

Bluechips Microhouse Company Overview

2019



BUREAU
VERITAS

ISO 9001



BUREAU
VERITAS

ISO 14001



BUREAU
VERITAS

ISO 13485



IEC 61340 &
ANSI/ESD
S20.20

BLUECHIPS

ELECTRONIC PRODUCT DESIGN & MANUFACTURING SERVICES



BLUECHIPS

ELECTRONIC PRODUCT DESIGN & MANUFACTURING SERVICES

Welcome to this guide to Bluechips Microhouse, your start-to-finish contract manufacturer for your electronic products. This overview gives you an impression of our capabilities and our service and acts as a good illustration of the benefits we offer as a strategic partner.

For any more information or enquiries, please email info@bluechips.co.th or consult the back of this booklet for our contact details.

CONTENTS



4	Company Overview
6	Manufacturing Capabilities
8	Research & Development
10	Quality Assurance
12	All-Round Service
14	Going Forward
15	Contact Details

Company Overview



Bluechips Microhouse is an international Electronic Manufacturing Service provider based in Chiang Mai, Thailand. As an EMS company, our contract manufacturing service has to be able to offer cost-effective, efficient delivery of your electronic products, as well as offering the versatility required to benefit our customers across a wide range of end markets ranging from sensoric and industrial automation to the opto-electronics, medical supply and transportation industries.

Additionally, the nature of our industry highlights the need for Bluechips to offer a one-stop solution to our customers, which we achieve by including product design, material procurement, mass production capabilities, quality control, testing, obsolescence management, logistics and multi-lingual customer service. As a result, we enable our customers to leave full projects in the hands of a single supplier and avoid putting unnecessary time and resources into the development of your products. Whether your product is a PCBA or a complex full-product solution, the Bluechips team is comfortable stepping in at any point of the development process on the way to the end-goal of fast, high-quality mass production.

With quality at the centre of our production process, we have built up a customer base where trusting, long-standing partnerships take precedent over short-term, spot-order arrangements. This is in no small part due to our constant pursuit of improvement, indicated by our attainment of various qualifications and accreditations. Our certifications, including ISO9001, ISO14001, ISO13485, SA8000 and official ESD status, reflect our commitment to complying with global quality standards.

Going forward, our commitment to quality is only set to increase as we further optimise the headquarters and primary manufacturing facility. Our facility boasts 2400m² of production space, a 600m² climate-controlled warehouse, ESD compliance throughout the entire ESD Protected Area and state-of-the-art machinery to make sure that your products are produced on schedule and defect free while representing value for money.

With our team adding experienced and specialised members, new lines being added to our production floor and investments being made in test equipment, as well as our ongoing emphasis on communication and cooperation, it is an exciting time to start partnering with Bluechips to manufacture your electronic products.



Your German EMS Partner in Thailand

Bluechips Microhouse is a German, family-owned company that has been based in Northern Thailand since our establishment in 1999. Our specialism in German engineering coupled with our base in the cost-effective production region of Southeast Asia means that we offer a financially competitive solution with no compromise in quality.

Serving Industry Leaders Globally

Bluechips has the privilege of forging partnerships with some incredible companies. We are trusted by industry leaders in the sensoric, industrial automation and medical supply industries among others to provide high-quality electronics efficiently, and to the precise specifications of the customer.



International Team of Specialists

Our team of over 400 people features experts in engineering, procurement, logistics and customer service. With talented employees from across the globe representing the company, Bluechips can offer the quality of service and experience required to satisfy our customer's high expectations.

Long-Term Business Relationships

Central to our philosophy as a company is our preference for developing long-term relationships with our customers. Rather than taking any contract that comes available, Bluechips actively seeks to work with companies with the shared desire to grow together and communicate effectively. This philosophy has seen many of our initial customers remain valued partners to the current day.



Manufacturing



At Bluechips, our ability to produce electronic products quickly, cost-effectively and to unwaveringly high standards has always been central to the service we offer our customers. Therefore, the construction of our new headquarters in 2015 was completed with the efficiency of our workflow as a primary consideration. The result of this multi-million dollar investment is a facility and production floor that provides a smooth material flow, a large production capacity and an ESD Protection Area entirely compliant with IEC 61340 and ANSI S20.20 ESD regulations.

Our production floor is laid out to allow our products to flow smoothly from our warehouse to our production lines and onwards to the packing and shipping area. However, we consider it to be of equal importance that the space is filled with the machinery capable of producing a high-output, high-quality service around the clock. With all of that achieved, the Bluechips production service is capable of offering the following:

- PCB Assembly – SMT, COB & IMT
- 5 SMT Lines; including a new Fuji NXT111C line
- Full Tunnel Nitrogen Double Wave Machine
- Selective Soldering
- Vapour Phase Soldering
- Multiple Reflow Ovens
- Resin Potting
- Die Bonding Capabilities
- Laser Marking and Screen Printing Machinery
- Stencil & PCBA Cleaning Machines
- Cable and Harness Assembly
- Full CNC Milling, Metalwork and Laser Welding in our Mechanical Department
- Ultrasonic Welding via Branson machinery

With our production capabilities allowing for the manufacturing of full turnkey solutions, Bluechips offers a one-stop, start-to-finish EMS solution for our customers; streamlining your procurement and eliminating the need for multiple suppliers.



2400m² Production Floor

Our production floor was designed and built with an efficient manufacturing process as the primary consideration. From incoming material to warehouse through to production and testing, everything is tailored to be as efficient as possible from the beginning to the end of our service.

State-of-the-Art Machinery

By continually investing in new machinery for our production floor, Bluechips manages to remain at the cutting edge of the modern EMS market. Everything in our production floor, from our SMT lines to our Laser Printing machine, is capable of contributing the highest quality to your finished goods.



Full ESD Compliance

Every area of the Bluechips production floor is ESD compliant meaning that we keep the risk of electrostatic discharge to a minimum. Only personnel wearing the mandated ESD uniform can gain access to areas where electronically sensitive components are held; avoiding any unnecessary risks with your products.

Start-to-Finish Electronic Production

When our customers trust us to build their electronic products, it is because of our track record in providing fully-finished products from the initial PCBA to the box building and shipment. Start-to-Finish production has been a key tenet of our philosophy since our establishment and remains a priority of the company's to this day.



Research & Development

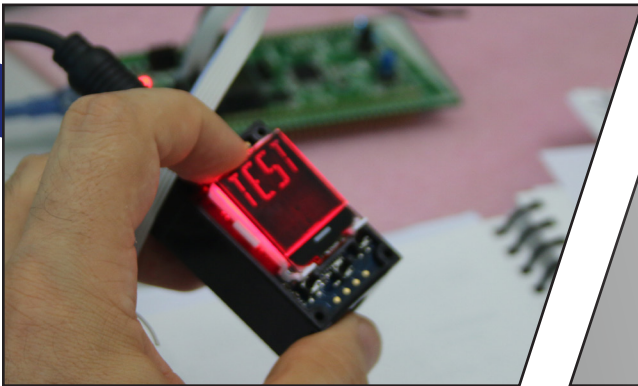


As Bluechips has grown, more and more companies have trusted us to not only produce their products, but to take care of the design, development and transition to manufacturing. This has seen the company invest significantly in our R&D capabilities and personnel allowing Bluechips to enjoy the benefits of one of the premier EMS R&D facilities in the country.

With a large team of engineers boasting decades of experience around the world, Bluechips can offer specialised services in developing your products. Upon discussing and confirming your specifications, our team enthusiastically offer the capability to design every aspect of the project. Whether it is hardware, software, firmware or a combination of the three, the Bluechips R&D team will adapt to your requirements and design the optimal product for your needs.

Not only can our team help your projects from the earliest stages of conceptualisation, they can also intervene at any stage in the development cycle of your project to optimise the end result. Customers often come to Bluechips with an initial design before our respective teams collaborate to improve the final product for prototyping and subsequent production. No matter how close a project is to being ready for production, the Bluechips team will happily work to locate any considerable improvement; from cost reduction to reduced space or component usage.

As the R&D team works in the same facility as the rest of the company, our transition from design and prototyping to mass production is taken care of under one roof. Our New Product Introduction Department specialise in taking products that have been carefully designed by the Development team and getting them efficiently through the sample stage. By making sure that the product can be manufactured at the quantity and quality required by our customers, we make sure that the subsequent transition to the production floor is a simple process with the customer in the loop throughout every stage of the process.

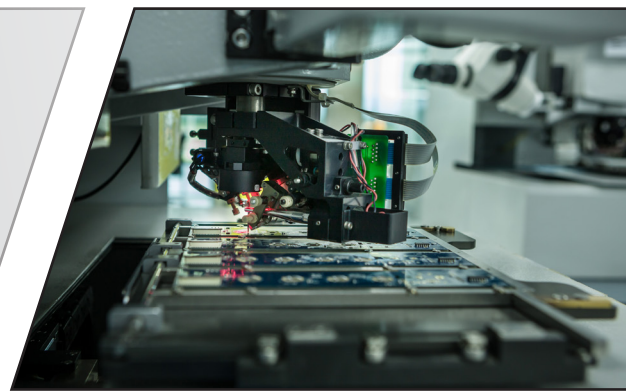


Hardware, Software & Firmware Development

The R&D team at Bluechips is made up of specialist engineers who combine to design and prototype entire products. From housing and initial firmware to adaptable and dynamic software the R&D team at Bluechips approach all new projects with the level of enthusiasm they deserve.

Develop New Products or Optimise Existing Goods

Whether your project needs conceptualised from the very beginning or just needs a final push towards completion, our R&D team will seek to understand your requirements and constraints and turn them into the optimised final result; allowing the lifecycle of your products to run beyond initial obsolescence.

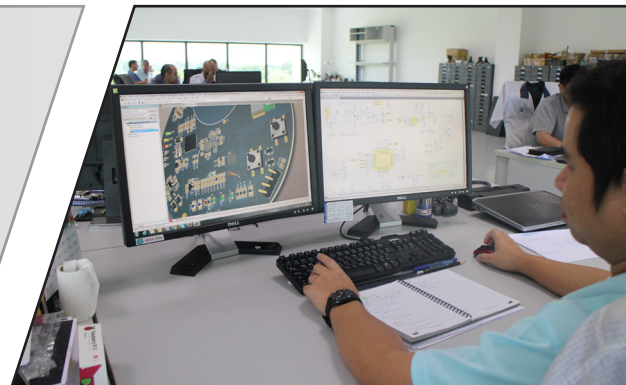


Transition Seamlessly to Mass Production

As Bluechips is positioned as a one-stop service provider for electronic products, the R&D process is specifically tailored to represent the beginning of a long-term collaboration. Bluechips also boasts a specific NPI department that will transition your product from prototypes to the initial stages of production with a view to mass producing your products without delay or disruption.

Constant Environment of Innovation

Research & Development at Bluechips is not confined to the projects of our customers. The R&D team frequently take the opportunity to develop our own in-house products so that the advances in technology and processes discovered by the team can then be applied to future collaborations.



Quality Assurance



Bluechips was established in 1999 in order to represent an alternative EMS solution compared to what was already on the market. At the heart of this venture was ensuring that Bluechips could offer a service based on quality; without impacting our ability to keep up with the quick-to-market nature of the electronics industry or the cost-efficiency expected by our customers.

Almost 20 years later and this philosophy remains the top priority for every product that is manufactured by Bluechips. As the company has grown, so too have the capabilities we possess to ensure that our shipments contain minimal defects and, consequently, allow our customers to focus on the growth on their own business without any concerns about supplier performance.

From a technical standpoint, Bluechips has invested in a wide variety of machinery that can detect defects at virtually any stage of the production process. Our Solder Paste Inspection machine allows high volume jobs to be monitored effectively so that easily manageable mistakes are avoided. Within the lines, our production floor boasts multiple Viscom AOI machines to allow for 3D, contact-less inspection of finished PCBs with In-circuit testing also available when required. Additionally, Bluechips possesses a DAGE X-Ray machine, offering real-time accurate analysis and allowing any potential defects to be detected and avoided in future manufacturing.

Despite the wealth of technological quality assurance at our disposal, Bluechips also places enormous importance on our team to constantly maintain and improve our internal standards. Our Quality Control team monitors and analyses the standard of all components and products involved in our production, both incoming and outgoing. Due to the obvious importance of this task, our QC team has typically consisted of more than 10% of our total workforce. Outside of our specific quality teams, initiatives have been undertaken throughout the company to make sure that everybody in the team is able to contribute to our overall quality of service. With ESD and a 5S work approach being adopted throughout large parts of the company, the entire company is held to the standard that our customers rightfully expect.



Up-to-Date Testing Machinery

As with the manufacturing areas of our production floor, the testing and QA areas are also equipped with up-to-date and market leading equipment. As a result, Bluechips can test your product at every stage of the manufacturing process; from the solder paste inspection prior to surface mounting through to the X-Ray and in-circuit testing to test the quality of your finished PCBs.

Wide Range of Certifications

As part of our commitment to quality, Bluechips has been awarded various certifications in recognition of the standards of our products, our facility and our team. As a company, we take maintaining these standards very seriously and, as a result, hold accreditation for our management style, environmental care, social accountability and medical products.



Regularly Audited by our Customers

The quality of our service is not just judged by external authorities. Bluechips is audited regularly by our customers to ensure that our premises and processes continue to meet the high standards that made our initial partnerships possible. We actively encourage those who consider Bluechips as an EMS partner to see our facilities and team in action.

Company Wide Commitment to Quality

Within Bluechips, the job of quality control is everybody's responsibility. While over 10% of the workforce are directly involved in QA, it is emphasised throughout the organisation that quality is our number one priority. That means that every department plays a part in our collective commitment to the quality of not only our products, but our overall service as well.



All-Round Service



The service we offer as an EMS supplier means that our customers rightly expect that Bluechips can deal with the entire process of manufacturing and distributing your electronic products. While our production facilities and quality first philosophy speak for themselves, we consider it equally important that every aspect of our service can offer real benefit to our customers.

Our experience in the industry means that many of the background considerations and required capabilities that are missed by some suppliers do not become a problem when working with Bluechips. With so many factors at play in getting the balance between delivery time, price and quality, our team will adapt to your requirements and deliver a service built upon years of honing our internal processes.

Our history of customer retention comes largely from the fact we offer competitively priced products while maintaining our no-compromise approach to quality. A large contributor to this is taking the same expectations our customers have for Bluechips and applying it to our own suppliers. Our material procurement team have built relationships with our partners over many years which have subsequently seen cost-reductions, faster lead-times and higher yields. Recent years have also seen the deployment of EDI with several of our top suppliers which allows the company to automate many of our regular orders. Additionally, our logistics team have formed strategic partnerships with many of our forwarders to make sure that we have an established shipping network that can get your products delivered safely and on time.

While we are proud of the products we make and the service we offer, we steadfastly believe that without clear and transparent communication we would be unable to build the partnerships we currently enjoy with so many of our customers. Our specialist customer service team operate as your gateway to the Bluechips service and keep you up-to-date with the status of your orders via a clear and consistent point of contact.

In today's electronics market, it is important to build a relationship with an EMS supplier you can trust. With the expertise at Bluechips spanning far beyond our production floor, you can rest assured that we will work as hard as necessary to deliver a comprehensive service built firmly on quality, communication and competitiveness.



Strategic Material Procurement

To further aid our cost reduction strategy, the Bluechips purchasing team aggressively pursue materials that are competitive in price and dependable in quality. In doing so, we have ensured that Bluechips and our customers can benefit from many of our long-standing relationships with suppliers that offer regular cost savings while maintaining product quality.

Multi-Lingual Customer Service

Bluechips assigns a specific Key Account Manager to every customer account to make sure that you are kept up-to-date and in the loop regarding the status of your orders. With support available in many languages, including English, German, French, Spanish among others, Bluechips seeks to make sure that all our customers are comfortable with our service throughout the entire product lifecycle.



Established Global Logistics Network

Our service to customers is only considered a success when we safely deliver your finished product on-time and to your standards. To aid this, our logistics team have built up a wealth of experience in finding consistently reliable forwarders no matter where in the world our customers need their products. Additionally, our forwarding partners in Germany ensure that we can offer weekly shipments between our offices to react quickly to our customers requirements.

Stable & Evolving Infrastructure

Bluechips has worked hard to establish an infrastructure that enables the company to operate as a reliable and secure EMS option for our customers. This goes beyond the physical infrastructure demonstrated by our impressive headquarters and encompasses the investments made by the company in our SAP ERP 6.0 EHP 8 system and secure data servers as well as our software and systems.





Going Forward

The coming years will be full of excitement for Bluechips as we continue to enhance our reputation in the global EMS market. The development of the company will come primarily from the growth of our team and the continued investment in both production and testing machinery with improvements already being seen from our recent implementation of our Fuji SMT line as well as the new Trumatic 1000 machine in our Mechanical department.

Outside of our investment in machinery, the company is investing time and resources into optimising every aspect of our service. Examples include our development and implementation of component traceability, MES and planning capabilities from our IS team and our Electronic Data Interchange programme incorporating more of our suppliers and customers to further automate our processes for time and cost savings.

The Bluechips team is also undergoing continuous improvement with our recruitment strategy actively targeting talented individuals both in Thailand and abroad. This strategy has seen departments such as R&D and NPI double in size in recent years with more individuals adding to the team consistently.

From a social perspective, our commitment to supplying a rewarding workplace for our team is continuing and is evidenced with our new canteen, recreation area and training facility scheduled for completion in 2018. The project, boasting a design to match the individuality of our current headquarters, will further boost our standing within Chiang Mai and the local community.

With so many recent improvements with many more on the way, Bluechips remains in an exciting position for the coming years in the EMS market. We encourage you to get in touch and see how you can benefit from a partnership with Bluechips Microhouse.

Contact Details



Bluechips Microhouse Co., Ltd.

Head Office

155 Moo 5, Tambol Chae Chang
A. San Kamphaeng, Chiang Mai,
Thailand 50130

Tel: +66 (0) 53 371 000
Fax: +66 (0) 53 371 099

Email: info@bluechips.co.th

Bluechips Microhouse GmbH

International Sales Office

Turmstraße 37
79539 Lörrach
Germany

Phone: +49 (0) 7621 589 4980
Mobile: +49 (0) 176 227 39 224

Email: sales@bluechips.co.th

Regional Sales teams are available in the following locations:

**Germany
Switzerland
Austria
France
United Kingdom
Thailand**

For more information, please visit our website at www.bluechips.co.th

