



PRODUCT RANGE

nh-technology.de



SYSTEM SUPPLIER FOR INPUT DEVICES

CONSTRUCTION | PRODUCTION | LOGISTICS

MODULES & SYSTEM SOLUTIONS

KEYPADS & SWITCHES

CABLE ASSEMBLY & CONNECTORS

ELECTRONIC COMPONENTS

MOULDED PARTS & TOOLING



Management
System
ISO 9001:2015

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ID 9105016435

QUICK FACTS

2001

N&H Technology GmbH founded
by Dipl. Ing. Yine Zhang in Krefeld
Germany with 3 employees

2002



Certification according to
DIN ISO 9001

2007

Moving to a new headquarter
in Willich with 15 employees

2012

Own company built in
the industrial area
„Stahlwerk Becker“ in Willich
Company expanded to
22 employees

2013

N&H Office opened
in Shanghai China

2016



General Manager
Dipl. Ing. Yine Zhang awarded
“Manager of the Year”



2017

Award from the TÜV
Rheinland for 15 years
DIN ISO 9001 certification

2018

Storage area significantly extended

2020

N&H expanded to 37 employees
(18 with graduation,
including 14 engineers)



Headquarter in the industrial area
„Stahlwerk Becker“ in Willich

ABOUT

N&H Technology GmbH was founded in 2001 and supplies components and complete solutions for customer-specific user interfaces (HMI), according to our guideline: Single Source Supply.

STRENGTHEN

We see ourselves as a link between production plants in Asia and our customers in Europe. On the one hand, our strengths lie in the technical advice and support of our customers projects and on the other hand in professional procurement, quality assurance and logistics. Through highly qualified German and Chinese engineers in our company, we communicate excellently with our customers and suppliers, even about complex technical issues. On customer demand, we also can take over entire development and design tasks.

PRODUCTION & QUALITY

Our production takes place through our extensive supplier network in East Asia. Our partly Long-term manufacturing partners are constantly checked by us on the basis of defined technical and economic criteria and selected on a project-specific basis. Sector-specific quality requirements are of course taken into account. In addition to DIN ISO 9001 and DIN ISO 14001 certification, we can fall back on a large number of specialized suppliers who, for example, meet IATF 16949 or DIN ISO 13845 standard requirements. Our comprehensive quality management system ensures European quality standards for our products.



Modern meets History

Since the turn of the millennium, the area of the former Stahlwerk Becker has been transformed into a diverse business park, where carefully restored monuments alternate with modern architecture.

ABOUT N&H

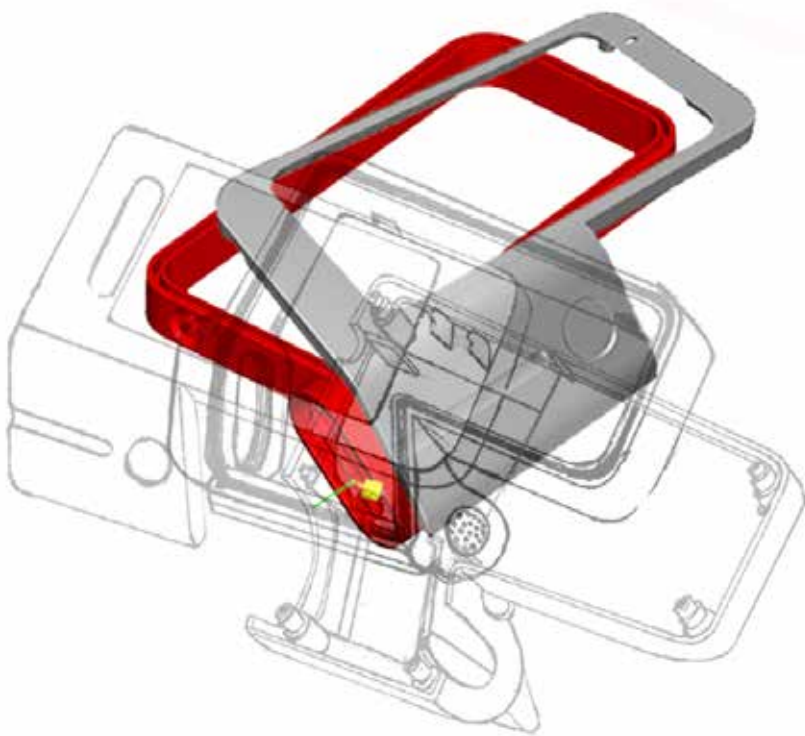
STARTING A NEW PRODUCT?

Planning a new product is a complex process. Problems frequently come up even at the early stage, relating the feasibility of the project or the procurement of required components.

We offer a comprehensive full service – from consulting and developing your early concepts to producing and logistic handling series and mass production.

We focus on customer-specific operating units and offer the production of electromechanical assemblies and the procurement of all necessary components. Of course, we gladly assist you in the development of individual components – as our purpose goes: Single Source Supply.

We constantly expand our portfolio with new products and technologies for being an attractive, long term business partner.



We work with a long-standing network of suppliers and guarantee an economic implementation of your projects according to European quality standards.

You benefit from our wide-ranged service, such as technical consultation from our engineering team, optimization of technical specifications for product safety, development of cost-cutting measures and much more.

The Asian market with its capabilities and own advantages is opened for you by our company in Willich, near Düsseldorf.

Our engineers in Germany and our team in China are the reliable support for your project with finished products at the end.

WE OFFER

Technical support

- Feasibility studies
- Suggestions for improvement
- Options to reduce costs
- Procurement of third-party components
- Outsourcing options for your supply chain
- Takeover of construction and development
- Assumption of assembly work in Asia

N&H Laboratories

- Measurements / tests
- Technical problem analysis, also for third-party products

Logistics

- Complete logistical handling
- Consignment warehouse possible at N&H



N&H LABORATORY

We carry out technical tests and analysis in our laboratory. Measurements for our customers on our own products are free of charge.

Upon request, we also perform technical analysis for third-party products.

ELECTROMECHANICAL TESTING

- Force-Travel performance
- Life Cycle
- Abrasion Test of coated and printed surfaces
- 2D / 3D measuring microscope
- Pressure / Pull Force measurements for checking the strength of
 - Material connections
 - Operating forces on control elements (buttons, switches)
 - Pull-off performance of films

OPTICAL TESTING

- Light density
- Color coordinates
- Dominant wave lengths
- Brightness control (homogeneity) of displays, backlights, backlit keyboards and pictograms, etc.



MATERIAL TESTING

- Resistivity and volume resistivity of surfaces
- Powder Resistivity Tests

FURTHER TESTINGS

- Climatic test cabinet
 - Temperature -70°C bis +180°C
 - Humidity 10% bis 98%
- Cable Test
- Sound level measurements (frequency diagram)
- Prototyping with 3D printer
- Device construction with CNC engraving and milling machine



N&H QUALITY MANAGEMENT

We offer high-quality products and service. Our well-trained and experienced staff makes decisive contribution to it. We consider quality essential to all activities and strive for continuously improving our working processes in detail.

All of our production plants are audited by our skilled technical engineers from Germany and China. With technical analysis and tests in our laboratories, we support our customers and suppliers with our quality assurance.

Our Quality Assurance Management is performed in four sections:



1 N&H in Willich / Germany

DIN ISO 9001 certified in the area of sales, logistics and technical processing and development. Projects for automotive industry are conducted under the VDA standards.

2 Manufacturing Partners, Asia

DIN ISO 9001, DIN ISO 14001, ISO TS 16949 or DIN ISO 13485 certified.

3 N&H Office in Shanghai, China

Onsite inspection and quality controls of manufacturing plants.

4 N&H Laboratories, Germany

Project-specific quality measurement and assurance

Each project is in charged by one of our engineers. Customers have an individual contact person throughout the whole project.



PRODUCT RANGE

MODULES & SYSTEM SOLUTIONS

- Complete solutions for HMI devices
- Production and delivery of components
- Design and development of components and systems:
 - Housing Parts / Moulded Parts
 - Keypads, Keyboards, Switches
 - LCD- / LED-Displays
 - Printed circuit board assembly
 - Cable assembly
- Tool construction
- Procurement of special components
- Complete assembly and preassembly in Asia
- Project-specific final testings



KEYPADS

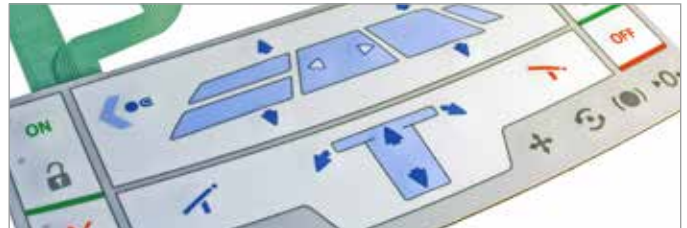
SILICONE RUBBER KEYPADS

- different coating and surfaces
- plastic caps (laser engraving for night-design)
- integrated light guides, EL or LED backlight
- switch foil with poly-dome or metal-dome
- carbon and metal contacts



MEMBRANE SWITCHES

- different key embossing
- epoxy buttons
- silicone rubber as overlay
- diverse options on windows
- integrated LEDs, Light Guide Film (LGF), Buzzer
- integrated solution with touch panel
- EMV and IP protection



VANDAL RESISTANT KEYBOARDS

- selection of standard stainless steel keyboards
- front and rear panel installation, desktop variants
- different language layouts, also customized
- optional: trackball, touchpad, LED backlight
- protection degree up to IP68



TOUCH PANEL

- film to film or film to glass
- matrix, analog-resistive or analog-capacitive
- glass thickness: 0.7mm up to 3.0mm
- 4-, 5- or 8-wire
- integrated solutions with membrane switch



MICROSWITCHES

- Tact switch, Slide switch, Multi function switch
- Rotary switch



PUSH BUTTONS / CAPACITIVE BUTTONS

- different mounting diameters
- protection degree up to IP68
- different housing colors
- LED lighting in several colors
- different button shapes
- individual printing of button keys
- customized developments



CABLE ASSEMBLY

CONNECTORS / POGO PINS

- Pogo Pins
 - Flat Types for SMT
 - Plug-in Types for THT
 - Right Angle Types
 - Rolling Pins for 360° movings
 - Screw Pins
 - Fitting caps for automated PCB assembly
 - Pogo Pin Connectors (customized)
 - Waterproof Connectors up to IP68
- Male and Female Connectors
- High Current Connectors
- Magnetic Connectors (customized)
 - complete solution with cable assembly



CABLE

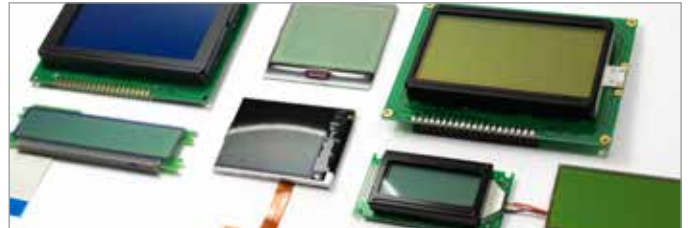
- cable harnesses and wire sets
- data communication cables
- cable with integrated assembly
- connection cables for LCD and flat screens
- coax cables
- spiral cables
- single cables, etc.



ELECTRONIC COMPONENTS

ACOUSTIC COMPONENTS

- Buzzer
 - piezoelectric / magnetic
 - for SMT / THT assembly
- Transducer
 - piezoelectric / magnetic
 - internal / external drive
 - for SMT / THT assembly
- Speaker and Sirens
- Microphones and Receivers



LCD & OPTO ELECTRONICS

- TFT, OLED, DFSTN, FSTN, EBTN, STN, HTN, TN, VA
- with integrated touch panel
- alphanumeric and graphic
- field-sequential-LC-displays
- controller (COB, COF, COG, TAB/TCP)
- EL, LED or CCFL backlight
- LED module
- LED 7 segment displays



PCB ASSEMBLY

- flexible, rigid and rigid-flex circuits, also multilayer
- assembly according to customer specification



POWER SUPPLIES & BATTERIES

- Primary batteries - especially lithium button cells, also with customer-specific solder connections
- Battery contacts (gold / nickel plating)



- tool design with mold flow analysis
- single and multiple syringes
- big parts up to 20 tons (tool weight)
- precision parts
- overmoulding
- surface treatment
 - painting and lasers
 - IMD (in-mold decoration) technology
 - galvanic surface finishing (matt and glossy)
 - EMC and PVD Coatings
 - soft-touch finish
 - special surfaces (eg burl wood decor)



- silicone covers
- seals, o-rings
- rubber damper and bellows
- rubber molded parts
- combined metal / rubber parts





YOUR PROJECT

We are looking forward to your inquiries and we are always keen on submitting you an offer as quickly as possible.

CHECKLIST

For an individual offer we need:

- technical drawing, sketch or sample
- technical specifications
- required quantity

Please send us the data to our email: info@nh-technology.de

One of our engineers will contact you immediately.

For technical advice and all questions about our products and services, please contact us by phone: **+49 (0) 2154 – 81250**

A first project meeting in our company is possible at any time. Especially complex projects can be discussed and determined with our engineers in such a straightforward way.



N&H SERVICE

Each project is individually managed by one of our engineers.

We offer technical support in the following areas:

- Research and Analysis on product feasibility
- Recommendation and advice on technical improvements
- Evaluation and technical options for cost-cutting solutions
- Construction, development and design (CAD-Software/ ProEngineer)
- Prototype construction with 3D printer

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We are your
system supplier for
customized input
devices. From
the first idea to
series production:
Everything from
one source.





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