

Company Information

NITTOKU CO., LTD.
NITTOKU株式会社



Profile

NITTOKU

Establishment	September 28, 1972
Stated Capital	6,884,928,042 yen
Representative	President (CEO) Nobushige Kondo
Employee	Approximately 450 (Consolidated: approximately 860)
Principal Office	2-292-1, Azuma-cho, Omiya-ku, Saitama City, Saitama
Factory	<div><div></div> Fukushima Factory (winding machine development, production)</div> <div><div></div> Nagasaki Factory (FA development, production)</div> <div><div></div> Shenzhen Factory (winding machine, peripheral equipment production, service)</div> <div><div></div> Suzhou Factory (winding machine, peripheral equipment production)</div> <div><div></div> Changzhou Factory (Automatic machine parts)</div> <div><div></div> European Factory (winding machine, peripheral equipment production) NITTOKU SINGAPORE PTE. LTD. NITTOKU (THAILAND) CO., LTD.</div>
Business Details	Development, manufacturing and sale of automatic winding machines and parts.



Management Philosophy

From a global point of view
Give shape to customer's expectations
Provide cutting-edge technology
Contribute to society through innovation

Action Guidelines

Concentration and expansion
Challenge towards worthy creation
Despite its small structure,
NITTOKU is a reputed brand name world wide

Quality Policy

Value added creation
for complete customer satisfaction
Increase customer satisfaction through value
Continuous organization and management improvement
Transparent management policy

Environment Policy

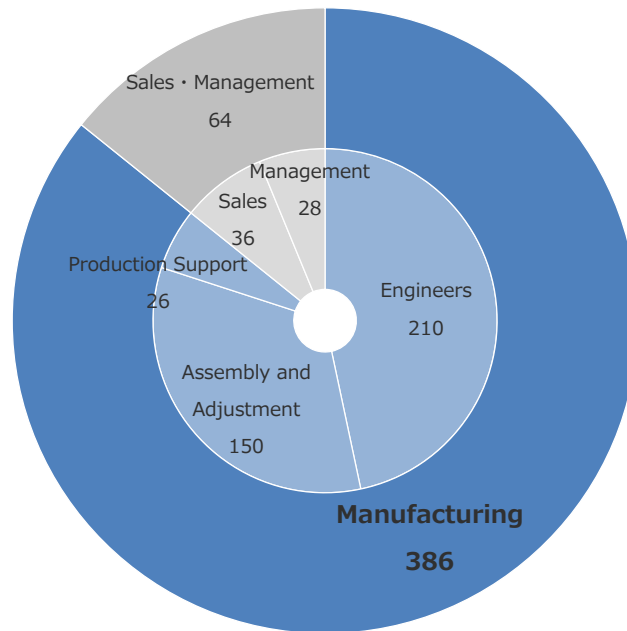
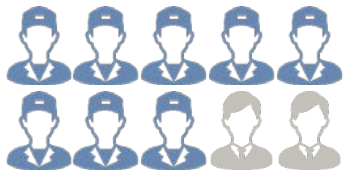
Committed to promoting a recycling-oriented society and
coexistence with the global environment.

Employees (non-consolidated)

As of April , 2021

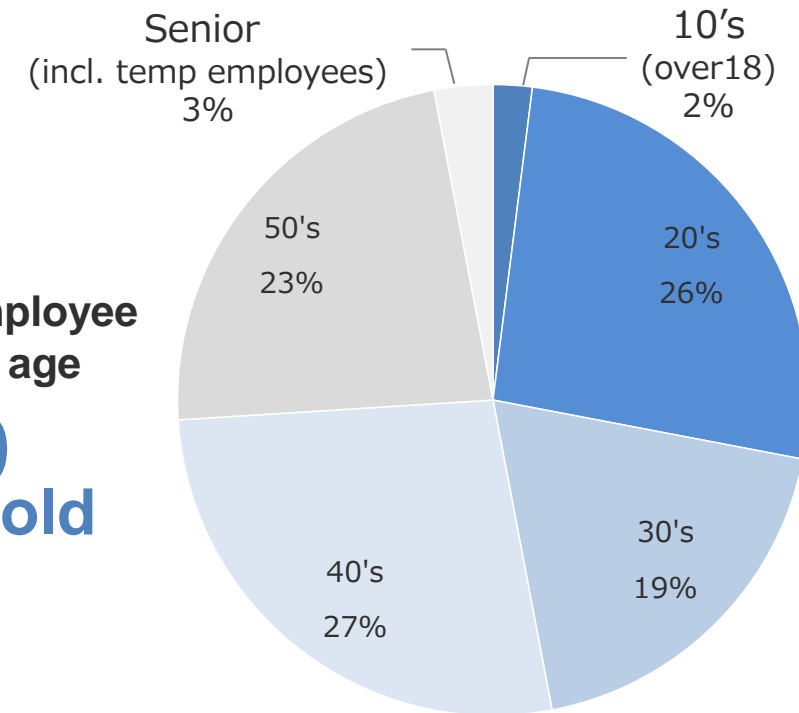
Production Section

86%



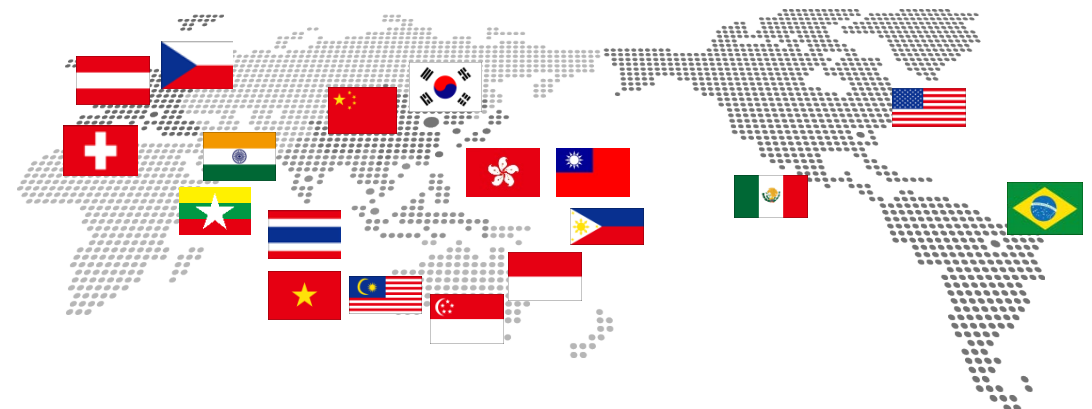
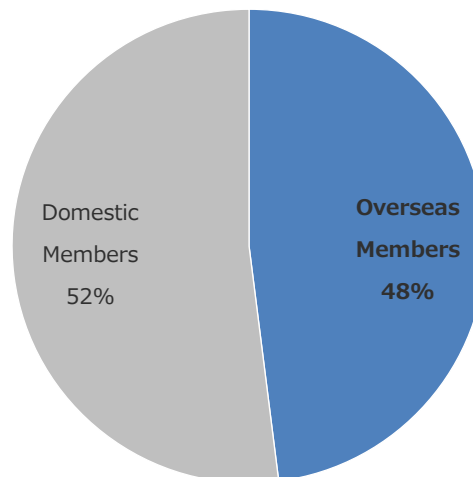
Regular employee Average age

39
years old

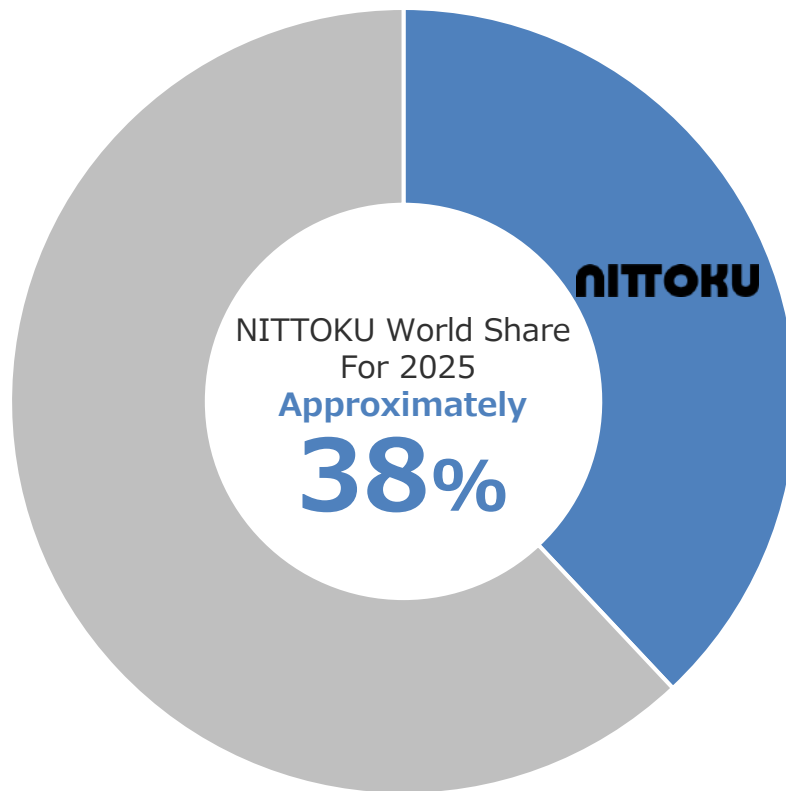


Overseas members (Consolidated)

48%

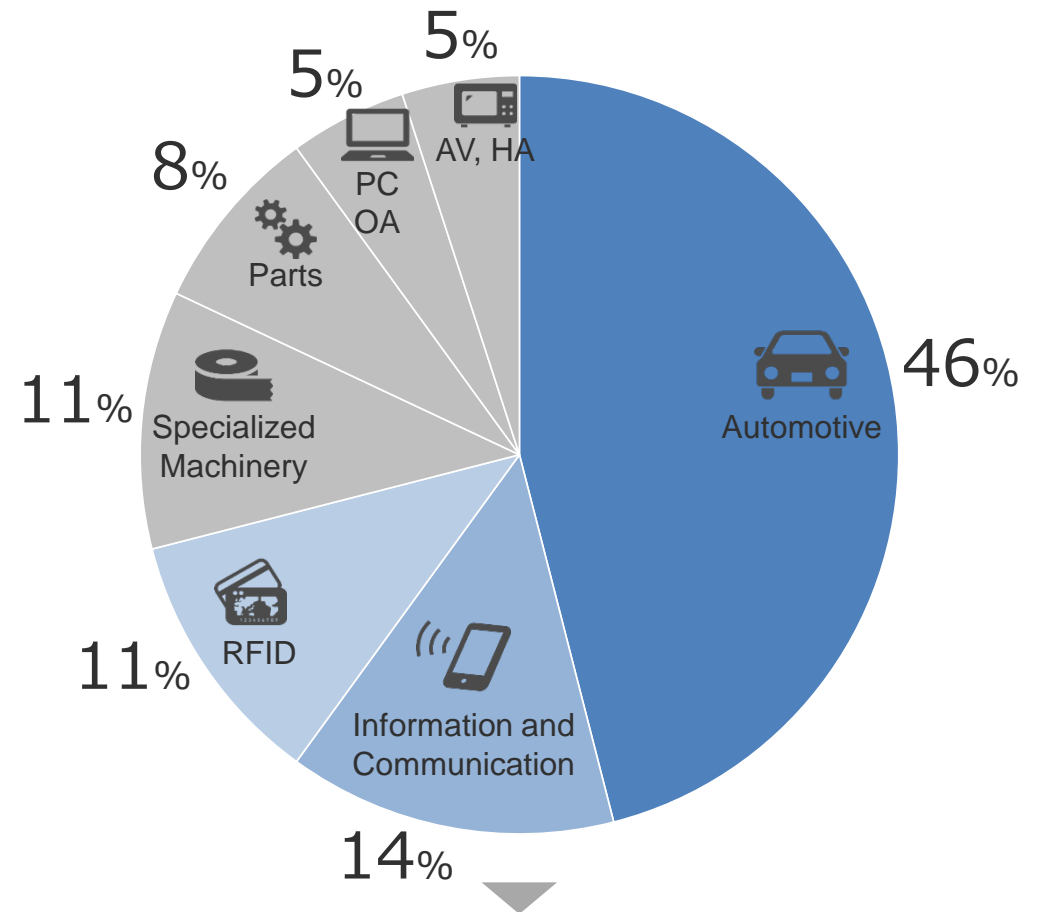


Winding System Industry



NITTOKU was chosen by the Ministry of Economy, Trade and Industry of Japan as one of "100 national global niche company selection" (2020) and "regional future traction company" (2017).

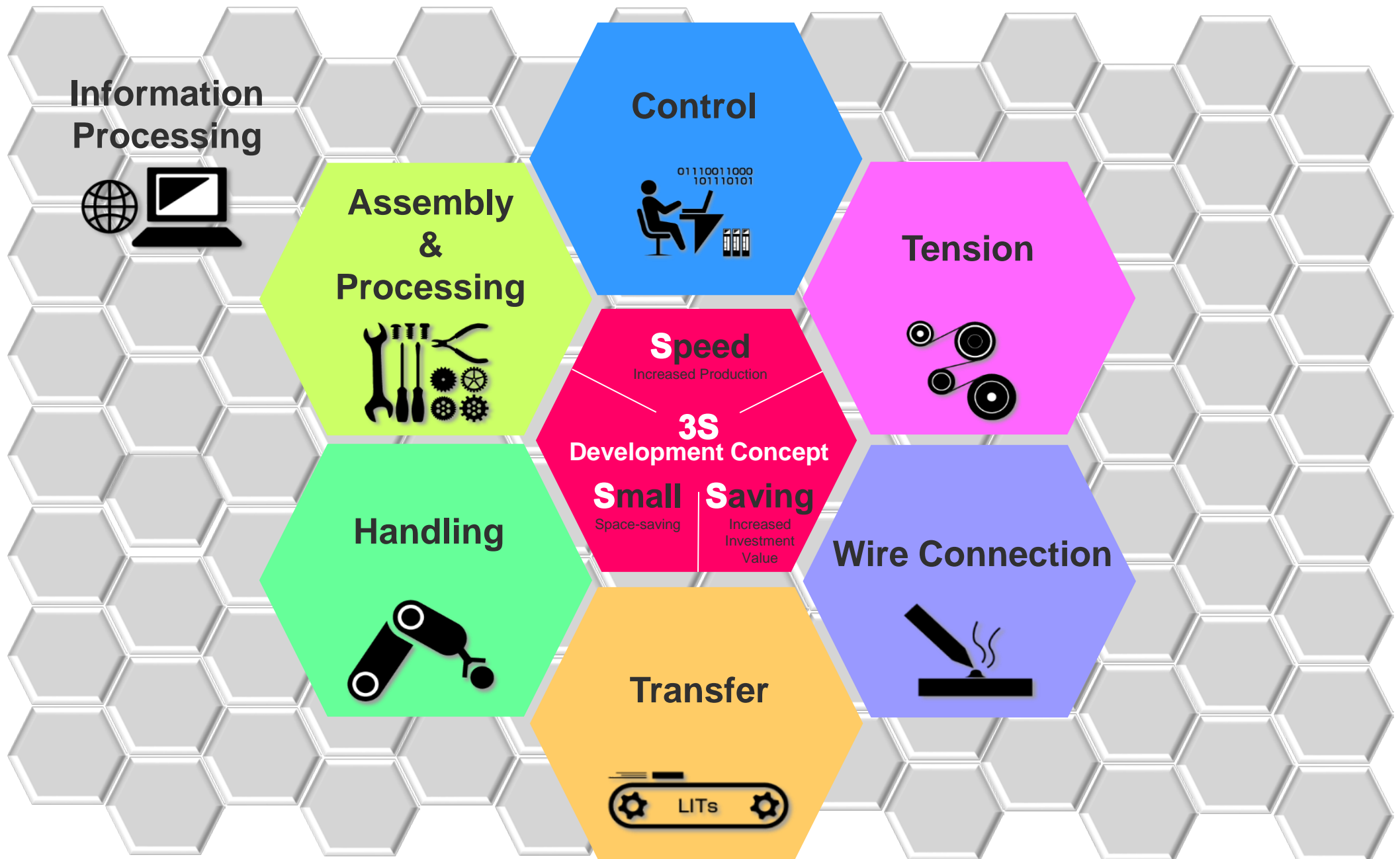
Sales by Industry



In the automotive field, sales were strong for EV motors and for electronic components such as cameras and sensors. Demand for non-contact IC cards is growing strongly in the RFID business.



Core Competencies



Core Technology ①



Assembly & Processing Technology

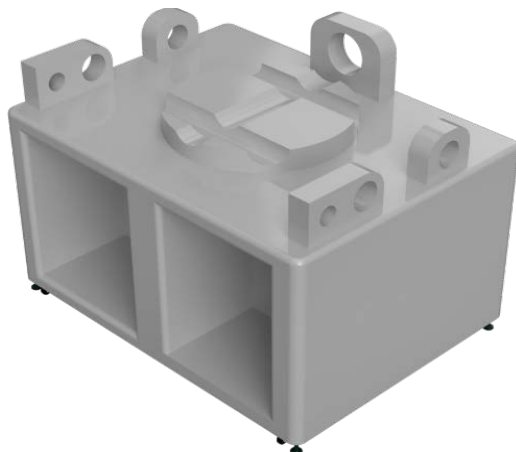
Improvement of machine accuracy and durability

- Solid Casting
- Fabrication

NITTOKU recommends solid casting for customer product quality stability.

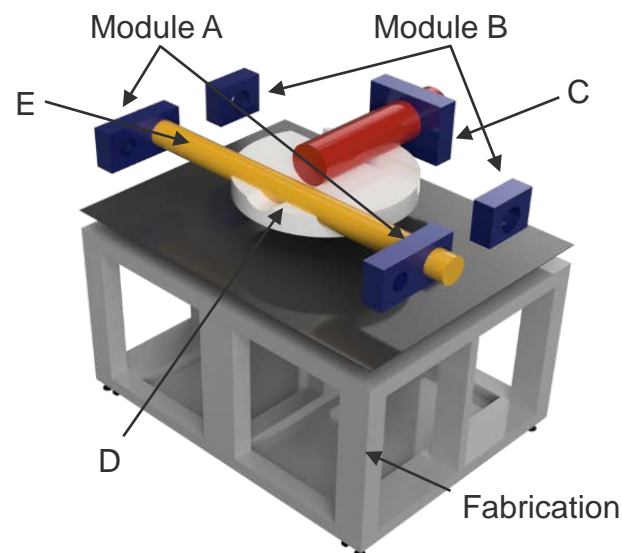
➤ Solid Construction

5-face machining equipment



➤ Compound structure

Combination of steel and aluminum modules and fabrication



Solid Casting by 5-face machining

- Excellent accuracy and maintainability
- Superior rigidity



Compound machining



5-axis machining center



Core Technology ②

NITTOKU

Control Technology



- High speed winding
- Multi-axis synchronous control
- Self-developed perfect layer winding software

Information processing Tech

IoT (real time) M2M (connect)



- Production management system
- Remote operation management
- Predictive maintenance

Complex machine operation can be easily undertaken using our **multi-axis synchronous controller**.

Software developed in-house.

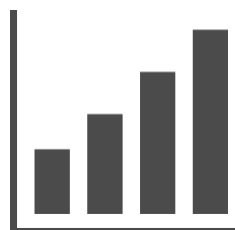
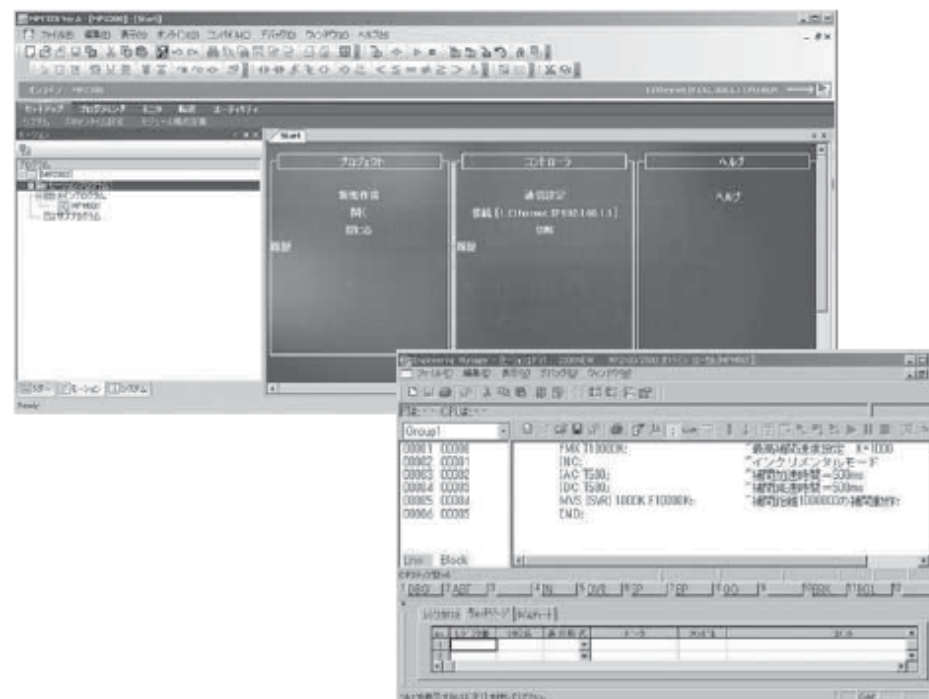
Achieve optimal process operation.

Original program support software

Visualization of manufacturing process.

IoT and M2M allow for production management and quality control.

The **NITTOKU CENTRAL SYSTEM** is an original production management system which provides vital monitoring information such as operational performance, productivity, quality trends and traceability.



Confirm Production Status



Production and Quality Charts

1a2b3...

Serial No. Search

Core Technology ③

Tension Technology

Maintain high product quality
High machine productivity



- Extra fine wire applicable
- Tension Variability Function

Feed method Tension device

Stable Tension

Copper	Tension	: Min. 0.5 g ~
	Winding speed	: Max. 50m/sec
Non Copper	Tension	: Min. 0.3 g ~
	Winding speed	: Max. 33m/sec
Film	Tension	: Min. 1.5N/300mm
	Winding speed	: Max. 10m/sec

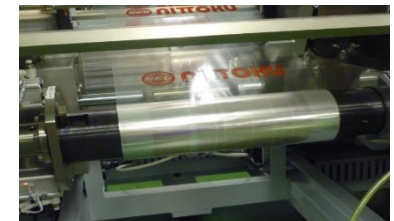


Material

- Copper
- Aluminum
- SUS
- Steel
- Formed (Film, Fibers)
- Gold, Platinum, etc.

Material shape

- Round Wire
- Square Wire
- Stranded Wire
- Edgewise
- Flat Wire (Ribbon Wire), etc.



Core Technology ④



Wire Connection Technology

Accurate Stripping and Connection

- Lead-free applicable
- Minute material applicable

Optimal bonding / Stripping methods

Solder

- Dip
- Sleeve
- Laser
- Iron
- Wave

Welding

- Fusing
- Micro-arc
- TIG
- Thermo-compression
- Laser
- USW

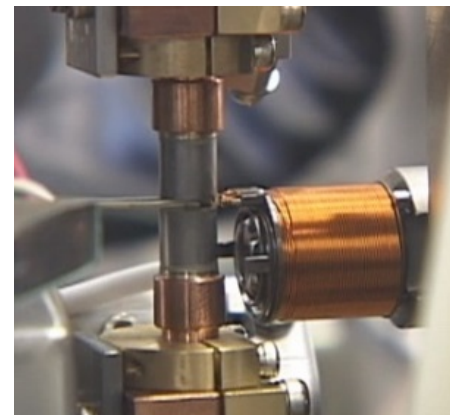
Stripping

- Diamond Chip
- Laser
- Polishing (grindstone)
- Heat

Glue Application

- Micro Dispensing

Highly accurate minute dispensing
Synchronized operation and dispensing control



Core Technology ⑤

Transfer Technology

High-speed and high-accuracy

- Flexible line construction



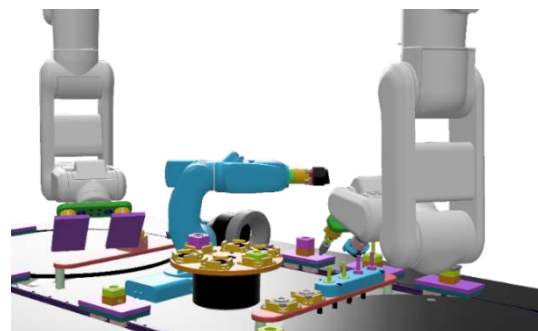
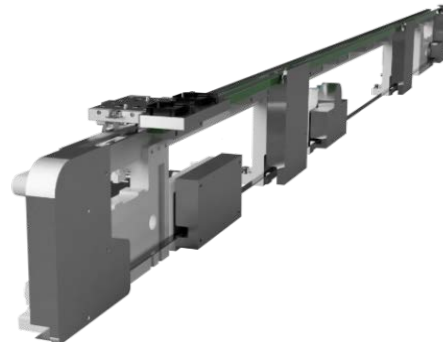
Only-one line concept

Transfer Systems

- Free flow method
- Index method
- Linear motor Method
- LITs shuttle method

FA Base System

- LITs method
- Vacuum LITs transfer
- FLEX-1 method



Handling Technology

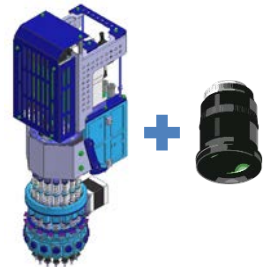
High-speed and High-accuracy



- Various workpiece applicable
- Multi-axis pitch conversion
- Sensing ➢ Alignment

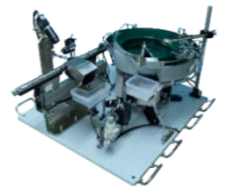
JET Handler

- N-JET with AOI (2 or 6 sides)



Parts Feeder

- Supplies minute and uniquely shaped parts
- Solid bowl design made from optimal material



High-speed Loader

- High-speed transfer of 0.6sec is realized using servo control/CAM.

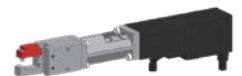
Gripping

- Industry smallest electric gripper (ultra-fine wire applications)



High-speed CAM

Top Mounted SCARA Robot



Winding Machines and Systems

From miniature coils to specialized motors.

Coil type and size vary depending on the use and product.
We have long and varied expertise in the coil winding sector at NITTOKU.

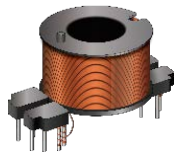
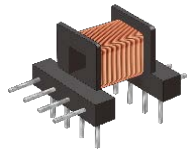


Bobbin Winding Methods ①

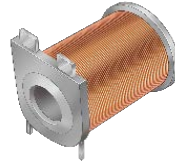
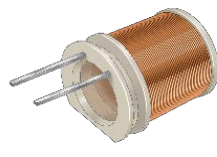
Transformer coil, Relay coil, Ignition coil (bobbin type)

Spindle Method

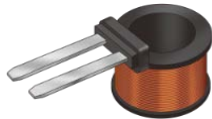
Multilayered Winding & Taping



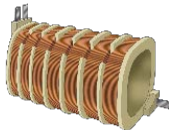
Step Winding



Vertical Perfect Layer



Section Winding



<Use>
Power transformer, Vehicle solenoid,
In-vehicle relay, Injector, Vehicle
Sensor

<Use>
Vehicle Ignition

Ignition (pencil type)

Spindle Method

Bank Winding (double traverse)



Section Winding



<Use>
Vehicle Ignition

Patented

Filter

Bifilar



Toroidal

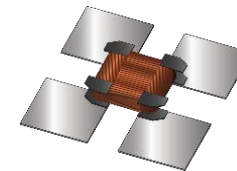


<Use>
Power Supply Noise Filter

Special

Spindle Method

Specialized Section Perfect Layer



<Use>
Sensor

Specialized Winding



<Use>
Watch Coil

Patented

Vehicle Solenoid, Clutch coil, Stepping (flat type)

Spindle Method
















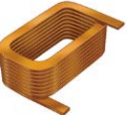




Thick Wire Perfect Layer

Bifilar Winding



<Use>
Automobile

Bobbinless Winding Methods ②

<p>Information and Communication (speaker, receiver, earphone coil)</p> <p>Spindle Method Patented</p> <p>Spiral Winding Intermittent Feed Winding</p>  <p>Flyer Method</p> <p>Spiral Winding Intermittent Feed Winding</p>  <p><Use> Smartphone</p> <p>Spindle Method</p> <p>Intermittent Feed Winding</p>  <p><Use> Hearing Aid</p>	<p>AV, PC ① (sheet transformer coil, noise filter coil)</p> <p>Outer-Outer (alpha) Patented</p> <p>Round Wire</p>  <p>Flat Wire (flatwise)</p>  <p>Flat Wire (edgewise)</p>  <p><Use> PC, Audio</p>	<p>Clutch</p> <p>Spindle & Flyer Intermittent Feed Winding (with jig grooves)</p>  <p><Use> Automobile, Air conditioner, Refrigerator, Washing Machine</p>
<p>Information and Communication (wireless charging coil)</p> <p>Litz Winding</p> <p>Inner-Outer</p>  <p>Outer-Outer (alpha)</p>  <p><Use> Wireless Charger</p>	<p>AV, PC ② (VCM, DVD, offset coil, pick-up coil)</p> <p>Spindle Method Patented</p> <p>Intermittent Feed Winding</p>  <p><Use> HDD</p> <p>Flyer Method</p> <p>Chained Spiral Winding</p>  <p><Use> PC, DVD Recorder</p>	<p>Transformer coil, Reactor</p> <p>Spindle Intermittent Feed Winding (Multi-layer)</p>   <p><Use> Automobile, Power Transformer</p> <p>Edgewise</p> <p>Tight Winding Patented</p>  <p><Use> Transformer Noise Filter</p>  <p><Use> Motor</p> <p>Single Coil</p>  <p>Chained Coil</p>  <p><Use> Power Transformer, Reactors</p>
	<p>AV, PC ③ (tuner, choke)</p> <p>Spindle Method</p> <p>Spiral Winding</p>  <p><Use> Car Radio</p>	<p>Special</p> <p>Chained Winding Patented</p>  <p>Formed Winding</p>  <p><Use> Industrial Equipment, Ammeter</p>



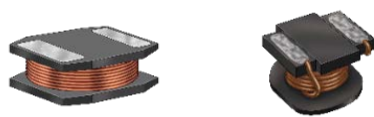
Chip Winding and Wire Connection

Power inductor

Spindle Minute Winding



Flyer Minute Winding



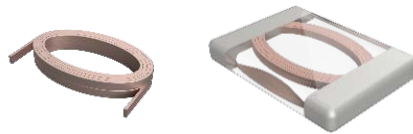
Size: 1608 ~ (1.6 x 0.8mm)

Patented

Flyer Round Wire Alpha Winding



Minute Flat Wire Flat Wise Alpha Winding



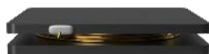
Flyer Minute Winding (lead frame)



Low back: 0.8mm ~



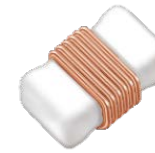
Side Welding: Thermo-compression Temperature Feedback Pulse Heat Method



<Use>
Vehicle PCB,
HA PCB,
Smartphone PCB

Chip inductor (high frequency)

Flyer Minute Winding



Size: 0603 ~
(0.6 x 0.3mm)

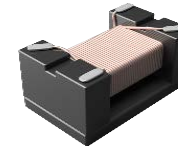
<Use>
Vehicle PCB,
HA PCB,
Smartphone PCB

Patented

Common mode

Spindle Bifilar Winding

Other Methods



<Use>
Noise Filter

Patented

Antenna

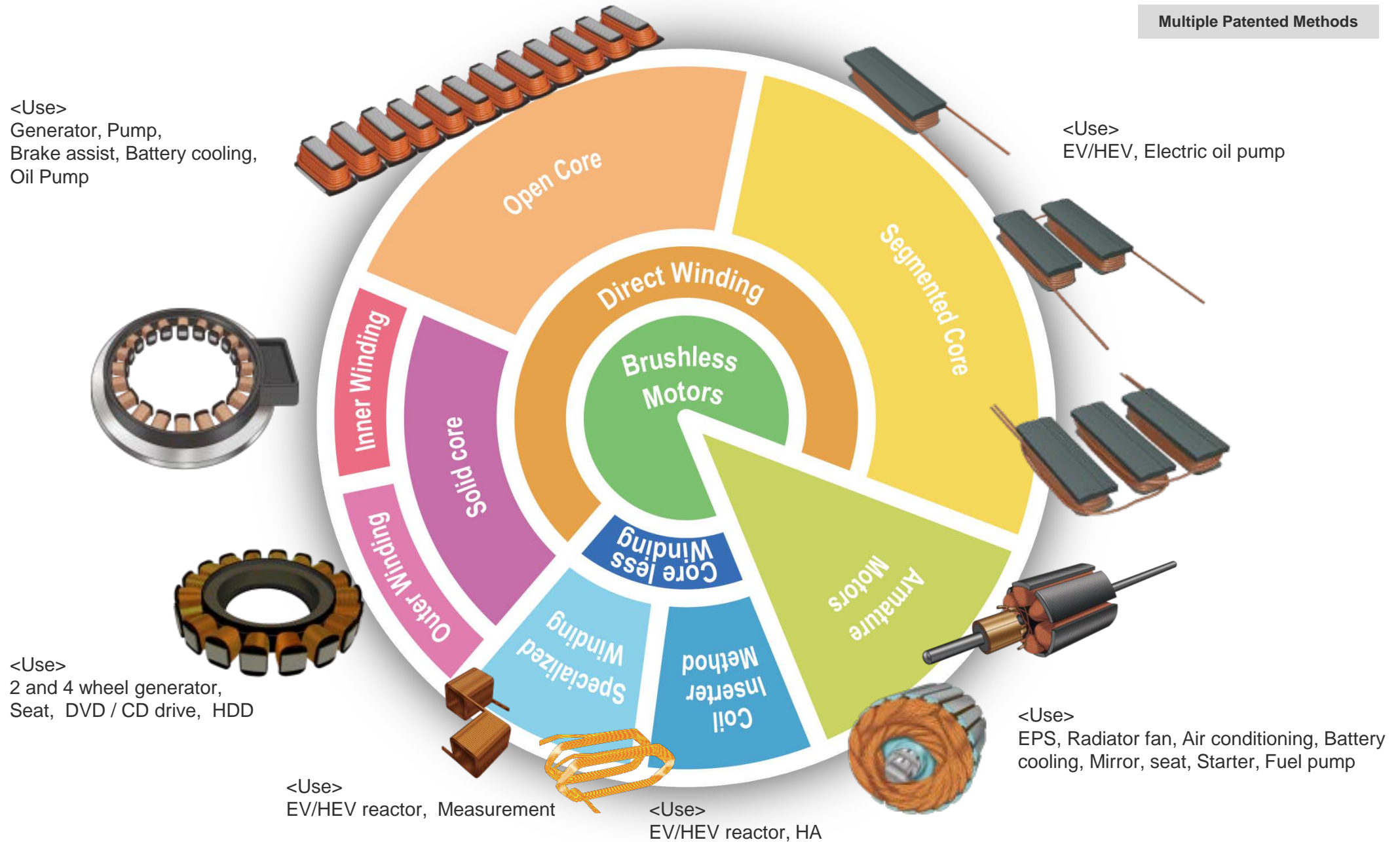
Spindle & Flyer Minute Specialized winding



<Use>
FA Tag, Medical,
Game System Angle Sensor

Motor Winding Methods

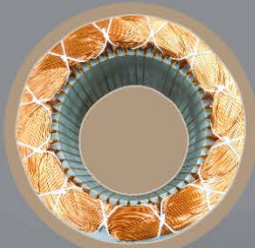
Multiple Patented Methods



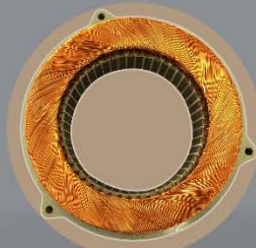
Next generation EV motor

Patented

Winding
Method



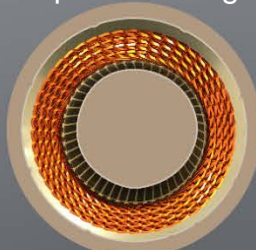
1 phase / slot
Spiral Winding



2 phase / slot True
Spiral Winding



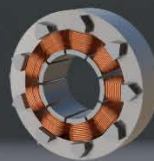
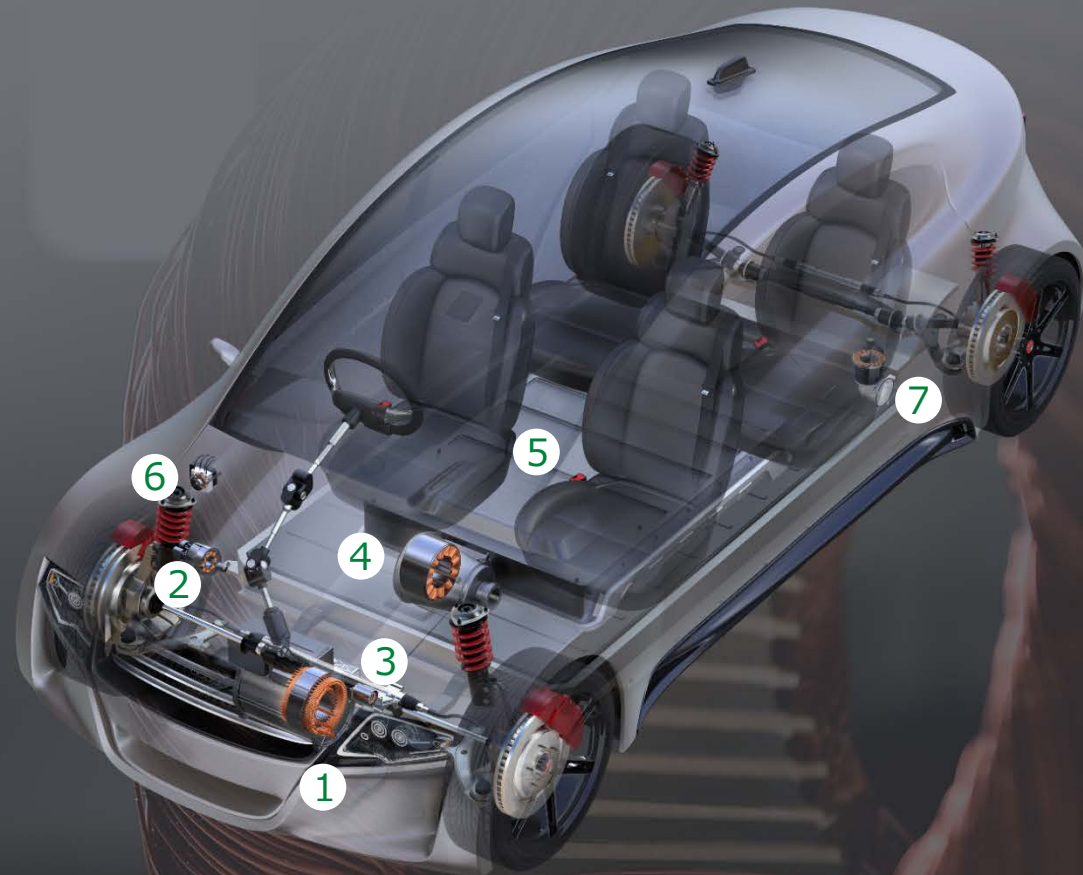
Inserter Style



Hairpin Style



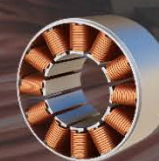
① Traction motor



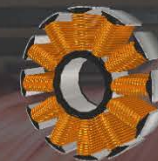
② Water pump



③ EPS



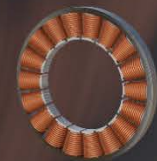
④ Electric compressor



⑤ Cooling fan



⑥ ABS



⑦ Slide door

Wire Handling System

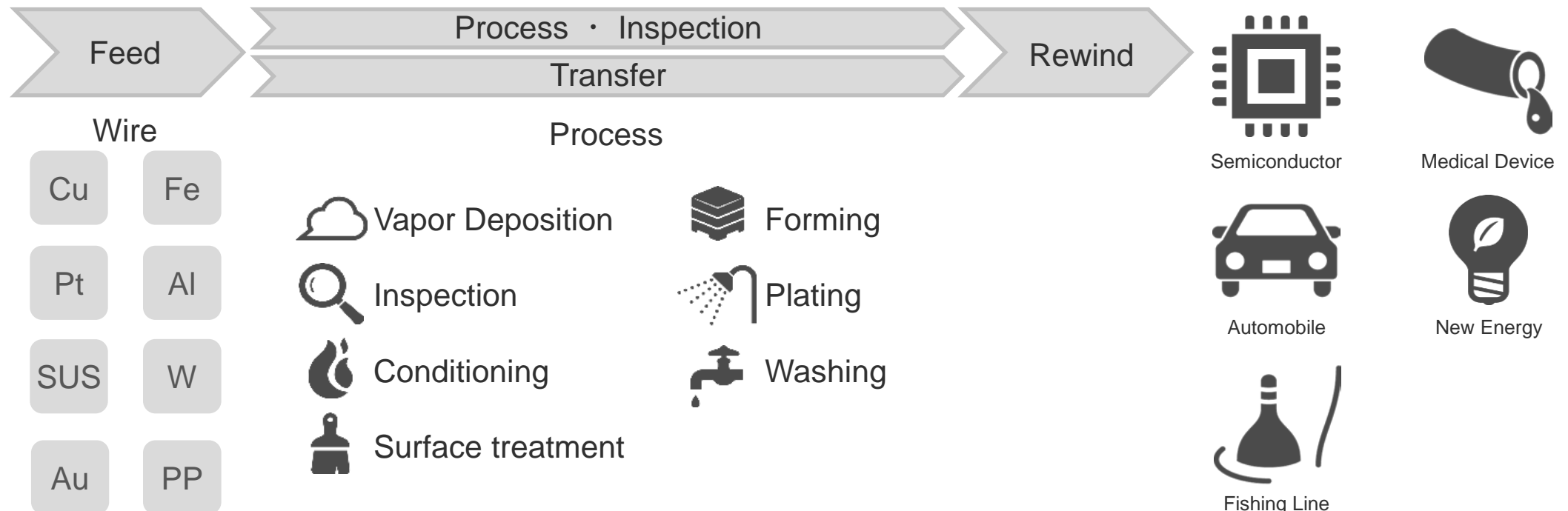
RtoR

Conveys material wound off of a reel at optimal tension and speed.
Precisely rewinds material after intermediate processing.

Low Tension
Tension **0.3 g**

High-speed
Wire speed **33m/sec**

Extra-fine
Wire Dia. **5μm**



Web Handling System

R2R

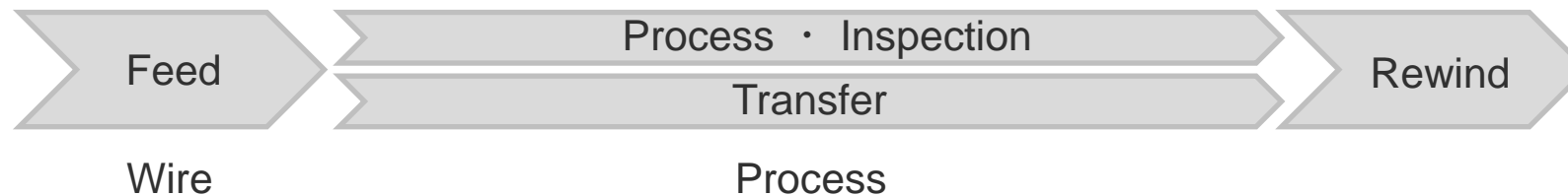
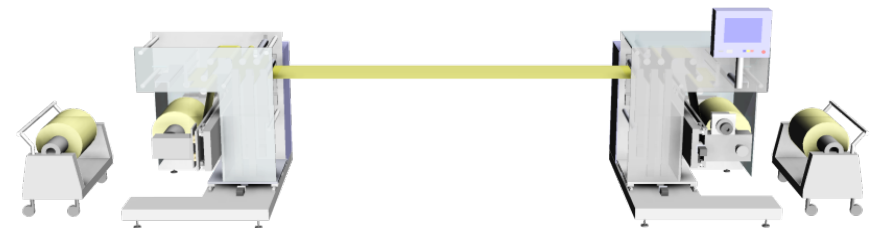
Conveys material wound off of a roll at optimal tension and speed.
Precisely rewinds material after intermediate processing.

Low Tension
Tension **1.5N / 300mm**

High-speed
Speed **10m/sec**

Ultra-thin
Film thickness **3μm**

Non-contact
Air floating



Cu

PI



Forming



Inspection



Washing

PET

Al



Joining



Printing



Coating

SUS

PP



Drying



UV Exposure



Attaching



Solar cell



RFID

Medical
PackagingFood
Packaging

Energy Storage

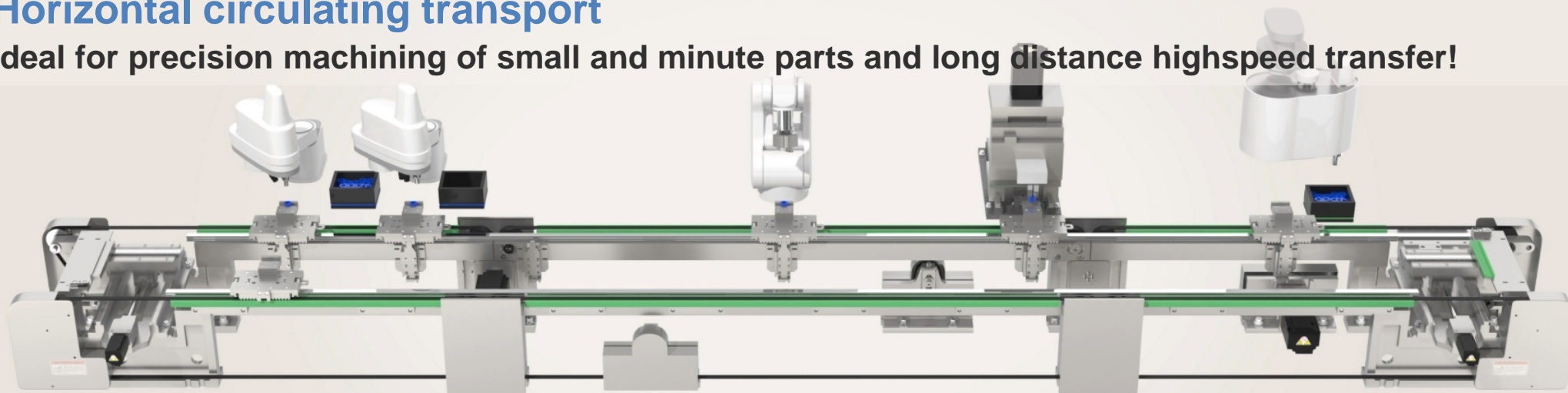


FPD

Lineup of FA-based LITs

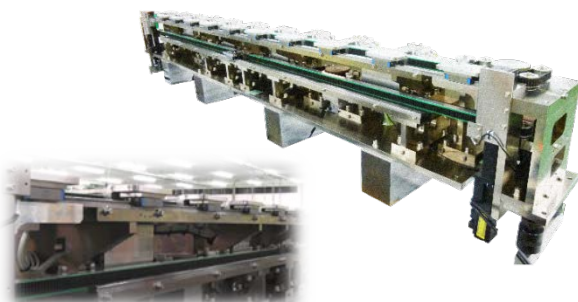
Horizontal circulating transport

Ideal for precision machining of small and minute parts and long distance highspeed transfer!



Vertical circulating transport

Connector cables, etc.
Perfect for processing long work-pieces!



Suction type circulating carrier

Ideal for appearance inspection
and assembly of minute parts!

Ceiling type

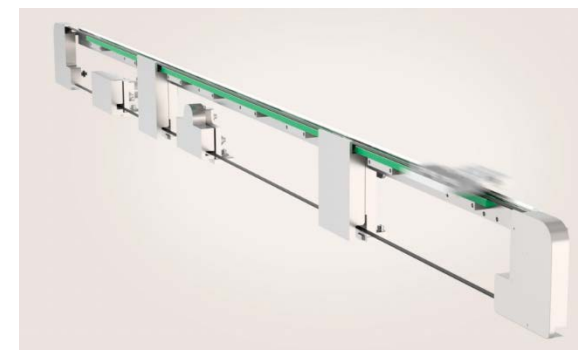


Flat type



Shuttle transfer

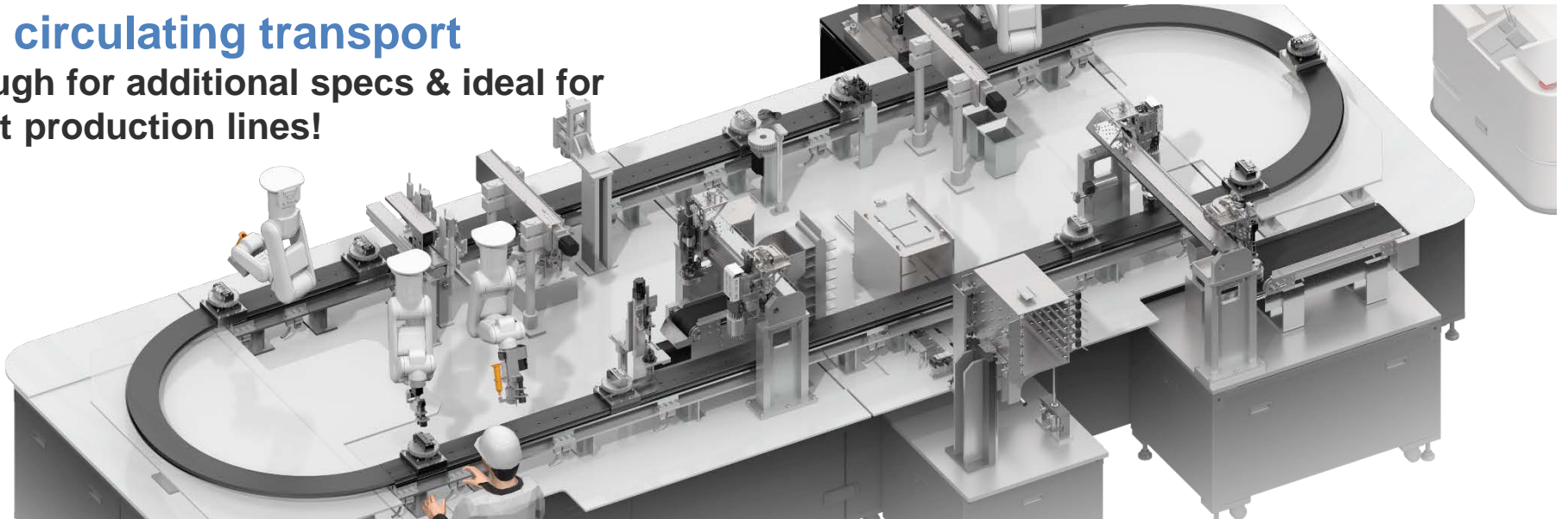
Ideal for processes with
different cycle times!



FA-based system FLEX-1 and LITs

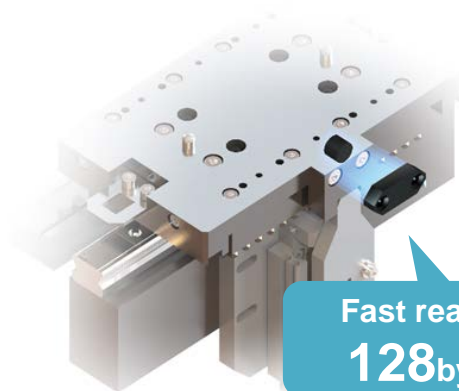
Horizontal circulating transport

Flexible enough for additional specs & ideal for multi-product production lines!



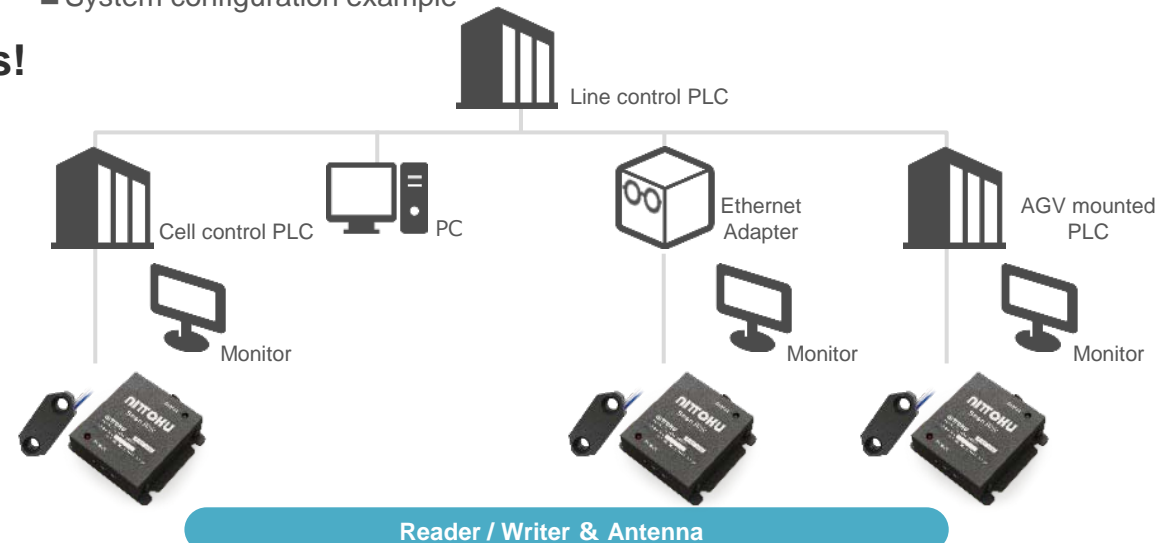
ITS (Intelligent Tag System)

Ideal for collaboration with ITS host systems!



Fast reading and writing
128bytes / 0.07sec

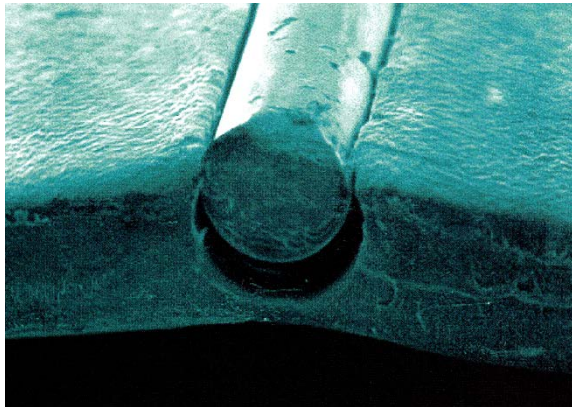
■ System configuration example



RFID (IC Tag and IC Card) Business

We propose a high performance RFID unit by winding antenna construction method.

Antenna for IC Card



Embed copper wire in plastic sheet

Inlet

IC Card

➤ Rewrite Card

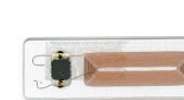
IC Tag

➤ Seal Tag

➤ Laminated Tag

➤ Molded Tag

➤ Metal Compatible Tag



Microchip



Animal Smart Chip



Syringe



Handy R / W Terminal



Certified as Ministry of Agriculture



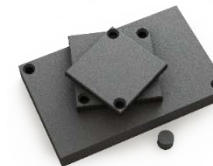
FA Tag



Glass Tube Tag



Reader / Writer



ITS Tag



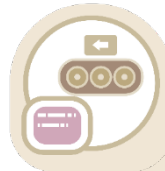
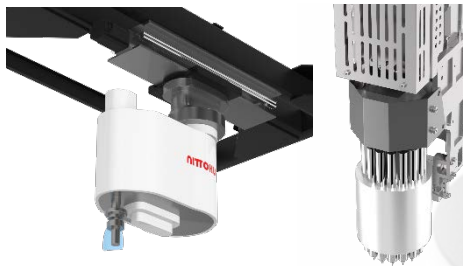
Ultra Small Surface Mounted Antenna

NITTOKU Module Components

Use NITTOKU equipment modules to help solve customer problems.



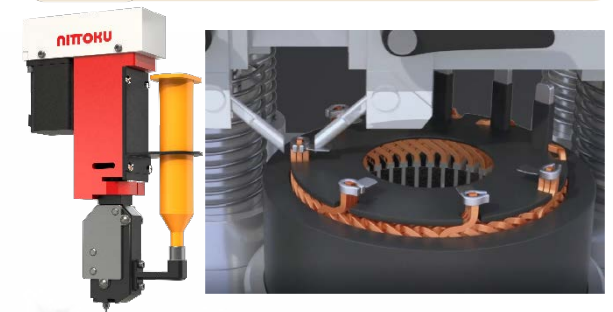
Handling Module



Transfer Module



Additive Module



Vision Module



Information Gathering Module



BCP Measures





Customer Service

Reliable NITTOKU Service



Close to Customer



Maintenance Contract



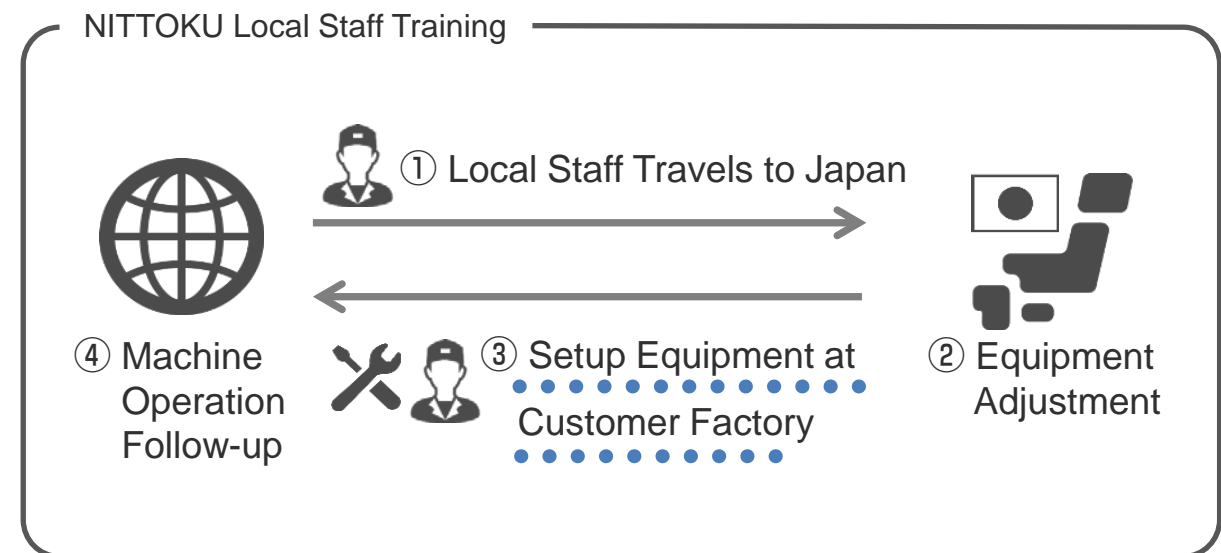
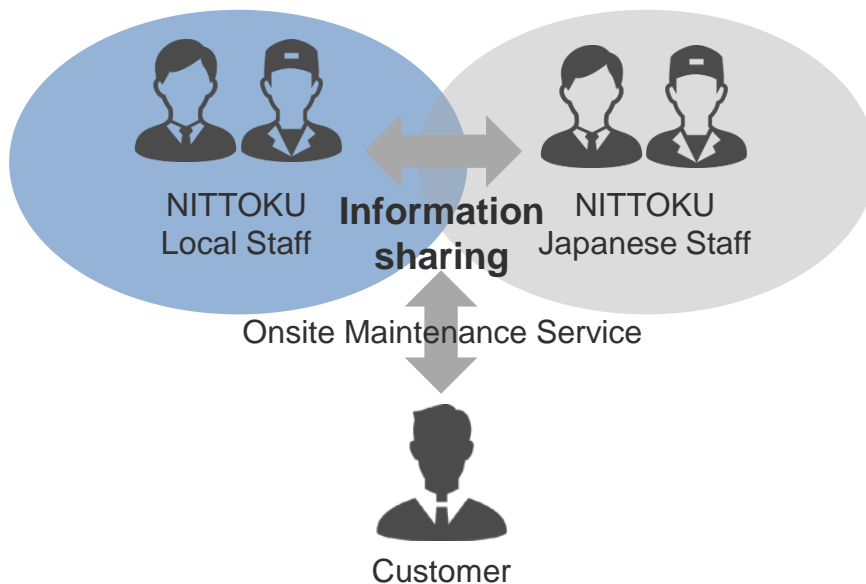
Regular Visit Service



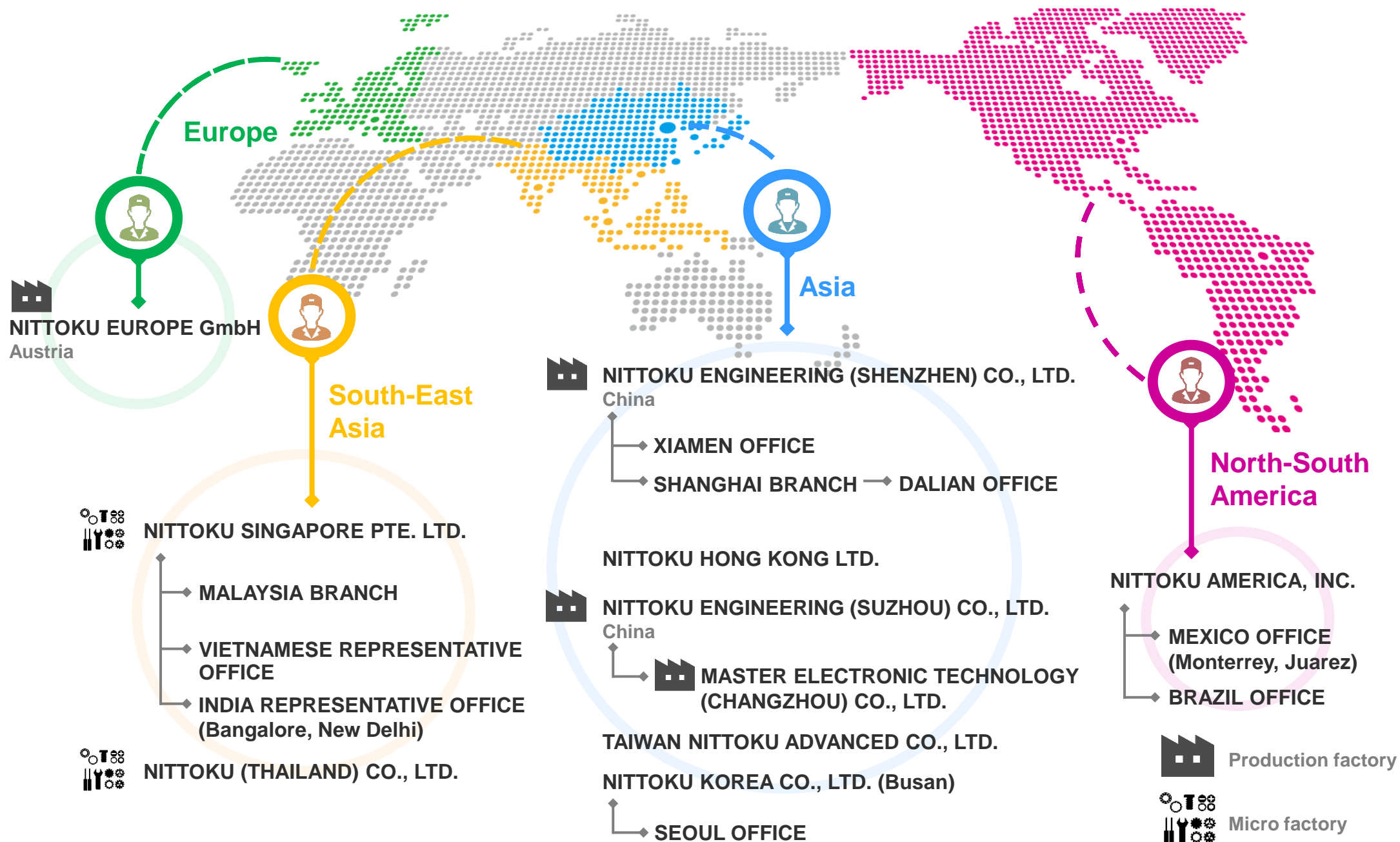
Quick Response

**NITTOKU manages remaining amounts of approved components to ensure
「 Continuous Production 」**

After Service



Global Network



Overseas Sales & Service Branches

NITTOKU

◆ **NITTOKU ENGINEERING (SHENZHEN) CO., LTD.**

108, 1F, A Building, 5th District,
Honghualing Industrial Zone, Taoyuan Street,
Nanshan, Shenzhen, 518055, China
Tel +86 755-8602-8043 Fax +86 755-8602-8040

◆ **NITTOKU ENGINEERING (SHENZHEN) CO., LTD.**

XIAMEN OFFICE

No.17-804, Lehai Beili Road,
Jimei North Ind. Distr., Xiamen, 361000, China
Tel +86 592-6061482

◆ **NITTOKU HONG KONG LTD.**

Unit 1601, 16/F., Peninsula Tower,
538 Castle Peak Road, Cheung Sha Wan,
Kowloon, 999077, Hong Kong
Tel +852 2512-2942 Fax +852 2512-2965

◆ **NITTOKU ENGINEERING (SHENZHEN) CO., LTD.**
SHANGHAI BRANCH

2501-2502, Building A, No.,319, Xian Xia Rd.,
Far East International Plaza, Shanghai, 200051, China
Tel +86 21-6853-5620 Fax +86 21-3882-0642

◆ **DALIAN OFFICE**

Room 615, New East Mansion, Northeast 4 Rd.
West Door Of Exempt-Zone,
Economic & Technical Dept. Zones, Dalian,
116000, China
Tel +86 411-3920-7956 Fax +86 411-3920-7956

◆ HP <https://nittoku.co.jp/english/>

◆ HP <https://nittoku.com.cn/>

◆ **NITTOKU ENGINEERING (SUZHOU) CO., LTD.**

No.3#4# Building, 158, Hongye Rd.
Industrial Park, Suzhou City, 215006, China
Tel +86 512-6271-3258 Fax +86 512-6271-3268

◆ **MASTER ELECTRONIC TECHNOLOGY**
(CHANGZHOU) CO., LTD.

No.33, Yangbei Road, Tianning District, Changzhou City,
Jiangsu Province, 213000, China
Tel +86 152-5048-4361

◆ **TAIWAN NITTOKU ADVANCED CO., LTD.**

9F. Building A2, No.453, Chongyang Rd.,
Nangang Dist., Taipei City, 115, Taiwan, R.O.C.
Tel +886 2-2651-9388 Fax +886 2-2651-9389

◆ **NITTOKU KOREA CO., LTD.**

(Gamjeon-dong, Busan Digital Valley) #715, 303,
Daedong-ro, Sasang-gu, Busan, 46981, Korea
Tel +82 51-311-2978 Fax +82 51-311-2962

◆ **NITTOKU KOREA CO., LTD.**

SEOUL OFFICE

(B)2609, Daesung D-polis, 606, Seobusaet-gil,
Geumcheon-gu, Seoul, 08504, Korea
Tel +82 1020-535-034

◆ **NITTOKU (THAILAND) CO., LTD.**

1091/335, Citylink Bldg., 5th Fl., Room 500,
Soi Phetchaburi 35, New Phetchaburi Rd.,
Makkasan, Ratchathewi, Bangkok, 10400, Thailand
Tel +66 2-255-5432 Fax +66 2-255-5434

◆ **NITTOKU SINGAPORE PTE. LTD.**

BLK. 1092, Lower Delta Rd., #05, 14/15
Tiong Bahru Industrial Estate,
169203, Singapore
Tel +65 6278-3255 Fax +65 6278-0566

◆ **NITTOKU SINGAPORE PTE. LTD.**

MALAYSIA BRANCH

Lot 40, Jalan PJS 7/19, Bandar Sunway,
46150 Petaling Jaya, Selangor Darul Ehsan,
Malaysia
Tel +60 3-5631-5320 Fax +60 3-5631-5330

◆ **REPRESENTATIVE OFFICE**

NITTOKU SINGAPORE PTE. LTD. IN HANOI

Room 12A2 Floor 12A Plaschem Building,
562 Nguyen Van Cu, Long Bien, Hanoi,
10000, Vietnam
Tel +84 24-3652-1310 Fax +84 24-3652-1301

◆ **NITTOKU SINGAPORE PTE. LTD.**

INDIA LIAISON OFFICE

309, Krishna Summit, Above Khazana jewelers,
Marathahalli Junction, Bangalore, 560037, India
Tel +91 99-0254-5452

◆ **NITTOKU SINGAPORE PTE. LTD.**

INDIA LIAISON OFFICE

512A, 5th Floor, Suncity Business Tower,
Sector-54, Golf Course Road, Gurugram, 122002, India
Tel +91 96-1169-2748

◆ **NITTOKU AMERICA, INC.**

3600 Commerce Drive, Suite 610, Baltimore, MD,
21227, U.S.A.
Tel +1 410-574-4960 Fax +1 410-574-7083

◆ **NITTOKU AMERICA, INC. MEXICO OFFICE,**
MONTERREY

Plaza Eloy 2401 Av. Eloy Cavazos #2401 Local 84,
Fraccionamiento Las Villas, Guadalupe, N. L., C. P. 67170
Tel +52 812-350-7766

◆ **NITTOKU AMERICA, INC. MEXICO OFFICE, JUAREZ**

Ejercito Nacional 5435 7 Plutarco E Calles
Jardin De San Jose, C.P. 32600 Cd. Juarez Chih., Chih.
Tel +52 656-314-7264

◆ **NITTOKU EUROPE GmbH**

Ebentalerstrasse 140, A-9020 Klagenfurt, Austria
Tel +43 676-89-70-20-200 Fax +43 676-89-70-20-222

Domestic Sales and Service Branches

NITTOKU



NAGOYA SALES OFFICE

3F Hongo Bldg., 2-203, Kamiyashiro,
Meitou-ku, Nagoya City, Aichi, 465-0025
Tel +81(0)52-777-0661
Fax +81(0)52-777-0662

OSAKA SALES OFFICE

1F Kitano Haitsu, 2-3-6, Tagawa,
Yodogawa-ku, Osaka City,
Osaka, 532-0027
Tel +81(0)6-6300-0678
Fax +81(0)6-6300-0685



NAGASAKI FACTORY

2-1306-4, Ikeda, Omura City,
Nagasaki, 856-0026
Tel +81(0)957-52-2109
Fax +81(0)957-52-2110

SHIKOKU TECHNICAL CENTER

Casagrande Ochi 8F, 7-8 Hinode-machi,
Matsuyama-city, Ehime, 790-0961
Tel +81(0)89-986-7155
Fax +81(0)89-986-7133



IMD CO., LTD.

1353-1, Sentanbayashi,
Nakatsugawa City, Gifu 509-9131
Tel +81(0)573-67-9604
Fax +81(0)573-67-9634



HEAD OFFICE, TOKYO SALES OFFICE

2-292-1, Azuma-cho, Omiya-ku, Saitama City,
Saitama, 330-0841
Tel +81(0)48-615-2110 Fax +81(0)48-615-2120
HP <https://nittoku.co.jp/>



FUKUSHIMA FACTORY, FUKUSHIMA SALES OFFICE

17-3, Kanokojima, Aza, Meiji, Iino-machi,
Fukushima City, Fukushima, 960-1393
Tel +81(0)24-562-4444 Fax +81(0)24-562-4445



Production factory



NITTOKU KOSEI CO., LTD. HEAD OFFICE, FUKUSHIMA FACTORY, FUKUSHIMA SALES OFFICE

22-1, Umeno-machi, Aza, Kosaka,
Kunimi-machi, Date-gun, Fukushima, 969-1784
Tel +81(0)24-585-5191 Fax +81(0)24-585-3236
HP <https://nittokukosei.nittoku.co.jp/>



YAMAGATA FACTORY, YAMAGATA SALES OFFICE

17-1, Otsuka, Aza, Amarume, Shonai-machi,
Higashitagawa-gun, Yamagata, 999-7781
Tel +81(0)234-42-2244 Fax +81(0)234-42-0544



IINO FACTORY

3-26, Yasumiishi, Aza, Meiji, Ooaza, Iino-machi,
Fukushima City, Fukushima, 960-1302
Tel +81(0)24-562-4451 Fax +81(0)24-562-4452



DATE FACTORY

8-7, Minamihonba, Aza, Fushiguro, Date City,
Fukushima, 960-0501
Tel +81(0)24-583-3345 Fax +81(0)24-583-3344



NITTOKU KOIDE CO., LTD.

9-3, Shinkou-cho, Mitsuke City, Niigata,
954-0076
Tel +81(0)258-66-0063 Fax +81(0)258-66-0064
HP <https://koide.nittoku.co.jp/>

Head office, Domestic offices, Subsidiaries

NITTOKU

HEAD OFFICE

Established August, 2019
Personnel 50 people
Size 2,091 m²



NAGASAKI FACTORY

Established April, 2013
Personnel 90 people
Size 6,266 m²



FUKUSHIMA FACTORY

Established December, 1991
Personnel 280 people
Size 20,076 m²



NITTOKU KOSEI CO., LTD.

Established November, 1974
Personnel 90 people
Size 5,916m²

Business details R&D, Manufacturing, Sales, & Service of :
Automated Loading / Unloading M/C,
Electrical Control & Automation Equipment.



NITTOKU KOIDE CO., LTD.

Established January, 1974
Personnel 30 people
Size 1,145m²

Business details R&D, Manufacturing, Sales, & Service of :
Factory Automation M/C



Overseas Facilities

NITTOKU ENGINEERING (SUZHOU) CO.,LTD.

Established July, 2002
Personnel 60 people
Size 9,350 m²



MASTER ELECTRONIC TECHNOLOGY (CHANGZHOU) CO., LTD.

Established May, 2017
Personnel 10 people
Size 1,800 m²



NITTOKU ENGINEERING (SHENZHEN) CO., LTD.

Established June, 2005
Personnel 50 people
Size 2,050 m²



NITTOKU EUROPE GmbH

Established May, 2015
Personnel 70 people
Size 1,900 m²



NITTOKU (THAILAND) CO.,LTD.

Established July, 1996
Personnel 15 people
Size 500 m²

