

Enhanced quality, enhanced
precision, enhanced speed of
inspection.

Your first choice for
all inspection tasks
in the electronics
industry





What we're known for:
precise measurement
at high speed

We take a closer look

High-precision inspection technologies that inspect concealed solder joints, miniaturized components or densely packed circuit boards fast and reliably are prerequisites for flawless, 100% reliable products. That's why electronics manufacturers need outstanding technological products for quality control. Viscom ranks among the world's leading providers of assembly inspection solutions for the electronics industry.

Our wide range of state-of-the-art inspection systems offers the right solution for every inspection task. Our systems are deployed wherever the requirements for inspection accuracy and inspection speed are especially tough. They guarantee full functionality of the assembly, impeccable quality of the end product and the safety of the user. Our standard: 100% defect detection.

New opportunities through digitalization

Our goal is to provide optimal support to our partners in the digital age. That's why we network our systems in smart factories, implement interfaces for machine-to-machine communication and rely on artificial intelligence in new software concepts, enabling us to link production data and inspection results in real time. Only seamless process control prevents errors and ensures maximum efficiency to achieve optimal first-pass yield results.



State-of-the-art solutions for now and the future

In the future, megatrends such as artificial intelligence, deep learning, big data and the new 5G communications standard will significantly speed up our development process. Self-driving vehicles, electromobility and increasingly complex assemblies will also pose new challenges to the inspection process. That's why we're already thinking today about what our customers will need from us tomorrow.

Whatever we do, we do it 100%

Viscom sees itself as the partner of our customers, because truly ambitious goals can be achieved only if we work together. Thus, specifically tailored solutions for each inspection task are developed in close collaboration with our clients.

Viscom's product portfolio covers the full spectrum of optical and X-ray inspection systems. Based on experience, we know that each partner has its own standards for state-of-the-art inspection technologies. That's why individually configured systems and special machines from Viscom are used around the globe, whether for manual operation or fully automated operation within a production line. In addition to plain defect detection, control of the entire production process via integrated analysis of the inspection results along the production line is increasingly important. The goals are to optimize production, prevent scrap and reduce costs.



Comprehensive technical support

After production and setting up the machine, we continue to support our partners. Our extensive service package includes conversion and modernization of the systems, preventive and corrective maintenance that includes rapid delivery of replacement parts, along with training and application support. This enables us to guarantee optimal inspection quality for safe and reliable electronics. We believe that providing excellent, comprehensive service is simply part of being a good partner.



Figures – Data – Facts

Founded:
1984 by Dr. Martin Heuser and Volker Pape

Number of employees worldwide:
468 (as of 2021)

Revenue:
€ 79.8 million (as of 2021)

World Market Leader:
Viscom is the No. 1 solution provider for automatic optical inspection in the automobile industry.

Headquarters and production:
"Made in Germany":
Hanover, Germany

Subsidiaries:
Viscom France S.A.R.L., Paris, France
Viscom Tunisie S.A.R.L., Tunis, Tunisia
Viscom Inc., Atlanta, Georgia, United States
Viscom Machine Vision Pte Ltd., Singapore
Viscom Machine Vision Trading Co. Ltd., Shanghai, China
VICN Automated Inspection Technology (Huizhou) Co. Ltd., Huizhou, China
Viscom Machine Vision (India) Pvt. Ltd., Bangalore, India



What makes us unique?
In-house development
of hardware and
software

Perfection down to even ultra-small electronic component

Viscom calls its headquarters in Hanover home, but our sphere of activity extends far beyond the city with a number of international sites. Approximately five hundred employees dedicate their expertise and passion to creating innovative inspection systems.

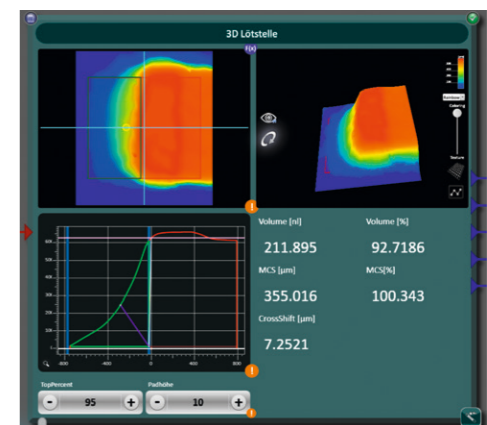
Viscom's partners include renowned companies from the automobile, consumer electronics, telecommunications and industrial electronics industries, for whom absolute reliability, pioneering inspection technologies and collaborative partnership are immensely important.

Everything from a single source – another factor in our success

For our partners we develop, manufacture and sell top-of-the-line inspection systems equipped with outstanding camera technology and high-speed sensor systems we produce ourselves. The software for intelligent inline systems communication is also developed under Viscom's roof. Hardware and software from a single source as well as in-house production – just a couple of features in Viscom's distinctive profile. Our products are manufactured exclusively at our Hanover site – quality "made in Germany".

Excellent opportunities in a growing market

We are very well positioned, and not just for the present. Our company operates in an international market undergoing rapid growth, driven by vehicle networking, self-driving vehicles and electromobility as well as digitalization and artificial intelligence. We've been shaping progress with our pioneering spirit for more than three decades. Our current and future partners, who count on high-performance, reliable inspection solutions to ensure maximum quality assurance and extremely efficient production, reap the benefits of our work.

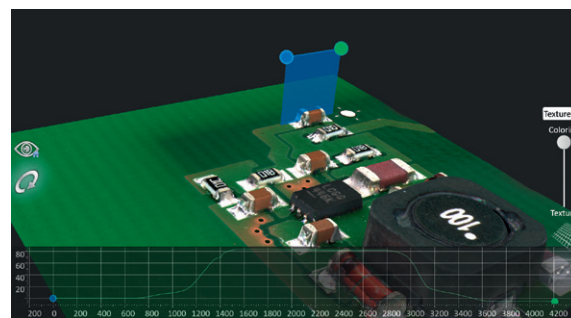


For impressive teamwork right down the line

Our wide range of inspection systems encompasses solder paste inspection (SPI), automatic optical inspection (AOI), automatic and manual X-ray inspection (AXI/MXI), conformal coating inspection (CCI) and wire bond inspection. Viscom utilizes the advantages of 3D technology – both for a shadow free photo realistic 360-degree view of solder joints and components as well as clear x-ray image slices for inspecting extremely complex electronic assemblies. The fully automated processes and interfaces are designed so that our inspection systems communicate perfectly with machines, inline monitoring systems and production control systems. This enables Viscom to meet even the toughest cycle time requirements and ensures extremely efficient production processes all the way down the line.

Trailblazing vVision software platform for optimal inspection results

To handle frequent product changes at top speed, inspection patterns can be rapidly generated in a user-friendly manner and then further optimized using verification image data. High-resolution colored images show the inspection results at a glance in an impressively realistic display. Process, production and quality data can be seamlessly traced.



Solder paste inspection | 3D SPI

Higher throughput, lower costs: our 3D SPI system for solder paste inspection detects incorrectly printed pads quickly and reliably, and offers much more as well. Analysis of 3D measurement data and the linkage of the results to the paste printer, pick-and-place machine as well as AOI and X-ray inspection systems ensure efficient, effective process control. Moreover, Quality Uplink by Viscom reveals areas where there is room for improvement. Thus, electronics manufacturers can enhance the quality of their end products on a lasting basis.

Automatic optical inspection | 3D AOI

User-friendly operation, first-class image quality, very simple verification: our high-end inspection systems for the inspection of assemblies and solder joints offer extreme inspection speed and the highest image quality, both for SMD inspections (pre- and post-reflow) as well as for THT and LED inspection. Viscom's 3D AOI systems feature state-of-the-art sensor technology with up to nine cameras. The result is shadow-free 3D inspection via 360° views that are true to the original. Our product range also includes desktop systems for manual inspection tasks such as random sampling.

Inline X-ray | 3D AXI (3D AXI/3D AOI)

Viscom's in-line X-ray systems provide the ideal solution especially for hidden components and concealed solder joints. The AXI range extends from applications involving classic printed circuit boards to particularly heavy, enclosed inspection objects from the field of power electronics and to battery cells and electronic devices such as smartphones or all-in-one computers. Very instructive slice images are generated from volume information with the aid of planar computed tomography. In this way it is possible to look into the interior of components and even solder joints to detect air inclusions and other defects. Viscom also offers the combined solution of in-line X-ray and automatic optical inspection in the same system housing. If xFastFlow handling is used, the time for automatic printed circuit board changes is reduced to a minimum.

Verification station

Verification plays an important role in quality assurance. Our user-friendly vVerify software is an excellent tool for the unambiguous classification of test results. It consolidates all the information so that electronics manufacturers can make the right decisions fast and safely. They can select and display the inspection results in accordance with their own criteria. This makes verification easy and convenient, and improves process efficiency and quality.

Conformal coating inspection | CCI

Flexible algorithms enable rapid adaptation of our conformal coating inspection systems to various coatings. Typical defects such as soiling and coating-free areas are reliably detected. Layer thickness measurements and inspection of wet coatings, plasma and other nano-coatings are also possible.



Wire bond inspection | 3D Bond

Whether ribbon, thick wire or thin wire, whether made of copper, aluminum or gold, Viscom has the right inspection system for every wire bond inspection. High-quality optical sensors guarantee excellent image quality and high-detail resolution.



Manual X-ray | 3D MXI

Electronics manufacturers count on the brilliant X-ray image quality from Viscom for manual X-ray inspection of prototypes or random samples. An extensive array of software features make our manual X-ray inspection systems a reliable test method for small series inspection. The microfocus transmission tube ensures high image quality and depth of detail. Sample handling is very flexible thanks to the selection of universal, interchangeable modules. The system can be upgraded with Viscom's proprietary computed tomography.



We put our energy into greater efficiency



-  **Confidently pass energy audits**
-  **Support climate goals**
-  **Maximum energy efficiency**

Energy efficiency is a crucial factor in the competitiveness of our partners. With innovative inspection systems, Viscom makes an important contribution to reducing energy consumption.

We've made it our goal to increase energy efficiency in the manufacture and processing of electronic products. On the one hand, our systems detect defects as early as possible. This is the only way to prevent scrap in production as well as defective end products that end up as electronic waste. On the other hand, our systems enable electronics manufacturers to analyze their production processes and to improve them on a lasting basis. This allows them to save energy, lower costs and help protect the environment.

With maximum efficiency

We focus on high energy efficiency right from the start when designing our inspection systems. Efficient control and lighting technology as well as optimized system servers are used to achieve maximum efficiency levels.

» At Viscom, transparency in energy consumption has been established within the context of Energy Efficiency Directive 2012/27/EU. We effectively identify all potentials for increasing energy efficiency and implement corresponding measures to achieve this goal. This enables our company to reduce energy consumption on a long-term basis. «



Achim Raths, Energy Management Officer, Viscom AG

First-class service when it really matters

Viscom maintains an international network of branch offices, application centers and service centers to ensure that we are available to our partners wherever they need us.

Our service engineers and technicians are experienced professionals with outstanding specialist expertise, always providing fast, reliable service and the right solution.

Support at the highest level

Viscom relies on direct contact. With locations in Europe, Asia and America, we keep distances short and efficiency high. This applies to our needs analyses to determine the optimal inspection technology as well as to our advice on optimal system configuration. We offer premium support in order to match the inspection drawings perfectly to the inspection samples for every application. To ensure that our customers enjoy the full performance of our systems, we train the operators at our training center, on-site in our partners' locations or online via e-learning courses.

Always up-to-date

Viscom's inspection solutions unleash their full power even for new requirements. Our team of expert technicians provide support with any and all system modifications such as adding functions, conversion or upgrading to increase your productivity and production quality. Software releases are free of charge for our partners. This enables us to guarantee full and optimal performance of our inspection solutions at all times.

-  **Short response times thanks to our global presence and 24/7 hotline**
-  **Worldwide expert service on site, via hotline and remote maintenance**
-  **Customer-specific maintenance and support agreements**
-  **Fast spare part delivery and free software releases**
-  **Comprehensive training available at all Viscom locations and customer sites**
-  **Annual Technology Forum with users' meeting and workshops**



That's what we call service: our global presence keeps us close to our customers

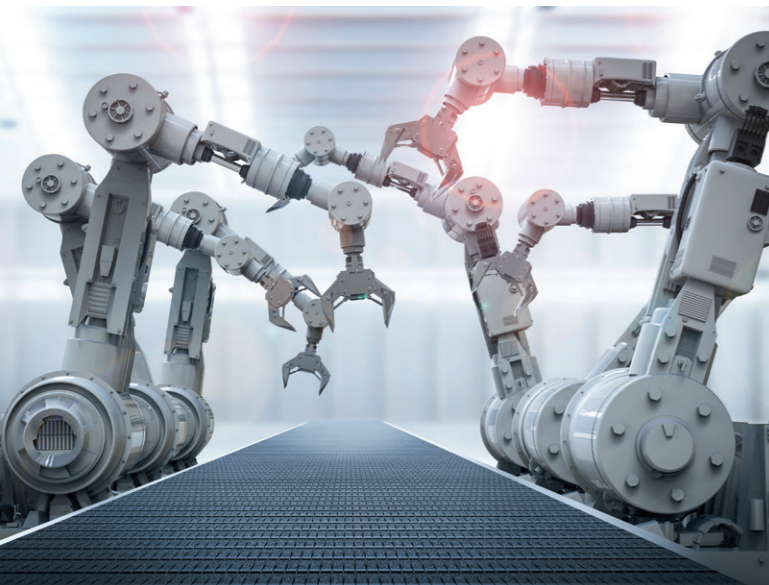
What our customers say about Viscom

As a provider of trailblazing inspection technologies, we work closely with our customers, as their satisfaction is extremely important to us. We've enjoyed decades of successful partnership with many of our customers.

Made in Germany.
Made by Viscom.

» Viscom, the leading manufacturer of AOI and AXI system technology, has been our trusted partner for many years. Together we create innovative solutions based on years of experience, enabling us to meet a wide range of sophisticated customer specifications. With regard to the future challenges posed by digital transformation, we see Viscom as a strategically important partner with whom we can also implement new technological trends and meet changing market requirements.«

Johann Weber, Zollner Elektronik AG



» We chose an AOI system from Viscom several years ago when converting from manual to automatic inline inspection of wire bonds. The positive experience of avoiding undetected defects and optimizing our entire manufacturing process at the same time has led us to update this wire bond inspection system, which will be equipped with the latest camera technology. This enables us to conduct optimal inspections of new electronic assemblies in the microelectronic field, such as 5G components, and to meet the tougher challenges of higher volume, greater product diversity and ongoing miniaturization.«

Christoph Binder, Team Leader, Microelectronics, Wire & Die-bonding, Rohde & Schwarz Messgerätebau GmbH



» We can recommend Viscom's high-quality 3D AOI systems to everyone who, like us, manufactures prototypes and small series. The fast product changeovers can be economically and efficiently accomplished only with extremely short programming times for the inspection plans. In this regard, we can rely on Viscom's software solution. I've greatly appreciated our long-standing collaboration with Viscom for their professionalism and the exceptional inspection depth.«

Jens Arnold, Managing Director, beflex electronic GmbH



A success story from the very beginning

1984

Everything began in Hanover when Dr. Martin Heuser and Volker Pape founded Viscom. Entrepreneurial spirit and the ability to break new ground has always defined the collaboration of the two founders and our company.



2006

With its listing on the stock exchange, Viscom initiated its internationalization. Established in 1998, the US subsidiary moved to larger premises in Duluth, Georgia. In addition to the United States we now have locations in Mexico, Singapore, China, Tunisia and France. Our international strategy was successful: Viscom became one of the world's leading providers of high-performance inspection systems.



2008

Now even closer to our customers: we're reinforcing our international presence with the new Service business unit and a global support team.



1990

After its founding, Viscom rapidly made its name as a pioneer in the area of assembly inspection. Our first solder joint inspection system set new standards for inspection quality. We followed up with numerous further innovations.

1996

Viscom combined optical inspection with X-ray inspection in a single system – a world first! Our innovation produced numerous advantages for quality assurance. Even today, it remains a milestone in the history of the development of inspection systems for assemblies.



2011

Wire bonds are used in high performance and safety related electronics. To meet the high production requirements Viscom expanded its product line to include the S6056BO-V in line system. This system combined high speed with 100% defect detection.

2013

A new addition to our product range: Viscom's S3088 CCI system is designed to meet the requirements of conformal coating inspection. Special UV LEDs ensure reliable contrasting of UV-sensitive conformal coatings.



2014

Viscom launched the S3088 ultra 3D AOI system with high-performance sensors on the market. Very fast indeed: with the XM 3D camera module, it includes one of the fastest AOI camera systems.

2018

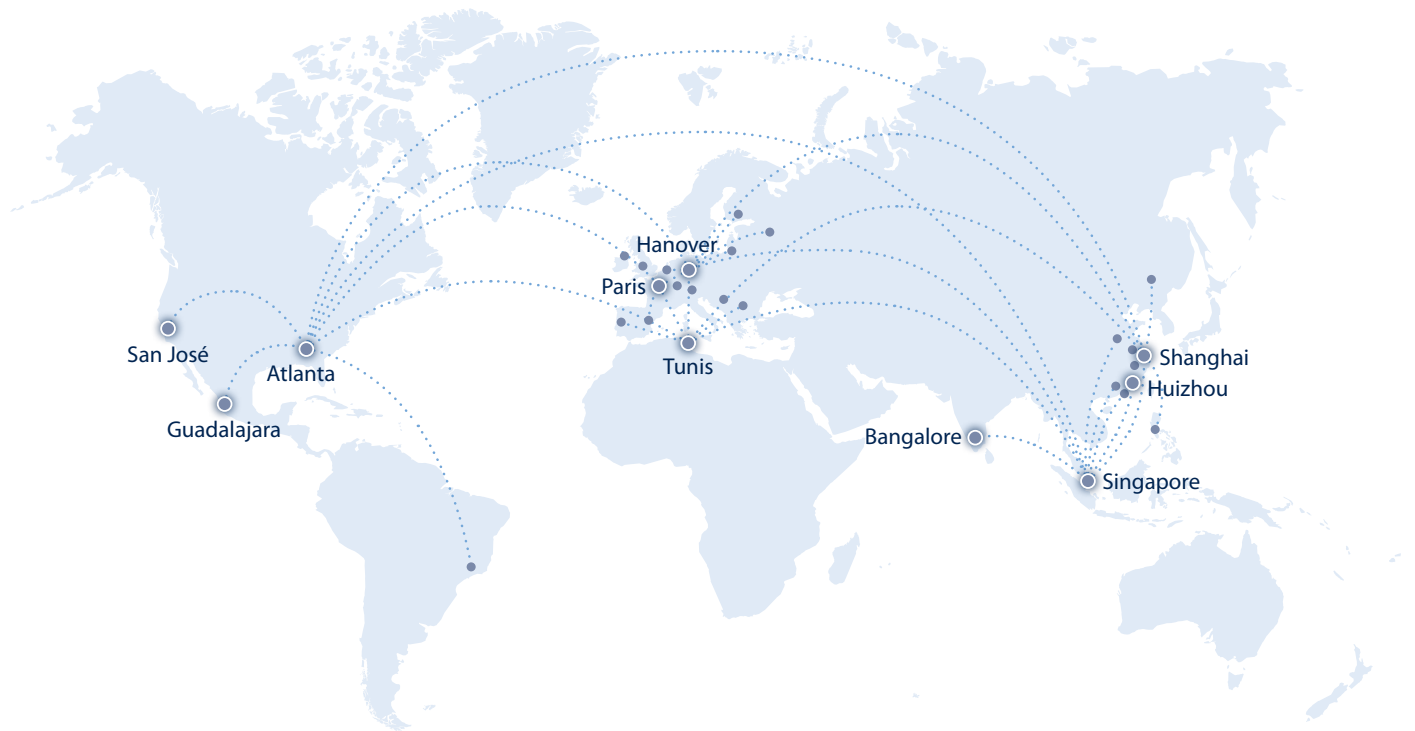
Carsten Salewski as the new Head of Sales and Peter Krippler as the new Head of Operations joined co-founder Dr. Martin Heuser and Chief Financial Officer Dirk Schwingel on Viscom's executive management team. Together they are pursuing a path that has distinguished our company since its founding: continuity, sound growth and entrepreneurial responsibility. Volker Pape, the other co-founder, became a member of the supervisory board.



2021

With its iX7059 product line, Viscom is setting new standards for high-precision 3D inline X-ray inspection. Outstanding inspection performance as well as exact measurement deliver 100% quality assurance in modern production.





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