600 N (approx. 300 needles of 2 N each) with maximum flexibility. The ME2 series not only includes mechanical and pneumatic stand-alone fixtures, but also the matching exchangeable systems and high-frequency variants.

What makes this series special? The seamless compatibility of the exchangeable cassettes within the line. This means maximum flexibility and efficiency in your work. Discover the many possible combinations of our new ME2 series now!

MEE-SERIES | MECHANICAL, ELECTRICAL

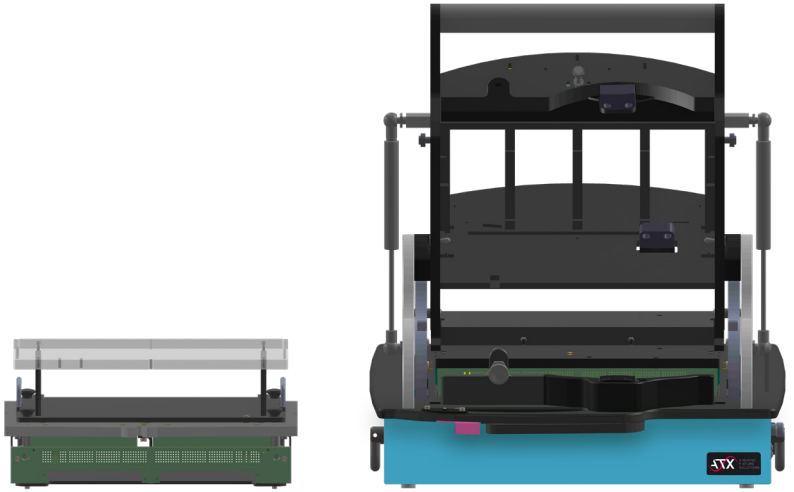


TESTING WITH ELECTRIC DRIVE

Our electromechanical manual test station combines high force development with maximum precision and flexibility. You do not need compressed air and benefit from the advantages of the MEP as well as the independence of the ME mechanical manual test station. Your operating personnel will enjoy fatigue-free working and the freely programmable electromechanical drive will also reduce their workload.

This variant combines infinitely variable bi-level suitability with maximum universal applicability. The assembly to be tested can be approached in several stages at any desired height. Like all fixtures in the ME series, the MEE is also ideal for functional and smaller ICT tests up to approx. 500 needles (2 N).

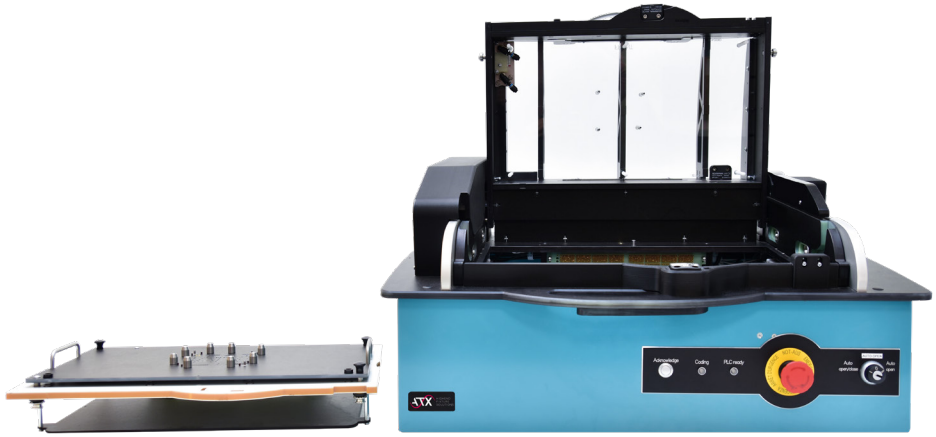
MEP-SERIES | MECHANICAL, PNEUMATIC



HIGH QUANTITIES WITHOUT EFFORT

Our MEP is a pneumatic cassette or stand-alone solution for functional and final tests as well as smaller ICT applications up to approx. 500 needles (2 N). With the MEP, cycle numbers and needle forces can be increased with almost no extra effort. The automatic opening of the bonnet supports the rapid ejection of faulty parts. Thanks to its compact design, our pneumatic fixture can be easily combined with additional components. The very special highlight of our MEP, which you will only find at ATX: Our MEP is bi-level capable. With its exceptional quality, it guarantees reliable operation even in continuous operation. It passed the test with over 1 million strokes under full load with flying colours.

MEP100-SERIES | MECHANICAL, PNEUMATIC WITH AUTOMATIC HOOD



AUTOMATIC OPENING AND CLOSING: SAFE!

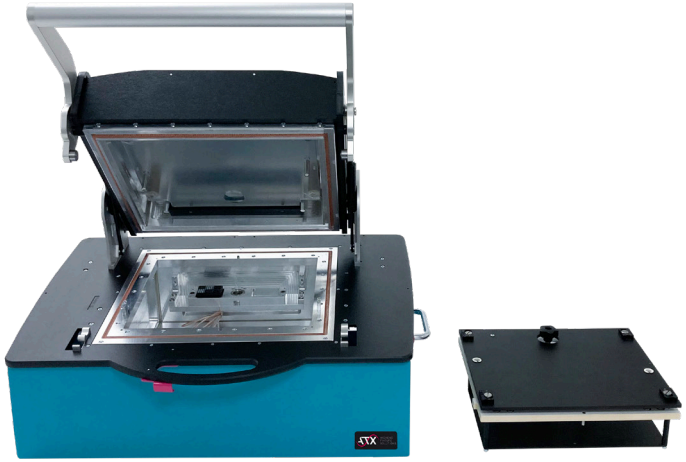
The MEP100 can be used with optimum flexibility in your production. The automatic opening and closing optimises the fixture for use with collaborative robots. The large opening angle allows perfect access with an automatic gripper. Because the MEP100 is safe for manual operation, it can also be operated by personnel as required without the need for additional safety measures. As an exchangeable cassette system and stand-alone fixture, the MEP100 provides the basis for flexible automation of your production.

PWG-SERIES | PNEUMATIC

FOR HIGH FORCES AND MANY CONTACTS

In ICT and FKT applications with many needles, it is important to be able to handle high forces safely and precisely. The PWG basic unit with the PWK exchangeable cassette is always the right choice when a pneumatic fixture with a high level of operating convenience and changing products is required. The pylon block interface between the basic unit and cassette allows customised adaptation to all special signal types.

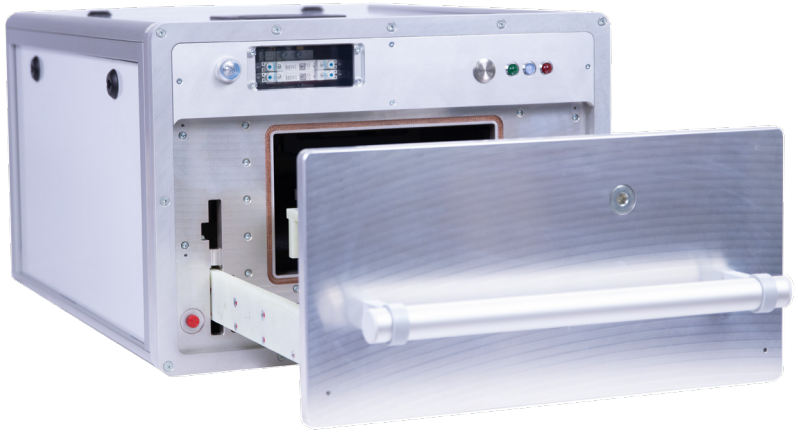
MMIHF-SERIES | MECHANICAL, ERGONOMIC, HIGH FREQUENCY



SOPHISTICATED TEST CONCEPT FOR PARTICULARLY SENSITIVE ASSEMBLIES

When checking and testing high-frequency and radio assemblies, it is important to reliably shield the test specimens against interference radiation from the environment without affecting them. Our electromagnetically shielded MMIHF fixture is the perfect solution for this. It enables safe tests on highly sensitive transmitting and/or receiving assemblies. The MMIHF is a robust and functional solution based on an inexpensive standard kit. The pressure mechanism of our MMIHF utilises our tried and tested MMI mechanism. We have put our high-frequency fixtures through their paces and had the first-class values confirmed by the Fraunhofer Institute. If you are interested, you can find the exact test results on our website. This product also has an innovative exchangeable system.

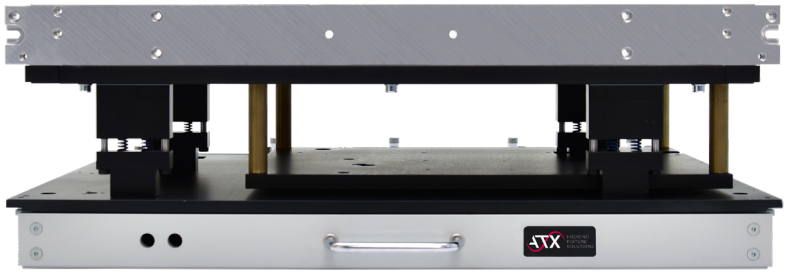
RF DRAWER

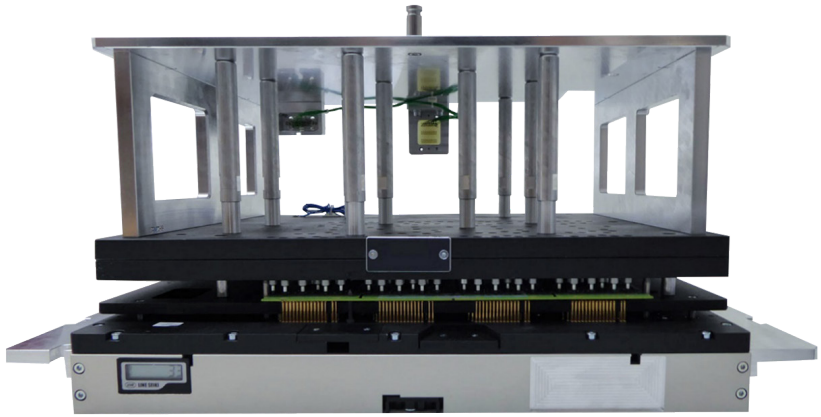


SHIELDED TESTING WIHT THE RF DRAWER FIXTURE

Specially designed for automated operation with a loading robot. The ATX RF drawer can open and close autonomously and is therefore ideal for fully automated production. However, it can also be operated manually by personnel, thus enabling flexible mixed operation. Thanks to the stackability, multi-test stations can easily be set up on the smallest footprint. The contacting can be easily exchanged for changing products. Despite complete HF shielding, service flaps enable maintenance-friendly access.

IN-LINE FIXTURE





FOR ALL COMMON LINES AND HANDLING SYSTEMS

For your quick and lasting success with in-line fixtures from ATX, you maximise your initial yield and minimise the risk of failure at the same time. Our devices are created on the basis of many years of experience and the highest level of development expertise - and are manufactured using the best materials of the highest quality. We offer in-line fixtures for all standard lines and handling systems as well as numerous additional technological features such as additional, pneumatically actuated needle beds for double-sided contacting - also in bi-level design or fine pitch. Even if you require board marking systems, barcode scanners, open probes or other technical specifications: We configure the fixtures the way you want them.

Flexible exchangeable inserts

As with many other fixture solutions, we also offer flexible exchangeable inserts for our in-line fixtures - a cost-effective solution that pays off, especially with frequently changing products. You only need to replace a small inlay with needles and a simple interface to change over. You save time and money that you can invest in development and optimisation.

VACUUM FIXTURE

Vacuum fixtures are suitable for all common test systems and impress in every respect with their lightness, speed and cost-effectiveness. We adapt the vacuum cassette exactly to the size of the corresponding circuit boards and thus guarantee fast suction with minimum device weight. The fixtures are subjected to a complete quality inspection, including wiring tests, before delivery. To ensure maximum flexibility, we supply the devices in all expansion stages for all available test systems from renowned manufacturers. You decide how your new vacuum fixture is delivered to you: fully assembled and fully fitted, fully wired and tested, drilled and fitted only, drilled only or as an empty kit. We also offer bi-level versions as an additional option. Self-assemblers appreciate our high-quality empty kits, where size and modification can be flexibly selected. A comprehensive range of accessories from hold-downs, vacuum bonnets and mechanical pressure units to plug contact modules, board markers, probe and needle material, setting tools and many other tools leaves nothing to be desired.

+ With all the vacuum fixtures described here, cost-effective and easy-to-use exchangeable systems simplify the testing of different products.

FINE-PITCH FIXTURE

TECHNICAL FEATURES

- Plate sandwich for mechanical realisation of the rigid needles from an extremely narrow adaptation to standard grid dimensions
- Wiring in wire-wrap technology
- Probes or actuating elements can be integrated on request
- Contacting of test pads with a ø of 0.4 mm and a pitch of 24 mil (0.60 mm) possible
- Direct adaptation of vias without test pads with maximum packing density

SPEED AND FUNCTIONALITY

For testing new, even more tightly packed layouts. It is ideal for testing small test pads with tight grid dimensions and helps you to reduce development costs. Assemblies that can no longer be tested using conventional needle technology can also be tested with ease using a fine-pitch fixture. All these advantages speak in favour of purchasing a fine-pitch device, which quickly pays for itself, especially with a high number of conventional small needles (0.050“ and 0.040“ needles).

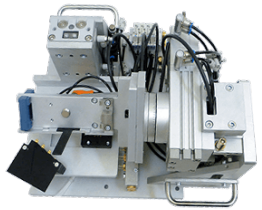
ATX offers you a selection of excellent and versatile devices. As a specialist in fine-pitch angled needle fixtures, we also supply devices with double-sided contacting and bi-level suitability. The fixtures impress with their enormous accuracy due to the minimum distance between the assembly and the needle guide as well as their very long service life and low maintenance requirements.

SPECIAL PROJECTS

Customers from numerous segments of the electronics industry have already approached us with a wide variety of individual requests for customised machines. So far, we have always succeeded in solving these tasks, even if some of them were extremely demanding. Our experts for consulting, conception and design therefore have a unique pool of expertise that they can draw on flexibly for new solutions.

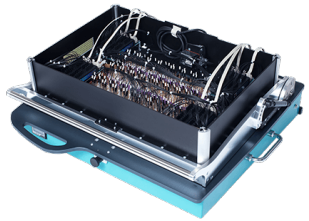
As part of a large number of successfully completed reference projects, we have developed a wealth of tried and tested detailed solutions that we can utilise and combine as required for new test scenarios. If this range is not sufficient for your specific requirements, we can also realise complete new developments for you from A to Z, from the test needle to the operating environment.

LASER SWIVELLING TABLE



EOL STATION WITH BATH BOX STORAGE & LABEL PRINTER

VACUUM FIXTURE WITH LED TEST



FURTHER REFERENCE PROJECTS

- Disabled-friendly rotary indexing table
- Double rotary indexing table for medical technology
- Sliding functional test fixture
- Functional test station
- Hand fixture for safe contacting
- and much more

BATTERY CONTACTING

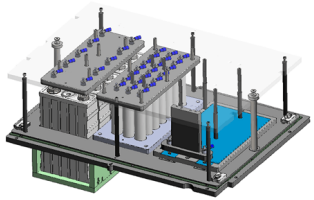
The requirements in the field of e-mobility and stationary storage are constantly presenting cell manufacturers with new challenges, especially when it comes to contacting the cell arresters for formation and validation at cell level. Extremely sophisticated systems are required here that keep the contact transitions stable within very narrow limits over the entire contacting period.

Some of these requirements call for completely new approaches with spring-loaded contact elements. One approach, for example, is moving scratch contacting in automated formatting towers, a process that has already been successfully tested in real-life applications and has proven its worth.

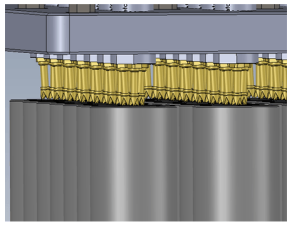
In the constantly evolving world of e-mobility and stationary storage systems, innovation in cell production and contacting remains essential. The entire field of cell production requires special solutions, especially when it comes to contacting. Be it high currents, constant voltages, temperatures or material pairings that pose the challenge here.

Together we will fulfil these complex requirements and shape our future!

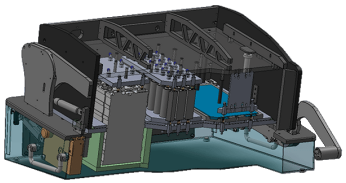
PRISMATIC, ROUND AND POUCH CELLS



SPRING-LOADED CONTACT PINS ON ROUND CELLS



MECHANICAL CONTACTING



FURTHER CONTACTING EXAMPLES

- Scratch contacting
- Scalable and stackable cell contacting
- Single-sided contacting
- Double-sided contacting

TEST CONNECTOR

Test connectors are indispensable components in many industries and applications. They ensure the safety, quality and reliability of electrical systems and help to detect faults at an early stage. Choosing the right test connector is crucial to fulfil the requirements of your specific application.

The connector modules of our test connectors are characterised by quick and easy handling. We offer many standard connectors as well as customised special solutions. We supply standard products for motor terminal board connections and automotive connections such as diagnostics, motor control and e-mobility, for example. With customised products, we offer the right solution for all conceivable connector variants when it comes to robust contacting in large quantities.

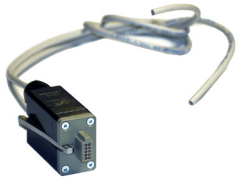
The high-quality ATX test connectors guarantee maximum contact reliability and wear resistance.

MOTOR TERMINAL BOARD CONNECTOR

PLUG MOTOR TERMINAL BOARD

CABIN DISCONNECT PLUG

TEST PLUG 10-PIN



FEASA ANALYSER

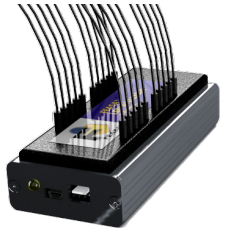
Optimum results for our customers

In Feasa Enterprise Limited, ATX has found a strong partner in the field of LED testing. The solutions enable us to achieve accurate test results for printed circuit boards with LEDs.

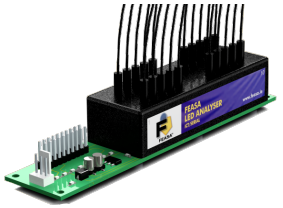
The analysers are an innovative solution for simultaneous testing of several LEDs for colour and brightness. Compact, robust and easy to integrate, the analyser tests 100 LEDs in just 3 seconds.

You can get an initial insight and detailed information in our brochure. Our sales specialists will be happy to answer any further questions you may have. Please contact us!

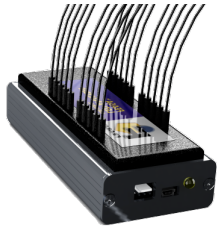
FUNCTIONAL ANALYSER (FKT)



IN CIRCUIT TEST ANALYSER (ICT)



INFRARED ANALYSER



MORE FEASA PRODUCTS

- Low light analyser
- High bright analyser
- LED life analyser
- Infrared analyser
- Legend
- Display analyser
- Special accessories

ATX HARDWARE GMBH WEST

Location Pürgen
Am Wiesengrund 12
86932 Pürgen
Germany
P +49 8196 9304-0
F +49 8196 9304-19
projekte@atx-hardware.de

Location Weil im Schönbuch
Carl-Zeiss-Straße 5/1
71093 Weil im Schönbuch
Germany
P +49 8196 9304-536
F +49 8196 9304-359
projekte@atx-hardware.de

www.atx-hardware.de

Subject to change without notice · Printed in Germany · **Info No. 01/122023**