

TAIPEI AMPA

TAIWAN ITS

AUTOTRONICS

TAIWAN MOTORCYCLE

TAIWAN EVS

TAIWAN CAR TUNING



TAIPEI AMPA+

# SHOW PREVIEW

**Taipei International Auto Parts  
& Accessories Show**

[www.AMPA-in-one.com.tw](http://www.AMPA-in-one.com.tw)



**Nangang Exhibition Center**

**Hall 1 & Hall 2**

**APRIL 24-27**



**APRIL 25-28**



# 2019

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AMPA



AUTOTRONICS



EVS



ITS









MOTORCYCLE



CAR TUNING

# SHOW INFORMATION










	 AMPA	 AUTOTRONICS	 ITS	 EVS	 MOTORCYCLE	 CAR TUNING
SHOW DATES & HOURS	9 a.m. ~ 5 p.m., April 24 to 26, 2019 9 a.m. ~ 3 p.m., April 27, 2019 <ul style="list-style-type: none"><li>Open to local and international industry insiders only, welcome to pre-register online for your visit.</li><li>Children under 12 are not allowed to enter the showground</li></ul>				9 a.m. - 5 p.m., April 25-27, 2019 9 a.m. - 4 p.m., April 28, 2019 <ul style="list-style-type: none"><li>April 25 to 26: Open to local and international industry insiders, welcome to pre-register online to visit</li><li>April 27 to 28: open to public by ticketing. Ticket price: NT\$200. Children under 12 years old for free admission.</li></ul>	
VENUE	Nangang Exhibition Center Hall 1 Nangang Exhibition Center Hall 2					
EXHIBITION SCALE	1,530 Exhibitors / 4,550 booths					
EXHIBITORS' ORIGIN	Taiwan, France, Germany, Hong Kong, India, Indonesia, Japan, Mainland China, Malaysia, Philippine, Slovenia, South Korea, Thailand, United Kingdom, United States					
EXHIBITS PROFILE	Headlights, rims, engine parts, body parts, steering systems, transmission systems, brake systems, vehicle modification equipment, maintenance equipment and services.	Automotive electronics, electric vehicle components and batteries, engine management and powertrains, brake control and suspension and chassis systems, body electronics systems, LED products, multimedia driving information and communication systems, GPS systems, vehicle safety and security monitoring systems, Automotive electronic components, automotive electronic semiconductors, testing equipment and services, automotive electronics manufacturing equipment.	Satellite navigation and positioning services, electronic maps, vehicle communication, car entertainment, energy management and electric vehicles, smart bus systems, three-dimensional parking equipment, entrance control systems, intelligent parking management, ETC charging systems, highway image monitoring, ticket systems, testing Equipment, repair equipment, spare parts manufacturing equipment and city bicycles.	Electric vehicles (motor vehicles, electric bicycles, electric four-wheelers, electric scooters), battery materials, batteries and battery modules, battery control systems, motors and control systems, charging station-related equipment and services, testing equipment, and other components.	Motorcycles, scooters, ATVs, engines and parts, motorcycle frames, motorcycle parts and accessories, motorcyclists' accessories, customized bikes and accessories, noise and emission inspection equipment, maintenance equipment, components and accessories manufacturing equipment, customized bikes and accessories.	Tuned cars, modification toolkits, car tuning and painting products, tires and rims, and maintenance equipment
ORGANIZER(S)	TAITRA	TAITRA TEEMA	TAITRA	TAITRA	TAITRA	TAITRA
CO-ORGANIZER(S)	TTVMA TREIA	TARC TTVMA	ITS TAIWAN TTIA CRIDA	TTVMA TEEMA	TTVMA	TTVMA TREIA



# SHOW SERVICES AND PRE-REGISTRATION

## PRE-REGISTER NOW TO GET EASY ACCESS TO THE SHOW AND GET YOUR SPECIAL TREATS

Plan ahead for your visit! Pre-register online and enjoy priority badge pick-up when you arrive at the show counter.

 <b>AMPA</b>	 <b>AUTOTRONICS</b>	 <b>ITS</b>	 <b>EVS</b>	 <b>MOTORCYCLE</b>	 <b>CAR TUNING</b>
					

## EVENT HIGHLIGHTS

- Opening Ceremony
- Electric Vehicle Forum
- Celebrity Sharing
- Car Detailing Demo Show
- One-on-One Business Meetings
- ITS Forum
- New Product Launch
- Motorcyclists' Accessories Demo Show

## FREE AIRPORT PICK-UP SERVICE

For more information, please contact [ampa@taitra.org.tw](mailto:ampa@taitra.org.tw)

Take advantage of this limited offer for FREE airport pick-up service from Taoyuan Int'l Airport/Songshan Airport to your hotel in the Taipei area. Pre-register via one of QR codes above and book the service accordingly. Your chauffeur will be waiting for you at the airport exit upon your arrival! More information will be updated via email and on the website.

## HALAL SERVICE

In order to provide a more comfortable experience during Taipei AMPA series show for Muslim visitors, we will plan more services, so stay tuned!

- Muslim prayer rooms
- Halal-certified restaurant map for Taipei
- And more



# REVVED UP

With more than 1,500 exhibitors, the 2019 Taipei AMPA show — Asia's only professional automotive purchasing platform — will be bigger than ever.

**That's because it is not just one show, but six shows in one:**



**AMPA**



**ITS**



**AUTOTRONICS**



**MOTORCYCLE**



**EVS**



**CAR TUNING**

- Taipei International Auto Parts & Accessories Show (Taipei AMPA)
- Taipei Automobile Electronics Show (AutoTronics Taipei)
- Taiwan International Intelligent Transportation Show (Taiwan ITS)

- Taiwan International Electric Vehicle Show (Taiwan EVS)
- Taiwan International Motorcycle Industry Show (Motorcycle Taiwan)
- Taiwan International Tuning & Car Care Show (Taiwan Car Tuning)

The first four shows are April 24-27, while Motorcycle Taiwan and Taiwan Car Tuning run April 25-28. All six exhibitions will assemble together at Nangang Exhibition Center Halls 1 and 2.

Organizers expect the 2019 event to be the largest ever, with 1,530 exhibitors spread over 4,550 booths. Organizers expect more than 7,000 international buyers from 120 countries to attend the show — up from the 6,800 who came in 2018.

The six-in-one show offers a comprehensive overview of Taiwan's automotive industry supply chain, from engines, suspensions, transmissions, and brakes to lights, batteries, motors, and IoT applications.

For the first time this year, eBay, the well-known e-commerce platform, is participating at Taipei AMPA. It will offer exhibitors along with domestic and international buyers an enhanced B2B trading platform.

Supporting Taipei AMPA are such well-known auto parts suppliers as Sonar Autoparts, SUM, Depo, Tong

Yang Group, Nan Hoang, and Eagle Eyes.

AutoTronics Taipei will feature sections for autotronic products and components as well as an "Internet of Vehicles" theme hall. Leading exhibitors include MobileTron, Jet Opto, MiTac, Kai Suh Suh, and K.S. Terminals.

At Motorcycle Taiwan are sections for complete vehicles, engines and components, parts, and riding gear. Major exhibitors include Chian-Yie, E-Gin, BMW (Pan German), Magura, Ming Ming Aluminum, and SPRS.

Taiwan EVS will display complete vehicles along with batteries and peripherals. Key exhibitors include Dijiya, Phihong Technology, Nice Crank, Fortune Electric, and Sinpro Electronics.

A highlight of Taiwan ITS will be a



specialty designed ADAS test track for self-driving cars, where buyers will be able to experience riding in some of Taiwan's innovative autonomous and intelligent electric vehicles. Taiwan ITS will also feature exhibits for intelligent vehicle components, parts, services, and public logistics management systems.

**For more information, visit [www.ampa-in-one.com.tw](http://www.ampa-in-one.com.tw).**





# STOP-AND-GO SALES

With the global boom in electric cars and the dawning of the era of autonomous vehicles — and the incredibly sophisticated electronics they require — this should be a promising time for Taiwan's automotive components industry.

**Y**et other factors have combined to make 2018 one of the worst years for the industry in recent history, once the final numbers are in. The outlook for 2019 is similarly cloudy, thanks to several factors beyond Taiwan's control, such as the simmering trade war between the United States and China.

According to the latest official figures through November, exports of Taiwan auto parts slipped by 0.45 percent compared with the same period of 2017, according to the Taiwan Transportation Vehicle Manufacturer's Association (TTVMA). While December numbers were not available at press time, many large manufacturers had been expected to post revenue decreases as well. That would make 2018 only the third year in at least the past 15 when auto parts exports shrank from the prior year.

The 2018 results were affected by softening demand coupled with an oversupply of components. Manufacturers' gross profits also took a hit.

**Casualties of war.** U.S. President Donald Trump launched the trade war after his saber-rattling over perceived trade inequities with China. Now, both sides are engaged in a tit-for-tat escalation that has only exacerbated the situation. To say that it has been difficult for manufacturers to expand market share in this environment is an understatement.

The trade war mainly affects U.S.-bound products made in China by Taiwanese companies. The Trump administration imposed a 10 percent tariff on most made-in-China goods in July, with plans to boost those to 25 percent.

The higher tariffs were originally scheduled to go into effect by the end of 2018, but the administration said it would delay them until March, pending negotiations with China. Should the 25 percent tariffs go into effect, the impact on many Taiwan manufacturers



will only be compounded.

For Taiwan's auto parts sector, the fourth quarter is usually the strongest — but the fourth quarter of 2018 is when the U.S.-China trade war really began to bite. Although some manufacturers' revenues rebounded in November from October, many did not enjoy the usual seasonal bounce. Among more than 40 listed auto parts manufacturers, an estimated 60 to 70 percent of them were expected to post revenue declines in December.

Recent weakness in the renminbi adds an extra dimension of currency exchange risk — and thus inflationary impacts — into this increasingly volatile mix. For manufacturers willing to expand production in the face of these headwinds, expansion will be restrained. On the whole, those Taiwanese factories with relatively concentrated operations will experience the biggest impacts.

**Look out for No. 1.** The United States is an important market for globally produced automobiles, and the auto parts industry is inevitably affected by what happens there. Leading manufacturers are actively seeking to move from China to other locations, promising significant sector changes in the medium term. Expect to see the automotive industry supply chain shaken up over the next few years.

For Taiwan auto parts makers, the U.S. is far and away the single most important market, accounting for nearly half of the segment's exports by value. Exports to the U.S. exceed those to Taiwan's No. 2 market, Japan, by a factor of 7!

According to the TTVMA, exports to the U.S. rose by nearly 2 percent through November, well ahead of the segment's overall slump.

The statistics show other bright spots for the Taiwanese industry. Compared with the growth rates for the U.S. market, exports to Mexico, the No. 6 market, rose twice as fast — and exports to Germany, the No. 5 market, rose nearly six times as fast. Without these fast-growing markets, the overall year-on-year growth rate would have been deep in negative territory.

Germany, in fact, was the brightest spot for exports, accounting for an increase of nearly 11 percent by value through November.

The biggest drag on Taiwan's 2018 results was its exports to China, its No. 3 market, which fell by nearly 11 percent through November.

Yet while the United States is overly important to the Taiwan auto parts industry, Taiwan is less important to the U.S. industry — Taiwan is just the ninth largest supplier of auto parts to the U.S.

Collision parts such as side mirrors,

## Export Value of Taiwan Auto Parts (2004 - Nov. 2018)

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018*
Export Value (\$ billions)	4.25	4.27	4.43	4.93	5.09	4.66	5.71	6.16	6.49	6.60	6.92	7.15	7.04	7.17	6.52
Pct. Change (YoY)	18.18%	0.48%	3.83%	11.30%	3.18%	-8.48%	22.62%	7.89%	5.40%	1.60%	4.96%	3.26%	-1.47%	1.73%	-0.45%

\* Through November 2018. Source: TTVMA



### Top 10 Auto Parts Export Markets — 2018 (through November)

Ranking	Country	Sales (US\$)	Market Share	Pct. Change (YoY)
1	United States	2.91 billion	45.79%	1.91%
2	Japan	399 million	6.29%	-2.70%
3	China	266 million	4.19%	-10.76%
4	Germany	191 million	3.00%	-1.38%
5	United Kingdom	188 million	2.96%	10.91%
6	Mexico	177 million	2.78%	4.44%
7	Netherlands	166 million	2.62%	-2.39%
8	Canada	163 million	2.57%	0.59%
9	Italy	145 million	2.28%	-0.64%
10	Australia	143 million	2.25%	-10.27%

bumpers, image sensors, engine hoods, door panels, fenders, radiators, head and tail lights, and differentials are Taiwan's key export products.

The booming U.S. aftermarket prefers certified products, which is good news for the quality-focused Taiwan industry — although some exporters have cited delays in achieving certifications in 2018 because of more stringent country of origin requirements.

**Avoiding turbulence.** For Taiwan companies with zero exposure to China, it's smoother sailing. Take TYC Brother Industrial Co., Ltd. one of the leading manufacturers of vehicle lights. Some 90 percent of TYC's production is for the aftermarket, with 40 percent going to North America, 20 percent to Europe, and the rest to other countries. A mere 10 percent of TYC's production is for the OEM market.

"Since our products exported to North America are 100 percent made in Taiwan, they are completely immune to the Sino-US trade war," a TYC spokesperson said. "Our manufacturing facilities in Taiwan supply North America and the European Union, where we also have branches."

TYC's manufacturing setup means the U.S. tariffs are not an issue, the spokesperson continued. "Our China

factory supplies the Chinese domestic market and the ASEAN countries — which are, by the way, increasingly important markets for us. TYC also has branches in Europe and the United States. So the Sino-US trade war is handled without much ado."

ASEAN is the acronym for the 10-member Association of Southeast Asian Nations.

"Last year's performance continues four consecutive years of growth even though the overall economic environment was not very good. For 2019, which is fraught with uncertainty, we have full confidence in a great result regardless," the TYC official concluded.

**Broader is better.** Taiwan's Industrial Economics and Knowledge Center (IEK) — a think tank affiliated with the Industrial Technology Research Institute — has recommended that Taiwan's auto parts makers pursue a decentralized strategy by focusing on gaining market share in currently emerging markets such as South and Central America and Mexico.

Europe is another growth market for the auto parts industry, claiming an increasing share of Taiwan exports since 2014. Germany, the United Kingdom, Italy and the Netherlands now account for about 11 percent of

exports.

The ASEAN nations, along with South Asia, New Zealand and Australia, are other promising growth areas, bolstered by the Taiwan government's "New Southbound Policy," which aims to expand economic and cultural ties with these regions.

Car ownership still has much room to grow in many of these countries. In 2015, according to the Organisation International des Constructeurs d'Automobiles, or OICA, Thais owned 228 cars for every 1,000 people, while in the Philippines the rate was only 38 cars per thousand.

Thailand's auto industry has been growing for more than 50 years and has a more mature supply chain than other ASEAN countries. But the Philippines, Indonesia and Vietnam are aggressively working to build up their own industries, boosted by rising economies.

The Indonesian government, for example, is promoting a "low-cost green car" project to increase the percentage of local car manufacturing.

The Philippines is also seeing auto sales rise as its economy develops. One indicator is that per capita GDP broke through the \$3,000 threshold in 2017, and the country had a shot at reaching its target of growing its economy by more than 6.5 percent in 2018.

For 2019, the IEK forecasts that exports of made-in-Taiwan auto parts and accessories will grow by about 1.5 percent to \$7 billion. But that could be optimistic if the weakness seen at the end of 2018 extends into the new year.

**Long-term strengths.** Taiwan retains many underlying strengths in the global auto parts market. Thanks to a comprehensive, efficient network of subcontractors, the segment has high production flexibility, a broad product range, lower production costs and fast development times, and the flexibility to accept small orders.

Weaknesses include the lack of key automotive technologies, no large-scale proving ground for innovating new services, hardware and software, and the cost-competitiveness of Taiwan-made batteries for electric vehicles (see page 9 for a related story on electric vehicles).

Still, the long-term outlook for Taiwan is bright. In the rapidly developing market for autonomous vehicles, Taiwan is very much in the driver's seat.

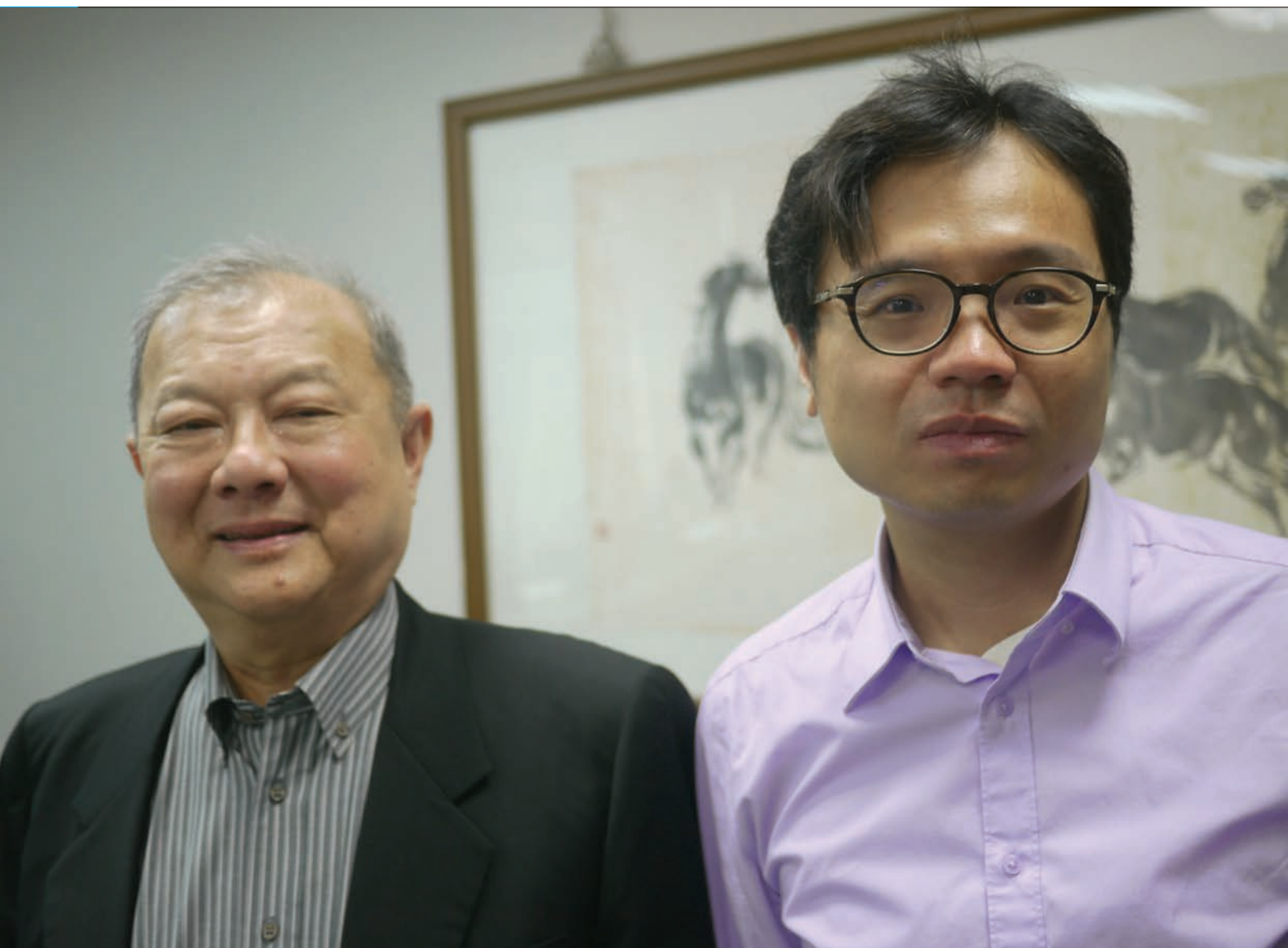
Self-driving vehicles need a host of sophisticated electronic components, something Taiwan manufacturers are well equipped to produce.

IEK estimated that Taiwan's automotive electronics industry will be worth \$6.67 billion in 2018, a big number that will encourage manufacturers to focus more intently on this emerging technology.

■ Glenn Reeves







**Winner Yu (left), chairman of the car electronics committee of TEEMA, with Jimmy Shih, project manager in the domestic business department of TEEMA.**



**AUTOTRONICS**

# A GAME OF LEAPFROG

Taiwan's auto electronics industry is preparing for the next generation of vehicles — and so are other Taiwan industrial giants, including some of its world-famous electronics and semiconductor companies.

**T**his new generation of electric and self-driving vehicles may also give Taiwan a chance to leapfrog traditional automotive suppliers, because they will require very different types of components than vehicles built around traditional internal combustion engines, says Winner Yu.

Yu is chairman of the car electronics committee for the Taiwan Electrical and Electronic Manufacturers' Association,

or TEEMA, and chairman of Photic Electronics.

"Now we are focused on artificial intelligence [AI], especially for autonomous vehicles and electric vehicles," Yu said. "We are doing our best to develop AI for autonomous vehicles."

That means working with Taiwan's semiconductor industry and developing sensors and digital cameras that can work with vehicles'

radar or lidar systems.

And it means developing the sophisticated software that can analyze all of this data in real time to help self-driving vehicles identify and avoid potential obstacles.

"We need to tell if the object is animal or human or whatever," Yu said. "So we are working to develop and adjust the AI needed to distinguish these using big data."

Yu noted that the Taiwan auto

industry, known for producing parts such as bumpers and lights, is not a noted manufacturer of such traditional automotive components as transmissions and engines.

"But for the next generation, Taiwan will be a more and more important supplier," he added, as internal combustion engines give way to electric motors.

Yu is especially bullish on in-wheel electric motors, which he believes will be "very important in the next generation" of vehicles.

"We are working on development of in-wheel motors in cooperation with companies in China and Taiwan," he said. "They are very power efficient, and you save weight because you don't need a transmission and other parts. Traditional cars might weigh over 1,000kg [2,200 pounds]. We can reduce this drastically."

While big motors, for buses or trucks are easy to make, small vehicles like motorcycles and cars need compact motors — and Taiwan manufacturers are experts in making high-performing, high-quality motors in small packages. "We have the skills to make them small," he said.

Yu said the auto industry is working with Nvidia, a semiconductor giant that is a leader in the development of artificial intelligence systems.

Yu noted that Nvidia — a U.S. company whose co-founder is Taiwanese — makes many of its chips at the Taiwan foundry TSMC.

He said one of Taiwan's core industrial competencies is its semiconductor foundries. Those foundries are seeking new markets, now that the growth in personal computers has plateaued.

"So now for the next generation of Taiwan's car electronics industry, I think autonomous vehicles are very important," he said.

He noted that in 2018, the Taiwan parliament passed a measure promoting autonomous vehicles, including ships and aircraft as well as cars.

The measure is intended to loosen some restrictions on testing autonomous cars and other vehicles so that members of industry and academia can experiment with autonomous technology.

Because Taiwan is not a major manufacturer of complete cars, the country's auto suppliers are looking to cooperate with the big global automakers to develop autonomous vehicles.

Tesla, the U.S. EV brand, has long relied on several Taiwan suppliers, including Fukuta Electric and Machinery **Hall 1 LO318** for motors,

and TPK Holding Co. for touchscreens.

Many Taiwan makers have started working with Japanese automakers. For example, the Japanese heavy truck maker Hino is looking to cooperate with ITRI, Taiwan's Industrial Technology Research Institute, to develop autonomous trucks for use in ports.

"Ports work 24 hours a day, with large container ships coming in," he said. "Hino's idea is to have heavy trucks that can move containers from A to B autonomously."

Yu added, "Our government is committed to the development of AVs in Taiwan, especially sensor chips, modularization, and subsystems. We have no big car makers, so we're looking to cooperate with big worldwide car makers. We are close to car makers in China, Japan, India, and the U.S."

In June, Yu will visit Poland to explore cooperation on an electric bus project in that country.

Yu will be visiting carmakers in Germany and the Czech Republic as well, with another trip planned for Southeast Asia in cooperation with TAITRA.

These new technologies offer huge potential for Taiwan, Yu concluded: "Sensors, AV, and electric motors — especially in-wheel motors — it's the most important change in a generation." ■ **Tom Kavanagh**



## GETTING SMART ABOUT EVS

**S**ales of electric vehicles are surging, and that's promising for the Taiwan auto parts industry.

According to researchers at Bloomberg New Energy Finance, global EV sales are expected to grow by a factor of 10 in just a few years, from 1.1 million in 2017 to 11 million in 2025. As EVs become cheaper to make than internal combustion engine cars, Bloomberg expects the surge of EV sales to accelerate to 30 million units by 2030.

In 2019, as battery prices continue to decline and more countries and auto makers promote electric vehicles, the growth rate for EV sales is expected to accelerate to 33 percent. Global EV sales are expected to account for more than 5 percent of total vehicle sales.

The Taiwan government is promoting development of "Smart EV" projects, including e-buses, incentives for buying EVs, and ways of building value chains in the EV industry.

Because Taiwan already has a strong auto parts industry, the growth of EVs and autonomous vehicles should boost sales for related components.

A researcher at the Industrial Safety Technology Institute, or ISTI, said Taiwan manufacturers are already skilled at assembling both hybrid and electric-only vehicles. By combining these strengths with those of the auto parts supply chain and maintenance systems, Taiwan should be able to strengthen its product design capabilities.

Climate change and increasing air pollution are helping boost EV sales.

Recent estimates are that up to 90 percent of the world's population breathes significantly polluted air, leading countries to recognize the importance of moving away from internal combustion engines to EVs.

■ **Glenn Reeves**







**BOOTH: HALL 1 J0518**



**MOTORCYCLE**

*MotorBrother Blue Titanium Clutch Bells, made by TSC*

# SCOOTER POWER

Scooters continue to see the highest growth rates in the motorcycle category.

**F**or many consumers, scooters are convenient — light, easy and economical to operate, and less expensive than motorbikes.

Another notable growth driver is light electric motorcycles. Consumers appreciate their quiet operation, and their significant contribution toward lowering carbon emissions. LEMs build on, and add to, the benefits of the motorcycle sector as a whole.

In 2018, global electric motor vehicles sold in excess of one million units. Some 80 percent of sales were in Asia, with 16 percent in Europe and about 3 percent in the Americas.

The Taiwan Industrial Economics and Knowledge Center (IEK) estimates that the global electric motor vehicle

output value will exceed \$3.3 billion by 2020. In Asia, the biggest growth will occur in Southeast Asia and India.

The only potential blight on this rosy outlook is the low speed and low torque of these vehicles due to the limitations of existing battery technology. This will certainly be overcome as manufacturers further develop hybrid systems using petroleum and electric power.

Taiwan has emerged as an innovative leader in electric scooters, thanks in large part to a concerted government effort to wean locals from their love affairs with their petroleum-fueled steeds.

For several years, the government has offered generous subsidies to

consumers buying their first electric scooters — and the results are becoming visible on Taiwan's roads.

An innovative electric scooter company, Gogoro, has shaken up the market in Taiwan — and is now trying to do so elsewhere in the world.

Founded in 2011, Gogoro has proved to be a highly effective fillip to the electric motor vehicle industry. Gogoro has about an 86 percent market share of Taiwan's electric scooter industry, and its sales doubled in 2018. In only three years, the company has made significant inroads in the 125cc mainstream scooter market.

The company's innovative solution to the range issues that affect current electric motorcycles is a network of



more than 1,000 “GoStations” in the countries where it currently operates. Riders can swap out their two batteries for a fresh pair, and quickly go on their way. The company says its riders swap more than 52,000 batteries a day.

Gogoro is now going global — partnering with Coup Mobility and with the Sumitomo Corp. to offer the system in Berlin, Paris, and in Spain and Japan.

Its newest scooter accelerates from zero to 50 kmh (31 mph) in 4.3 seconds and reaches a maximum speed of 90 kmh.

It supports lean angles in excess of 45 degrees, and has a battery range of 110 km at an average speed of 40 kmh — attractive specs that should allow the Gogoro to continue grabbing market share.

Whether they ride an electric scooter or a more conventional petroleum-fueled one, motorbike and scooter riders still want the ability to trick out their rides.

Taiwanese company TSC Moto Race

Co., Ltd. **Hall 2 R0722**, pursues a two-pronged strategy to optimize its product lines in both the motorbike and scooter segments.

TSC’s GP-Dream brand focuses on light-duty motorcycle racing accessories.

The other, MotorBrother, appeals to scooter riders’ culture with body accessories, lights and performance enhancements.

Even though TSC makes all of its products in Taiwan, the company has been caught in the crossfire of the U.S.-China trade war.

Far from benefitting from the dispute, TMC spokesman Yates Wang said it has created more hassles.

“Not only is there no benefit, it’s actually quite troublesome,” Wang said.

Wang said TSC focuses on Taiwan manufacturing because designing and creating its high-end products can’t be done in China. “They are all about low prices and large quantities. There is no profit to be had there,” he said.

Yet despite its Taiwan focus, TSC is forced to go through obstacles when it exports products to the United States.

“Because of the trade war, U.S. Customs wants to make sure the goods are not being transferred from China. There are more inspection procedures and more hassles for Taiwan shippers,” he said.

TSC is also grappling with implications of the move toward electrified two-wheelers and away from internal combustion engines, which impacts its product strategy.

The issue, Wang said, is deciding how much of its product offerings should serve electric motorcycles, and how much should continue serving traditionally powered ones.

“There is a decreasing need for combustion-engine related components — exhaust pipes, for example,” he said. “On the other hand, all the other types of external components are still required. So an increasing focus on these parts is important.”

■ Glenn Reeves







*Forum8 Software lets designers model traffic environments through virtual reality.*

# FUTURE PERFECT

From self-driving cars to cities able to automatically regulate traffic as it flows through them, the future is just around the corner.

**E**xpect to see several exhibitors at AMPA that are helping make the future a reality with intelligent transportation solutions that help reduce accidents, improve mobility, lower pollution, and increase efficiency.

Just one step up from already available features like smart cruise control or collision avoidance systems, perhaps the most exciting and contentious development in the sector is the advent of autonomous vehicles.

Most automakers and rideshare providers, including Tesla, Volkswagen and Uber, are testing and even selling

vehicles that offer some level of autonomous operation. But for them to become widely used, both vehicles and the systems serving them must be fitted to our existing messy road layouts.

To do this, automated vehicles need to collect and correctly classify vast streams of information. For safety, they must be able to analyze these rivers of data seamlessly, reliably and almost instantaneously. This has led to a boom in the development of new computers and sensors.

Beyond the vehicles, traditional infrastructure will also need to be updated or replaced. Imagine a traffic

light: It will soon need to tell both the human driver and the car itself whether to stop or go. To make this possible, wireless communication protocols will need to be standardized, and higher-capacity data networks will need to be implemented to manage this river of information.

Obviously, any mistakes implementing this new technology in the real world could have drastic consequences. Therefore, virtual modeling has become increasingly important.

Forum8 Software Technology of Taiwan **Q0410** is one company that's



helping engineers create the cities and streets of the future. Its virtual reality software lets designers quickly model environments, and then navigate them in virtual vehicles that behave with extreme fidelity to their real-world counterparts.

Because it allows engineers to design and navigate a complex, costly infrastructure project in virtual reality, it can identify and resolve problems before the much more expensive construction phase begins.

Forum8's products help engineers refine traffic flow management and accident reduction, along with the development of software for self-driving cars. To the casual user, perhaps most impressive is the level of immersion offered by the software programs. Its virtual vehicles "steer" using virtual steering wheels that offer lifelike resistance and feedback.

There are many ways of gathering the traffic data needed to manage a highway filled with vehicles. Cameras and sensors can watch over roads to monitor traffic speed and density, and people's smartphones can also let these systems gauge how they are traveling through a city.

These data streams can then be used to manage traffic in real time, or create predictive models for the future.

Automatic number plate recognition systems, increasingly considered an area of national security, are also becoming more widely used.

AMPA exhibitor Kingdom Communication Associated **Q0403a** provides the cameras and the hardware to capture, store, and decipher what's happening on the roads.

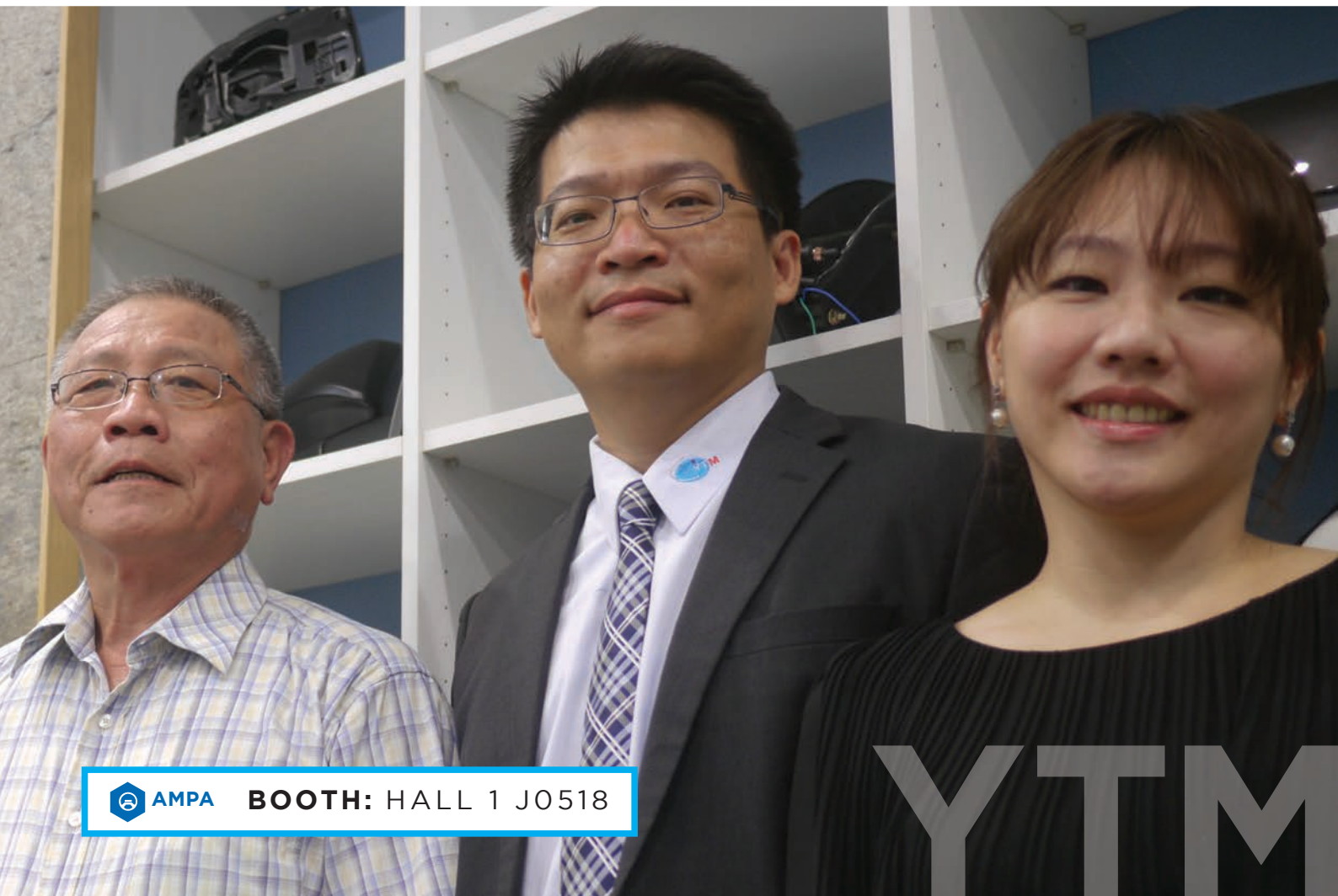
"Traffic surveillance systems

combined with AI technology and government regulations will be a massive development," a Kingdom Communication spokesperson explained. It is just one of several exhibitors whose technology is helping drive the automotive industry into a smarter and safer future.

■ Joe Delves







(L-R) "Mr. Mirror": YTM founder Ming Yang Yen, Jerry Chen, Karen Chen.

# THEY CALL HIM "MR. MIRROR"

## IN THE TAIWAN AUTO PARTS INDUSTRY

The company that Ming Yang Yen founded in 1983, Yu-To Automotive Parts Co., Ltd., now sells mirrors under its YTM brand to 90 countries, mostly in the Middle East, Southeast Asia, Latin America and Africa.

YTM now offers around 6,400 mirror models for Japanese, Korean, European and American car brands.

"We'll be adding another thousand this year," sales director Jerry Chen said, adding that many of the differences between models are quite small. "Mirrors are an easy way for

brands to refresh the look of their cars."

YTM got a boost in its early days by supplying replacement mirrors for Volkswagen T4 vans, exported in large volumes to Africa and Southeast Asia.

"In Africa, we got a lot of business because not only would the original mirrors get damaged, they were also being stolen," said Chen, who is also the founder's son-in-law. "We ended up replacing 80 to 90 percent of the T4 mirrors in Nigeria."

YTM now supplies mirrors in a plethora of variations, including electric and foldaway mirrors, and models that

incorporate such features as puddle lights, heated surfaces and turn signals. The company concentrates on Japanese car brands, with aftermarket sales making up 95 percent of its business. It is the biggest supplier of mirrors for Toyota cars in Taiwan.

YTM operates two plants with a total of five production lines. The headquarters plant and warehouse in Yongkang City, Tainan, recently installed a QR code system for item and order numbers which has boosted efficiency by moving away from paper. Along with its huge number of model



***Jerry and Karen Chen in the entertainment and meeting area, stocked with the founder's whisky collection.***

variations, YTM is known for its short lead times.

"Whenever a trading company has an urgent order, they call us," Chen said. "Our product lines are very flexible and we always have enough parts on hand to cope." Chen adds that although he would prefer to move to a forecast-based production system, this is difficult due to the high level of uncertainty.

For proof of YTM's high production quality, look at the certifications it has qualified for, which include ISO IAF 16949, ISO 9001 and 9002, EMARK, SASO and UK VCA.

Chen said YTM and other Taiwan producers are important sources for quality mirrors, including OE.

"China is also a big supplier, but Chinese companies are mainly focusing on their huge domestic market. They do compete with us in export markets, but Taiwan-made mirrors are famous for their cost-performance. That's why we can still survive," Chen said.

He said YTM doesn't skimp on materials or engineering.

"The plastics we use are high-grade compared to China, where the emphasis is on cost reduction — they will purchase inferior or even recycled materials," he said. "Also, the tooling control for molds is very important. In China, a company might spend \$30,000 for a mold, but we will spend double or triple that to make sure the surfaces are perfect."

YTM's main markets are the Middle East (35 percent), Latin America (20 percent), and Africa (10-15 percent). It is the market leader in many countries.

Chen has first-hand experience with the brand's popularity: When he and his wife were on their honeymoon in Peru, they visited the biggest auto

parts store in Lima.

"We said we were looking for the best mirror and the owner was so proud to show us YTM mirrors. He was so amazed when we showed him our business card that he ended up taking us out for lunch," Chen said. "We're number one in Peru, as well as some other Latin American markets. So our YTM brand is very famous."

Although mirrors are being replaced with cameras, screens and Advanced Driver-Assistance Systems (ADAS) in some high-end new cars, Chen thinks this shift is unlikely to affect YTM's main markets for years to come.

"It will be a long time before we are affected. People say that in 10 to 15 years we won't need mirrors anymore, but, frankly, I don't believe it — at least, it will only be happening in developed countries," he said. "For example, in Africa a lot of roads have no marking lines and are just rocks and stones, so I don't think autopilot is going to work there."

He also noted that cameras need power supplies and electronics to function, and must comply with different laws and regulations.

YTM's future plans include a joint venture with its automation partners to increase the level of automated production beginning this year. A new partnership in the U.S. is promising, and the company is also looking at new ways of

cooperating with overseas customers, including joint warehousing and local assembly of semi-finished products from Taiwan.

As a long-time Taipei AMPA exhibitor, Chen acknowledges that the show is convenient for buyers from neighboring countries, although he suggested that the timing can be a problem.

"March or April is high season for the main shows, so sometimes my customers say they are going to the Canton Fair or Shanghai instead. A few years ago, the Canton Fair started the day after AMPA, so there was nobody on the last day."

But Chen has high praise for the Taiwan government's efforts to boost buyer attendance through such incentives as hotel subsidies. "I'm very happy that TAITRA listens to our suggestions, although we would like to see the show become even more international." ■ **Tom Kavanagh**



***YTM keeps a vast selection of parts on hand to ensure fast lead times, while a new QR system keeps track.***





AMPA

BOOTH: HALL 1 M1019A

*Alan Yeh of Barkerli (left) and Kayo Huang of FTP Motorsports*

# PROBLEM SOLVERS

There's a problem with some BMW charge pipes — and that's been great news for Barkerli Industrial of Taiwan.

“The OEM charge pipe in BMWs is made of plastic, which tends to blow up when the car is pushed hard. The plastic degrades and fails, even in non-tuned cars after maybe five years. The type of plastic used is eco-friendly but not durable,” explained sales manager Alan Yeh.

Owners often find out about the problem only when the original charge pipe fails, and the engine automatically goes into “limp mode” to prevent the

car from being driven

Barkerli's replacement charge pipe is made from aluminum, not plastic, and improves engine performance.

“Our product is bigger, which gives better performance, it is lighter, and it is engineered from aluminum so it isn't going to fail,” Yeh said. Barkerli is the only company in Taiwan that supplies these replacement parts. Yeh said BMW hasn't improved its stock charge pipe even though failure is common,

which is “lucky for us.”

Replacement charge pipes are just one of the products that have made Barkerli a success. Established in 2011, Barkerli provides aftermarket kits for every model of BMW, Volvo, Volkswagen, Audi, and Mercedes sold in Taiwan.

Barkerli, which calls itself a professional pipe-bending company, manufactures air intakes, cold air intakes, charge pipes and intercooler





**F8X M3/M4 Charge Pipe/Boost Pipe combo V2**

pipe kits. It has carved out a niche for itself in the market for performance car parts.

With a staff of 20, Barkerli maintains a factory in Tainan that has four production lines, two of them dedicated exclusively to BMW parts. It offers more than 100 aftermarket products for BMWs and claims a specialist knowledge of the brand.

Some 90 percent of its products are exported, and only 10 percent are sold to the Taiwan domestic market. The biggest export market is the United States, which accounts for 60 percent of total exports, with Europe accounting for 30 percent.

Barkerli also sells into such Asian markets as Malaysia, Singapore and Japan.

In 2017, the company sold 1,500 to 2,000 sets of charge pipes, and doubled that amount in 2018. Yeh attributed the growth to the increase in sales of cars with turbocharged engines.

"At first, few users knew about our products, but as turbo engines have gained in popularity, they have

become more aware of our brand and are buying our pipes for higher performance."

Apart from Chinese copycat makers, only three other reputable companies supply aftermarket pipes, including the U.S.-based VRSF and Evolution Works. But Barkerli has some key advantages. "In the U.S., the focus is on larger engines, and BMW doesn't sell diesel engines there," Yeh said. "But we can supply parts for smaller engines and for diesel models."

Three years ago, Barkerli started cooperating with FTP, a motorsports brand based in Taipei, and began producing all of its charge pipe kits. The two companies are sharing a booth at AMPA for the second time this year.

The FTP Motorsports brand, in fact, focuses on BMW charge pipes.

At AMPA, look for the FTP Motorsports name on the booth to see the newest products from FTP and from Barkerli. "The combination has more impact," said FTP's Kayo Huang.

A highlight at this year's show is the F8X M3/M4 Charge Pipe/Boost Pipe combo V2. This kit helps improve

the durability of intercooler piping. It increases throttle response and decreases turbo lag. Using lightweight, high-grade 6061 aluminum piping, the kit is precisely engineered for the BMW F8x s55 engine.

Huang says AMPA is an important show, although it has become less of an order-writing trade show since international buyers can see a company's products online.

"However, it's still the case that face-to-face interaction is important. We know that some companies will 'Photoshop' online product images, so buyers still need to see the items in person and talk to the people behind them," Huang said.

He likes to take a counterfeit Chinese charge pipe with him to international shows so he can demonstrate the difference in quality. FTP and Barkerli both have received large orders after meeting customers in person at AMPA.

"At the show, buyers can appreciate we know a lot about BMW. We are passionate about our products and the cars, and we can answer any questions," Huang said. ■ **Tom Kavanagh**

# FORUM8 SOFTWARE TECHNOLOGY



**BOOTH: HALL 2 Q0410**



**F**orum8 provides software and technology services to support civil engineering and construction. Its highly flexible and customizable interactive 3D virtual reality simulation and modeling software brings together vehicle modeling and data analysis under one roof, allowing users to quickly construct 3D environments that can be driven around immediately.

This makes it an ideal platform for automotive testing, quality engineering, ADAS simulation, and intelligent transport solution research.

Established in 1987 by President Tadaharu Wada with just 16 employees, Forum8 now has offices in Japan and branches in Shanghai, Qingdao, Taipei, Vietnam, and Myanmar.

Along with representatives in the UK, Korea, Sydney, Arizona, and Canada, this has seen the company grow to over 240 staff.

This year Forum8 will be showcasing new technology including an automatic torque steering control driving simulator with motor-driven force-feedback. Providing for a sense

of immersion into the VR driving experience, a second product will be its air driving simulator that allows the navigation of the company's VR Design Studio's 3D environments by moving your arms and legs in front of a Kinect sensor.

Presenting an even more radical solution, another highlight is its futuristic brain wave driving simulator that allows you to navigate within the programme's VR space using just the power of your mind.

## KINGDOM COMMUNICATION ASSOCIATED



**BOOTH: HALL 2 Q0403a**



**S**pecializing in vehicle security and smart home products, KCA group was originally launched in 1990 to provide full CCTV surveillance security solutions. Since then it's grown to make an increasing number of products for the automotive industry too.

With around one hundred employees, KCA's primary markets are the European Union and Asia. Based in Taiwan, the company see the current disputes between China and the United States as an opportunity to promote the "Made in Taiwan" brand to a larger

global audience. It believes Taiwan's more stable economic environment and greater freedom of public cooperation will prove attractive to nervous foreign buyers and investors.

In 2019 it intends to continue focusing on offering the best customization ability, so as to differentiate its products from lower-cost Chinese-made solutions.

Already boasting a sizable operating capital, KCA sees the potential for further industry growth alongside the increasing use of traffic surveillance

systems. In the near future it expects to see even more of these systems coming to rely on artificial intelligence technology.

"Having been a leading security solution manufacturer in Taiwan for 28 years, we'll keep concentrating the network security for transportation," explained a spokesperson for the company.

In keeping with this aim, at this year's show, KCA will be debuting a new high-spec 1080p hybrid IPC & AHD mobile digital video recorder.



# YIH JING TRAFFIC INDUSTRIAL

 **MOTORCYCLE BOOTH: HALL 2 R0426**



Specializing in the manufacture of plastic body parts for scooters, Yih Jing Traffic Industrial's E-GIN brand is one of the largest aftermarket suppliers for many popular scooter models.

With products exported across the world, including to Asia, Europe, North Africa, the Middle East, and South America, all of E-GIN's products are 100 percent made in Taiwan.

Mold and die development, plastic

injection, coating, and packing all take place in-house. In these processes, E-GIN uses premium quality ABS and PP plastic material to ensure precise installation, durability and long life of all products.

With the ability to offers many colors for products, a coatings process offers a further way to meet customers' demands for even more varied options.

Reacting to the tastes of young scooter owners, E-GIN has found

that modified accessories such as mudguards, rear wings, and lights are proving especially popular with riders who want to make their scooters stand out in the crowd. Similarly, lights with smoked lenses remain very popular products.

E-GIN, which has recently expanded its range, is showing several new products designed to fit Vespa's Sprint scooters.

## KAKUKA PRODUCTS

 **MOTORCYCLE BOOTH: HALL 2 R0709**



Dedicated to the design, research, and sale of parts for fuel injection systems, Kakuka was established in 1992. Originally an agent of Keihin carburetors in Taiwan, the company still provides carburetors for Yamaha, Kymco, and Sanyang along with others as the market demands.

In addition to this business, the company created the Kakuka brand soon after its founding to create parts for fuel-supply systems.

With manufacturing experience and knowledge accumulated over

more than 20 years, Kakuka today produces high-quality products at reasonable prices.

Since 2015, besides introducing the popular PWK/FCR product series for domestic and foreign customers, it has been the agent for Yamaha Injectors. This move also led to the development of intake kits for the brand, which are now one of the company's main products.

For the coming year, air filter and intake kits will remain the brand's focus.

In their creation, Kakuka has sought to develop lightweight filters to meet high-volume demands while protecting the engine from damage caused by inappropriate materials.

Similarly, its striking air tube designs employ colorful silicone tubes that comply closely with the original parts to ensure credible quality.

Also demonstrated on its stand at AMPA will be a new electronic fuel injector system that promises to be a key product in the coming year.



## MAGURA'S OTHER FACE

Magura is best known in Taiwan for its bicycle components, but the 126-year-old German brand has a storied history as a supplier to the motorcycle industry. It's been supplying motorcycle components to BMW since 1922 and KTM since 1953, among other famous marques.

**N**ow, Taiwan is getting a first-hand look at Magura's motorsports side. Through its Magura Asia subsidiary, the company is making its second appearance at Motorcycle Taiwan.

Based in Taichung, Magura Asia serves as the Asia-Pacific hub for its parent company.

Established in 2002, Magura Asia handles regional procurement, sales, marketing, quality control, import-export affairs, technical support and customer services throughout the region.

Managing director Bernd Herrmann said Magura established the Taiwan subsidiary to investigate new markets. "We started with bicycle components

because the market here is not small and is very important worldwide," he said.

Magura originally made a splash in the bicycle industry with its legendary neon yellow HS22 — the world's first hydraulic rim brake for bicycles. At first, Magura Asia was squarely focused on the bicycle industry, which then was growing much faster than the motorsports sector.

But as the Taiwan market has opened up to "heavy" motorcycles, enthusiasts have begun clamoring for the kind of high-end parts that Magura is famous for.

"Motorcycle enthusiasts were buying Magura parts over the internet, which told us it was a good time

to start sales in Taiwan," marketing specialist Castro Liao said. "Also, we thought lots of wealthy consumers were moving from bicycles to scooters to heavy motorcycles. They knew the Magura name from bicycles and they were asking us to sell the motorcycle products in Taiwan. So we were kind of 'forced' to start selling by the buyers."

Magura manufactures all of its motorsports products in Germany. It has an enviable reputation as an OE supplier, with perhaps 95 percent of BMW motorcycles containing Magura parts. "But you'll barely find our brand logo," Herrmann said. "It's hidden away where you can't see it."

Magura also supplies aftermarket parts for most major European and





**Marketing Specialist Castro Liao**



**HC3 brake and clutch master cylinder**

U.S. brands, and Magura Asia currently focuses on aftermarket motorsports products. “We have some big customers that are expanding here, like BMW and KTM,” he said.

Herrmann said it’s a good time for Magura Asia to emphasize motorsports because the Asian bicycle industry has become less stable, especially in China.

“We thought we should diversify, and since we already have motorcycle parts, why not try the aftermarket opportunities here?” he said. “Last year, we joined the show as an exhibitor for the first time. We’d been before as a visitor, so we roughly knew what to expect. The feedback was very interesting — after all, we have a well-known brand.”

Magura Asia provides sales and maintenance, technical support and educational services for OE/AM in the Asia-Pacific region. From five employees in 2002, the company now has a staff of 85. About 70 percent of its sales are exports, with China alone accounting for more than half of Magura Asia’s business. Other key markets are Singapore, Malaysia, Australia and the Philippines.

**What’s new at the show.** At Motorcycle Taiwan, Magura will highlight its HC3 brake and clutch master cylinder and Hymec retrofittable hydraulic clutch system. Both products have proven to be so popular that they were sold out by the end of 2018.

Some of this is due to Magura Asia’s cautious management of availability.

“We try to control the supply a little bit, so sometimes we let product out and sometimes we hold back a bit,” Herrmann said. “Sure, we like to grow, but we want to do it really carefully. Therefore some people might have difficulty in obtaining product and might complain, but safeguarding the brand itself is very important.”

The HC3, made from a CNC-machined aluminum housing, is designed for superbikes, supermotos

and road sports specialists. The master cylinder is fully machined from solid aluminum to ensure it is both extremely rigid and extremely light.

With a 90-degree radial design, the HC3 features a 3-way adjustable lever bearing point, Advanced Seal Technology and titanium fixing screws. It is ABS-compatible.

The Hymec is an easy-to-install alternative to a mechanical clutch. This system replaces the clutch lever and cable with a small, light hydraulic system that improves clutch control.

“Most manufacturers need to save costs somewhere, and it’s quite common to see a clutch system with a mechanical cable,” Herrmann said. “This can rust or stretch and lose sensitivity, which can become quite tiring and hard since you are using the clutch so much. With a hydraulic system, you always have the same feel, and the modulation is consistent.”

Robust and easy to mount, the Hymec offers excellent modulation and reduced maintenance. The Hymec ensures an easier operating pressure, a constant pressure point, no more cable adjustment and smooth clutch actuation to ensure the perfect take-off every time.

Magura claims the Hymec improves performance by allowing the rider to feel the point where the clutch releases and actuates.

**Next up: electric mobility?** With around 550 employees in Germany, Asia and the United States, Magura produces high-tech components for all kinds of two-wheelers.

But the company has other, less-well-known strengths in the fields of composite technology and electronics, thanks to close cooperation with Bebro Electronic, which is owned by the same holding company as Magura.

That could lead to new products in unexpected markets, he said.

“We’ve been looking at electric mobility already for many years. Since we are involved in the motorcycle, automotive and bicycle sectors, we had the feeling a long time ago that something is happening,” he said. “The green feeling around the world is also quite important. We worked very early with Bosch in this area. And we see automotive coming up in this direction.”

Bebro Electronics already works with automakers including Volkswagen and Porsche, and Herrmann hinted that “there will a lot of interesting changes” to come from Magura.

■ Tom Kavanagh



**Bernd Herrmann, managing director**

# TYG GROUP

 **AMPA BOOTH: HALL 1 J0407**



**T**YG Group performs global logistics management in both original equipment and aftermarket sectors.

Producing both automobile and motorcycle parts it develops its own molds and paints, along with integrated plastic, metal, and cooling product lines.

A large-scale professional supplier, TYG has developed strong partnerships with Taiwanese and overseas carmakers including General Motors, Ford, Nissan, and Honda.

Originally founded in 1952, since 1994 Tong Yang group has expanded

into the vast Chinese market through various joint ventures. Since then it's established 19 plants aiming to satisfy the demand from China's major car makers including First Auto, CCAG, Dongfeng Motor, and GAG group.

Now employing a staff of 9,664 across Taiwan, China, and Europe, the company turns over around US\$1.6 billion each year.

Its key lines remain auto and motorcycle plastic items, such as bumpers and grilles; sheet metal products, such as hoods and fenders; and cooling products such as fan assemblies, along with molds and

paints.

Looking ahead, the group expects demand from China to increase further in the near future.

Asked for more predictions, it believes that while the advent of autonomous and electric vehicles may be one trend, weight reduction may turn out to be just as important.

And as a pioneer of lightweight plastic auto parts, it's well placed to take advantage. It's just one reason the TYG Group is optimistic about the future.

# TW RACING PARTS



 **AMPA BOOTH: HALL 1 J0608**

**A** leading manufacturer of high-performance coilover suspension, brake systems, air suspension kits, and forged wheels in Taiwan. TW Racing Parts also offers a private label service for companies around the world.

With 30-40 percent of its revenue reinvested in the R&D department, this research is backed up by its DT racing team which attends racing events across Asia.

One of the top five air suspension manufacturers in the world, its products cover applications from street to pro

racing, with many also having a nitrogen design option. The brand's main focus is on the American, German, UK, and Japanese markets. Consequently, all its components are manufactured in-house and in accordance with the relevant international certification.

Similarly, its brake kits are distinguished by features including calipers with electric park brake function and carbon disc rotors.

Finally, its unique and fully customizable forged wheels are tested in-house on VIA and JWJ equipment. These are part of a lab in which TW

Racing has invested a cool half a million dollars.

With 20 years' experience in the industry, TW Racing Parts was established by Liao Chih-Hsien in 1997.

Born out of a desire to promote the aftermarket industry in Taiwan and a love of motorsports, the company's racing team has always been central to its mission.

On its stand at the show will be a new stepped style forged wheel and a single-side multi-piston brake caliper with a floating design. Both of them will be released under the D2 label.



# ACME RUBBER

 **AMPA BOOTH: HALL 1 L0814**



**A**cme Rubber is a subsidiary of Unilli Motor Company, a specialist manufacturer of tires. A capital and technology-intensive industry, Acme Rubber uses advanced production methods, highly efficient management, and continuous quality improvement to set itself apart in a crowded market.

Created in 1998 by Sales Manager Chiang Hung Chun, Acme Rubber is still a family-run business. Now a medium size company with 135 employees, it

believes a hands-on approach to its customer's needs sets it apart from larger and better-known rivals.

"We insist that quality is the most important thing" explained a spokesperson. "We supply customers with the best products and keep making new ones to meet market demands."

Based in Taiwan, but selling through Europe, the USA, the Middle East Countries, and Asia, the company sees the current market as occupied with

too many low-quality brands.

Currently finding its products popular in the Middle Eastern, African and South Asian markets, it believes many other countries have unfavorable trade conditions for Taiwan. It expects the future for expansion to be the Chinese world.

For this year's show, Acme Rubber is bringing a wide selection of its tires that show off its many manufacturing capabilities.

# JUN KAUNG INDUSTRIES

 **AMPA BOOTH: HALL 1 M0208**



**N**ow in existence for over three decades, Jun Kaung was founded in Taiwan in 1985 by the man who remains its president, Charlie Hsieh.

Offering hand power pullers, tie downs, trailer winches, trailer jacks, web slings, luggage cords, cargo nets, and related auto accessories, these parts are variously backed up by CE and GS approval along with ISO9001 certification. Ensuring the highest quality, it also collaborates with the

Automotive Research and Testing Center (ARTC) on the design and testing of some products.

In the past several years its well-received hand power puller and manual winch have generated the greatest amount of sales.

With sales spread among the U.S., Canada, Europe, Japan, and South Korea along with a host of other countries, the brand retains a strong presence in these high-value markets.

A limited liability company, most of

its shares are held by the same family, giving it security in its business decisions. Now employing around 60 people, it maintains a 7,500 square-meter facility, allowing all its products to continue to be made in Taiwan.

For this year's AMPA show Jun Kaung Industries will exhibit what is perhaps the lightest four-ton hand power puller, the new HP-161D. This will sit alongside the latest addition to its popular winch line, the W06-512G-9 auto-brake stainless winch.



**MOTORCYCLE BOOTH: HALL 2 R0514**

*NCY Racing Team with General Manager Chen (center).*

## RAPID RESPONSE TEAM

From its roots as a workshop for repairing and upgrading scooters, Chian-Yie Industrial of Tainan has become one of Taiwan's largest makers of parts and accessories for scooters and motorcycles.

Founder Chung Jung Chen, a racing fanatic, began modifying his own scooters when he was 18, and established the factory in 1997. Now, Chian-Yie's NCY brand makes parts for most major models and brands, including Honda, Yamaha, Suzuki, KYMCO, SYM, and PGO. It's about to open a new factory in Vietnam.

The company stays close to its roots by sponsoring a racing team that provides feedback for product development. And its Tainan service center doubles as a coffee shop where touring riders can relax while they check out the latest NCY products.

At Motorcycle Taiwan, the firm will highlight modified parts for fuel and electric scooters.

**Moving fast.** For popular scooter

models, NCY offers everything riders need for performance upgrades, including CVT, engine parts, suspension, exhaust and brakes. Complete systems are available for many specific models from Honda, Yamaha, and Vespa, and others.

The company keeps a close eye on which models are most in demand, said Annie Chen of the export sales department. "We have to act fast to develop parts while they are still popular," she said.

Dozens of scooter models pack the company's headquarters as engineers work to keep on top of trends. Chen said Chian-Yie handles design and development, sample production, QC, dyno testing and final packing.

"We want to let customers know we have the complete ability to produce

parts," Chen said. ISO and TÜV certifications attest to the quality of Chian-Yie's manufacturing processes.

"Our NCY brand name actually comes from 'Nan' ['south'] in 'Tainan', and 'Chian-Yie,'" said Joyce Wen of the sales department. "Our brand colors represent professionalism (black), passion (red), and innovation (yellow)."

**Supplying Assemblers.** With a staff of 45, Chian-Yie achieved sales of USD\$7 million in 2017. Aftermarket sales of modified parts account for 80 percent of sales, but the company also supplies OE parts to scooter makers PGO and others.

"The PGO scooters are also sold in the U.S. under the Genuine brand. We supply parts to PGO for assembly and these are then sold into the U.S.





**NCY's Tainan service center includes a 'Miss Scooter' coffee shop.**



**NCY is showing new CVT sets at the show.**

market," Chen said.

Some 40 percent of its aftermarket sales are in Taiwan, and the remainder overseas.

The Tainan offices house the usual departments: R&D and sales teams, sample production, CNC manufacturing stations, dyno testing, and equipment for QC and other checks. A warehouse takes care of packing and shipping.

A couple of corporate facilities go beyond the expected. This year, Chian-Yie will open a 50-meter sprint test course for employees to test its parts. And the coffee shop at its Tainan service center uses a personal touch to welcome customers.

"The coffee shop is called 'Miss Scooter,' and we designed it to allow customers to relax," Chen said. "A lot of scooter riding clubs or teams stop by for a break when they are touring around Taiwan. All of the cookies and cakes are handmade by our general manager's sister. The second floor is decorated with a scooter theme. The third floor has a small meeting room."

Chian-Yie also runs an office in Taipei for its Taipei dealers, and has a network of worldwide agents and distributors. Chen said the new Vietnam factory will start production this year.

**Different strokes.** Taiwan's Environmental Protection Administration has been cracking down on two-stroke motorbikes, offering subsidies for riders to change to less pollution four-stroke models. Although a threatened ban on two-stroke engines did not materialize, the Taiwan Air Pollution Control Act has had a big effect on Taiwan's scooter market.

Ultimately, Chen sees the EPA changes as an opportunity.

"For example, Gogoro wants to offer NCY modified parts so users can have more options," Chen said, referring to the fast-growing electric

scooter brand.

"Electric scooters are selling very well," she added. "We have had new products for e-scooters since last year, and they have been getting a very good response in the market. We're finding out what appeals to teenagers and other users."

**Show highlights.** At Motorcycle Taiwan, NCY is highlighting its CVT set. The easy-to-install set includes pulley, roller, plate, drive face, secondary sliding sheave, spring seat, spring, clutch, and housing. The upgrade offers rapid acceleration response and allows the rider to adjust the roller and spring to achieve the ideal RPM.

Chen says the CVT set typifies the company's approach to innovation.

"We just launched a special CVT Offline series. The pulley has a special gap that helps rapid cooling. There is also a wear indicator line to remind users when it is time to replace the pulley," she said.

Chen added, "The internal structure is also unique. A high gear ratio runway design increases top speed, while a special angle design helps the belt work efficiently. The design allows for better performance and higher speeds."

NCY has also improved the clutch housing. Through balance and clutch-in tests, NCY keeps vibration to a minimum, while high friction material ensures better performance.

Another CVT upgrade is the secondary sliding sheave. Instead of the usual steel, NCY fabricates the sheave from aluminum. "This means the part is 35 percent lighter, friction is higher, and throttle response and transmission efficiency is increased," Chen said.

NCY carries out rigorous quality controls on its brake discs, testing

tolerances, hardness, runout check and high temperature test.

"We designed a side cutting gap and use special material rivets, which we patented last year. These heat-resistant rivets result in less deformation and constant braking power," she said.

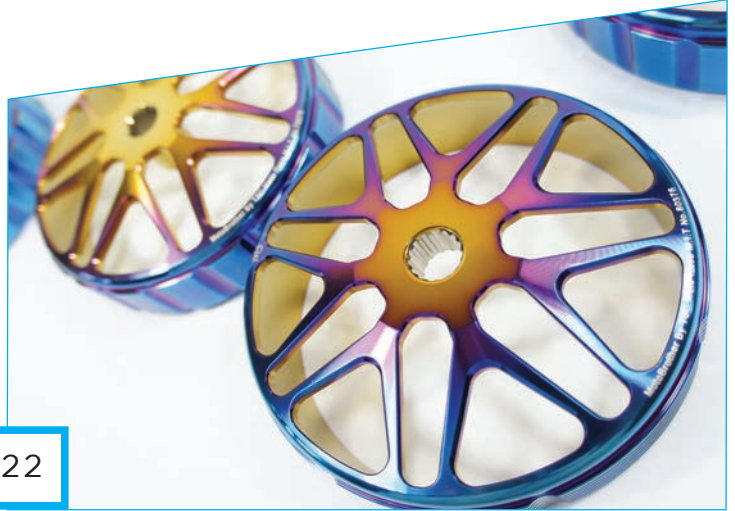
NCY also uses a rear brake arm that is longer than usual. "A patented bearing design helps to increase brake feel and reduce effort. NCY suspension forks have a custom damper design with preload adjuster so the user can find the perfect level of damping," Chen said.

■ **Tom Kavanagh**



**NCY offers complete modified kits for the most popular scooter models, seen here lined up at its HQ facility.**

# TSC MOTO RACE



 **MOTORCYCLE BOOTH: HALL 2 R0722**

**T**SC Moto Race Company started as a traditional motorcycle workshop with a sales and wholesale business attached. Driven by a desire to provide quality products and services, it originally entered the boutique motorcycling market as a parts maker.

Boosting recognition through participating in domestic races and attending exhibitions around the world, it now provides expert design and development, alongside the wholesale of peripheral parts for motorcycles and scooters.

Having assembled a team with a shared passion for motorcycles, its accumulated wealth of racing experience helps TSC to understand its customers' needs.

Under its GP-Dream and MotorBrother brands, the company researches and develops various kits and personalized products that improve performance and safety while enhancing the fun of riding a motorcycle.

Already active in the region, in 2019 the company intends to push further into the U.S. market, developing more

parts, and hopefully establishing additional sales bases in the Americas. Alongside this, it will be attending shows in the region to increase its visibility.

Based in Taiwan and employing 30 people, the company hopes to open up both the American and Chinese markets through a spirit of research, development, and innovation.

In 2019 new products include a forged titanium clutch bell, an adjustable front shock preload unit, an embedded caliper bracket, and a stylish license plate supporter.

# BIKETECH



 **MOTORCYCLE BOOTH: HALL 2 R0109**



**B**iketech was established in 1988 by David Kho. Mainly focused on spoked wheel manufacturing, in 2016 it began applying its technology and competencies to the creation of motorcycle wheels for off-road terrain. Its house brand, REVV, now produces hand-built motorcycle wheels with sturdy aluminum rims and high-quality 3D forged and machined hubs. These in turn spin on high-quality Japanese bearings, seals, and spacers, allowing them to take on the harshest of conditions. Meanwhile, it also provides

customized products to meet the needs of each individual brand it services.

Based in Taiwan, Biketech now employs 17 people, working across a range of projects encompassing the design and manufacturing of pedal-powered bicycle wheels, motorcycle wheels, bike parts, and motorcycle wheel parts.

Although recent trends towards electric vehicles have yet to significantly impact Biketech's core business, it does believe it's well placed to service

the market with its lightweight wheels. Even without further adaptation, these are already suited to both regular electric bicycles and e-motorbikes. Constantly encouraged by positive customer feedback, Biketech believes 2019 will be a year of continued growth.

With its main markets being Europe, the U.S., Taiwan, and China, new innovations for the company include improvements to its motorcycle wheel range, along with an increased offering of e-bike wheels.



# YING PAIO ENTERPRISE



 **MOTORCYCLE BOOTH: HALL 2 R0113**

Ying Paio is a manufacturer of tire repair materials & kits for all vehicles. With a range including tire repair kits, CO2 repair kits, cold patches, rubber solution, tire seal strips, tire sealant, and patch plugs, they've been active in this field more than 40 years.

Owning two factories, one in Taipei Taiwan and one in Xiamen China, it produces the well known Thumbs Up brand.

Because its production is split

between these two manufacturing bases, U.S. President Donald Trump's recent trade war has had little impact on the brand, as the U.S. is not its main market. At the same time, the Taiwan factory has benefited from some orders that were originally purchased from other factories in China.

Happy with its positioning, the brand has no plans to move. "The Chinese domestic market is currently the most populous in the world," explained a spokesperson. "Although

Chinese income and purchasing power have improved a lot, there are still some less good sales habits, along with copycat brands and low-quality products in the market. Because of this, we make even more of an effort to promote ourselves."

Constantly developing new products, the company hopes to allow more people repair their tires by themselves. At the AMPA show, it'll be debuting its new YP880 kit to help do just that.

# SF RACING

 **AMPA BOOTH: HALL 1 L1218**



SF Racing founder Bill Hsu has devoted himself to researching and developing suspension for more than 25 years. In 2012 he used his accumulated knowledge to set up the brand and has since built it into one of the leading makers of shock absorbers in Taiwan.

Now home to about 20 employees, its products aim to maintain the highest quality at a reasonable price. Despite not being a big company by the standards of the automotive industry,

SF racing is unique in retaining a professional research and design team. Helping it continually develop and refine its range, this comprises three types of shock absorber covering sport, track, and external reservoir types.

Along with its own ranges, SF Racing also offers a private label service for many famous companies around the world.

To achieve this it can customize its shock absorbers to meet each

customer's needs and is certified to ISO9001. Currently, its products are sold around the world including in Canada, Germany, UK, Australia, USA, Singapore, Thailand, China, Malaysia, and the Philippines.

In a novel move for the company, it has recently invested time and resources into developing an air suspension system which will launch at the show. This exciting development will sit alongside a shock featuring a new external reservoir design.



# AN EV POWERHOUSE

Fukuta is at the forefront of electric drive technology

**W**ith \$66 million in sales in 2017, Taichung-based Fukuta Elec & Mach. Co., Ltd. is a key player in the global market for EV drives, as well as an important supplier of motor parts to major companies.

The company manufactures electrical motors, including AC induction (IEC) and induction servo, inverter/inverter duty, spindle and synchronous servo, and EV (UTV/hybrid).

Fukuta operates two factories in Taichung. Its FengChou plant builds the induction motors, while its FengGong plant manufactures the servo motors, and EV motors and powertrains. It also has a dyno system test line.

Last year, Fukuta opened the first phase of an impressive new factory in Maioli County, said Brian Tsai of Fukuta's international sales department. Known as the Tongluo facility, it is

already operating production lines for stamping/welding, heat treatment and die-cast rotor production. When the second phase is finished at the end of 2019, the plant will be responsible for producing EV motors and powertrains.

Integrated powertrains. At AMPA, Fukuta will highlight its integrated powertrain designs, which combine an induction motor with drive/controller and gearbox. Available for applications ranging from scooters and motorcycles to sedans and SUVs, the powertrains allow for relatively rapid development of electric vehicles.

"We help customers adjust their designs to electric drive, and assist with integrating everything needed," said Tsai.

The "Three in One" powertrain slashes the cost of the power harness, coupling and cooling systems. Integration reduces the amount of

cooling required and shortens the wiring distance, which in turn reduces electromagnetic interference (EMI).

The key advantages of Fukuta's EV motors are their die-cast copper rotors and lamination bonding technology for stators.

"Traditionally, induction motors use aluminum die-cast rotors. But for EVs we need to improve efficiency and reduce the size, so we use die-cast copper. This is a new technology and actually very few companies are doing it," he said.

Fukuta has spent 10 years developing its copper die-casting technology. Its rotors are highly efficient, last up to twice as long as aluminum rotors, yet are smaller and cost less.

Another technology pillar is Fukuta's lamination bonding process, used to make motor stators. More efficient and with higher magnetic flux density than





welded stators, lamination bonding is also stronger and, importantly, dimensionally accurate.

Tsai noted that EV motors operate at high RPMs, “which can cause vibration and noise if the dimensional accuracy is not precise.”

Fukuta is developing five variants of its powertrain for passenger cars, with peak power outputs from 150kW to 350kW. It may be some time before passenger vehicles using the powertrains appear on the market, since each customer needs to integrate many different components as well as the powertrain. He said some customers expect to start mass production in 2020.

**Green pioneer.** Passenger cars are only part of the company’s push into green transport: in 2010, Fukuta has led industry projects to develop drivetrains for electric buses and garbage trucks, and even provides the propulsion for pleasure boats that ply the popular tourist destination of Sun Moon Lake in Nantou.

Scooters and motorcycles are another promising market. “We’ll be showing our integrated powertrains for scooters and motorcycles at AMPA this year,” said Tsai. Fukuta will display its 3-in-1 and 2-in-1 designs (the latter for customers who want to use their own controller).

Fukuta, in fact, has long been a pioneer in the field of green energy. It has worked with government,

universities and other companies to develop leading edge technology.

In 2005, it became the first Taiwanese motor manufacturer to jointly develop a wind turbine power system. The 5kW vertical turbine was introduced in 2008.

In the EV sector, the company has big ambitions. The completion of the second stage of the new plant in Tongluo Science park this year will see EV powertrain production capacity ramp up.

Covering 75,600 square meters (814,000 square feet) and located 30km (19 miles) from the two existing plants, Tongluo initially will host two copper rotor die casting lines, seven stations for progressive steel sheet stamping, a steel plate heat treatment furnace, and a

powertrain assembly area. Fukuta expects to expand the factory steadily in coming years.

**Challenges ahead.** Even though Fukuta is regarded as a key global player in the EV drive market, Tsai admits the environment is challenging. “We are developing the market in Taiwan and Asia, but also in Europe and the USA.”

Fukuta faces competition from three or four big players, but Tsai said “Our manufacturing processes are really hard to reproduce. It’s like trying to reverse-engineer a Japanese engine — it doesn’t tell you the manufacturing processes behind it.”

■ Tom Kavanagh



# AKER TECHNOLOGY



**AUTOTRONICS BOOTH: HALL 2 P0117**



Aker is a global high-tech company founded in 1990 which designs and manufactures a wide range of frequency control solutions. With its research and technical headquarters based in Taiwan, Aker is able to provide prompt service through its worldwide branches and distribution networks. Certified with ISO 50001, ISO 14001, ISO 9001, OHSAS 18001, IECQ QC080000, and TS16949 along with being AEC-Q200 qualified, it produces quartz crystals

and oscillators.

Established in Taichung, Taiwan in 1990, by 2002 the company was publicly traded on the Taiwan Stock Exchange.

Overseas expansion followed with the launch of Aker Technology USA in Miami and a sales office in Shenzhen, China. The company now has 300 employees, and the products it produces are widely used in automotive, industrial control, networking, medical, and consumer

electronics devices. Its prime markets are now the U.S. and Europe.

As the technological sophistication of most cars increase, the business sees further opportunity for growth in the coming years. Currently, its products can be found all over the vehicle, from helping operate its parking distance control, to enabling its remote keyless entry system. Concentrating on a focused range, at this year's show the brand will preview a new high-precision oscillator product.

# KAI SUH SUH ENTERPRISE



**AUTOTRONICS BOOTH: HALL 2 P0514**

Used by over 40,000 international clients in 126 countries, KSS is the No. 1 wiring accessory manufacturer in Taiwan. The largest manufacturer in Asia, it's also one of the three largest companies of its kind worldwide. Based in the huge KSS industrial park in Tainan, the company spans some 500,000 square meters (5.38 million square feet).

With certifications including ISO9001, ISO14001, ISO17025, OHSAS18001, and IATF16949, KSS specializes in offering high-quality

products. These include nylon cable ties, wiring ducts, cable markers, glands, clamps, and clips, PCB parts, wrapping bands, bushings, connectors, tubes and fasteners.

With an in-house research team and mold-developing technology, it uses the most high-tech computer-controlled injection and extrusion machines to produce over 10,000 product lines.

These serve the rapid and developing needs of a huge number of industries from robotics and solar, to

shipping, and architectural. Products made by KSS can be found in all types of industry, from small to large firms in light industry, heavy industry, construction, and retail.

Kai Suh Suh Enterprise also maintains an intelligent, fully automatic warehousing system with a storage capacity exceeding a thousand 20-foot containers.

Targeting the global market, its largest sales share comes from Europe and the America markets, followed by Asia.

# HO CHAK



**CAR TUNING BOOTH: HALL 2 S0420**

Founded in 2014, Ho Chak specializes in producing brake disks and forged wheels. Ho Chak trades and manufacturers from bases in Taiwan, South Korea, and Indonesia, offering upgraded power braking systems with carbon

ceramic technology along with the ability to custom forge wheels for many different requirements. With a small and focused team of five full-time staff, its core markets are concentrated in South Asia, Taiwan, and Japan. Undeterred by the recent

trade difficulties between the U.S. and China, it expects these disputes to be settled soon. As such it believes 2019 and beyond will be a period of steady growth, and one in which Ho Chak will continue to win an increasing number of orders and contracts.



# LINKCHAMP



**AUTOTRONICS BOOTH: HALL 2 P0230**



LinkChamp is a professional OEM/ODM Taiwanese manufacturer with more than 25 years of experience. Based in Tainan, it specializes in producing DC-AC power inverters, DC-DC converters, battery chargers, solar inverters, and solar charge controllers. It's also the only manufacturer in the industry to provide a full range of microcontroller integrated power inverters, through its popular Intelligent DC-AC series.

Founded in 1993 by James Lu with the aim of becoming the world's leading intelligent DC-AC inverter design

manufacturer, LinkChamp boasts its own research and design capability, which employs between five and ten dedicated staff at any time.

This allows it to offer unique inverters with micro-control CPU designs, along with the ability to customize its product to the end users' requirements.

A further team of between 10 and 20 are then also employed in the quality control center. Operating testing equipment largely imported from Europe, they ensure that no product leaves the facility unless it's

both flawless and compliant with relevant standards.

LinkChamp's products are found almost everywhere around the world. With long-term production experience, it's able to provide conscientious service for original equipment manufacturers. In order to offer reliable and stable products to its worldwide customers, its products are all accredited by CE, E-mark, RoHS, REACH, and ISO 9001.

This year it will be showing an innovative and energy-saving 600W-3000W DC-AC Inverter.

# ACEWELL INTERNATIONAL



**EVS BOOTH: HALL 2 Q0219a**



Established in 2005, Acowell International is a designer and maker of speedometers based in Taiwan.

From its inception, the company's instruments were used by many motorcycle and all-terrain vehicle manufacturers, and the Acowell brand was soon established as a player in the European, American, and Japanese aftermarket sector.

Imagining its products as more akin to small computers rather than just simple gauges, most of its models do

far more than simply show users their velocity.

An early adopter of the trend for electric bikes, scooters, and other vehicles, since 2010 it's also made displays for these markets as well. The company now offers more than 10 styles.

These models are equipped with electronic hardware and firmware and each has the essential functions needed, such as speedometer, battery message display, along with up to 10 LED indicators.

Each product also has an IP67 waterproof design and is subject to 8G mechanical vibration testing, while also benefiting from CE and E-Mark certifications.

Enhancing road safety and driving pleasure, at the show Acowell will be exhibiting its full-color TFT series products.

These bring a new take on human-machine interfaces, collecting the necessary information from the bike, before presenting it on an advanced liquid crystal monitor display.



*Chung Yang headquarters in Taichung*

# DIFFERENT STROKES

The unusual shape of Chung Yang's headquarters building in Taichung hints at one of the company's business lines: It evokes a 2-stroke engine.

That's appropriate for a company that supplies the tiny engines used in remote control vehicles. Chung Yang, founded in 1970 as a maker of sewing machine parts, applies its manufacturing expertise to a range of products beyond engines, from surgical items to padlock parts.

For a decade, it has also produced precision-machined rotors as a trusted OE supplier to Nissan and Subaru.

At AMPA, the company will show a new range of aftermarket auto parts, including suspension and brake systems, under its SA8 brand. The company launched the brand in 2017, and sales manager Paul Huang said Chung Yang is well aware that it is entering a highly competitive market.

"It's hard to start in this market due to price pressure. The profits are slim and there are so many competitors," Huang said. "We're trying to find ways to succeed as a new entrant. So far we're selling to the domestic market

in Taiwan, but we also intend to look abroad."

Eric Lai, the company's general manager, added that SA8 "is a new brand, but the items are 100 percent made in Taiwan. We're looking for agents, so that's why we are joining AMPA."

Lai, the son of the company's chairman, became general manager right after graduating from university in 2017.

Chung Yang has honed its reputation in the auto industry through the rotors it supplies to its Japanese OE customers.

"The sintering process is extremely precise. Currently we're selling around 600,000 units per year of one rotor type," Huang said. "We also have a bigger rotor we've been producing for eight years – we're delivering 60,000 units of this per month as an OE supplier."

Because of its extensive partnership

with Japanese firms, Chung Yang is focused on rigorous production standards. "They care about quality first of all. Of course the price is important, but not as much as quality," he added.

Huang said CNC-machined parts, including auto parts, now account for about 55 percent of Chung Yang's annual sales. Another 20 percent of its business is for sewing machine parts – most of them exported to Japan, and the rest to Germany. And production of RC engines accounts for about 25 percent of its business.

"But now we're focusing on doing auto parts. Annual sales for auto parts accounts for 30 to 35 percent of our overall annual sales," he said.

CNC machining is a central part of Chung Yang's production process, and its factory boasts more than 140 CNC stations. "We need to produce parts like crankcases ourselves, so we need a lot of machines," Huang said.





(L-R) General Manager Eric Lai, Chairman Lai. Peggy Lai

Chung Yang holds several patents and has TS-16949 and ISO-9002



Grinding and deburring machines from Peter Wolters ensure complete removal of burrs from precision auto parts.

certifications. It can design and manufacture automated machinery, jigs, fixtures and measuring tools.

Its OEM product catalog includes parts for cars and motorcycles, bicycles, computer peripherals, medical equipment, and sewing machine components.

Sometimes it takes more than exceptional quality to land a sale. Huang tells a story about a potential customer who, for more than five years, constantly ordered samples but never signed off on an order.

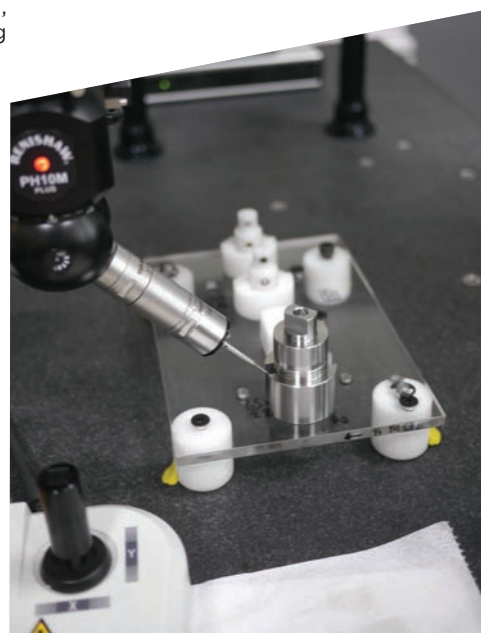
"One day I was passing by the company and I thought I'd better do something to push them to get an order. So I bought some dumplings and went to visit them," Huang said. "I sat down with the boss and he said he was very sorry about all the samples, but now he had an opportunity for me: 'I have a customer in the U.S. and he is looking for a supplier for padlock bodies. The quantity is huge and I can't handle it.'"

The boss passed on the contact information for the U.S. customer and Huang gave him a call.

"He gave us the order. It was worth

\$3 million a month, so it was a pretty good result for a few dumplings! We are still making the lock bodies today."

■ Tom Kavanagh



Testing in the QC department

## DIJIYA ENERGY SAVING TECHNOLOGY



**BOOTH: HALL 2 Q0423a**



**D**ijiya Energy Saving Technology's operating strategy is to develop innovative and autonomous products, electric vehicles and intelligent storage systems, along with technologies and benefits based on electric vehicles in the two major industries of energy conservation and carbon reduction.

With global trends in energy conservation and carbon reduction resulting in countries gradually tightening their fuel consumption regulations for automobiles, Dijiya is

well placed to benefit from this switch to cleaner technology.

"Governments have announced that they'll ban gasoline and diesel vehicles by 2030 and move towards electric vehicles. Poor air quality is the biggest environmental health risk for the public and governments are determined to take action within a short period of time," explained a spokesperson.

"These announcements suggest that fuel cars will soon be a thing of the past and a new era of electrical energy is fast approaching."

Currently, its growing customer base includes bus carriers, government agencies, and private companies.

In this booming market, Dijiya is striving to develop the green energy industry for the benefit of the planet and is very proud to be part of Taiwan's green energy industry.

In recent years its 20-seater electric bus has been one of its biggest sellers. At AMPA the company will showcase a 7-meter electric bus that uses many of its latest systems.

## TAIWAN MITIN INDUSTRIAL



**BOOTH: HALL 1 M1133**

**E**stablished in 1998 in Tucheng District, New Taipei City, Taiwan Mitin Industrial Co specializes in car modification and shock absorber technology.

Its core brand is the Mitin Racing Suspension label, which produces after-market tuning products for a range of high-end marques including Alfa Romeo, Audi, Mercedes Benz, BMW, Ferrari, Mitsubishi, and Toyota.

A micro-enterprise with just eight employees, the company cooperates with a Spanish technical team

on suspension modification and calibration for racing cars, using the data to help further develop its own products. In addition, the company obtains technical support from applied materials professionals in Germany. All parts are extensively tested, both on the racetrack and via the company's own state-of-the-art damping test machines.

Unsurprisingly for a brand named after the Spanish word for "unity", Mitin's largest market is in Spain, followed by Japan, Southeast Asia,

and Taiwan. This year Mitin will be bringing its latest 4X4 pickup truck shock absorbers to the show. It's part of an expanding range that shows confidence in the industry.

"Our main purpose is to manufacture a suspension system suitable for the needs of each vehicle owner," explained a spokesperson. "Cars are a modern means of transportation. As long as there are humans, this industry will not disappear. What will disappear is those that have not kept pace with the progress of the industry."



# HI-CAM ELECTRONICS TPMS SYSTEM FOR TRUCKS



**AUTOTRONICS BOOTH: HALL 2 P0304**



It's vital to maintain proper tire inflation on vehicles, both for safety and to reduce fuel consumption. When tire pressures are lower than recommended, the resulting higher temperatures can lead to rapid tire wear or blowouts.

Hi-Cam's tire pressure monitoring system (TPMS) system offers an effective solution. It monitors each tire's pressure and alerts the driver when the pressure goes higher or lower than recommended, improving vehicle and driving safety, increasing tire life and saving fuel.

Although the company is relatively new to the auto sector, it brings plenty of expertise with roots in wireless microphone technology.

"We have a lot of knowledge about wireless communications and collecting data," General Manager Henry Lo said. After showing a

prototype at last year's show, Hi-Cam is displaying production versions at Autotronics 2019.

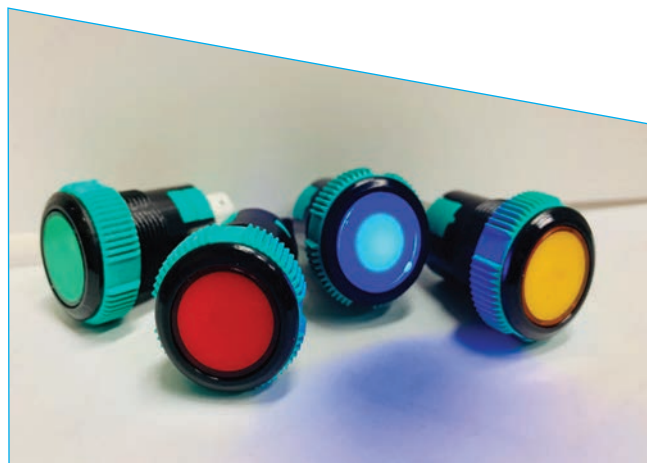
Hi-Cam Electronics' parent company, ECEN, was founded in 1992 and specializes in portable PA systems, wireless microphones, and systems for tour guides. In 2012, ECEN branched out and established Hi-Cam Electronics to focus on automotive products such as TPMS and rear view cameras. It now employs 30 people.

TPMS systems report real-time data like tire pressure and temperature to the driver via wireless RF signals from sensors in each wheel. TPMS is required for all new cars in the U.S., Europe, Taiwan, South Korea, and other countries. Although Hi-Cam offers a retrofit aftermarket system for passenger cars, its main focus is aftermarket TPMS for trucks and buses.

"Our system for trucks and buses

can handle up to 14 tires at a time, with color-coded alerts on the touchscreen in the cabin," Lo said. While the information is obviously useful for the driver, it can also be transmitted over the internet to the fleet manager for real-time monitoring. Lo said Taiwan's largest oil company is interested in the system for its tanker fleet, as it can be integrated with an FMS (Fleet Management System), OBD II, GPS navigation, EDR, HUB and ECT. Daily data can be recorded for each vehicle.

The system is made in Taiwan, using some parts from Japan. Other features include a patented valve design compatible with many different vehicles. Optional Bluetooth allows direct connection to a special smartphone app. Long battery life is another plus point: After 10 minutes of inactivity, the sensor stops transmitting to conserve power.



# HSUAN YEN ELECTRONICS INTERNATIONAL CO., LTD.



**AUTOTRONICS BOOTH: HALL 2 P0925**

Established in Tainan in 1995, Hsuan Yen Electronics specializes in manufacturing electronic components and switches. With more than 20 years of experience, the company focuses on producing high quality products and offering reasonable prices and punctual delivery.

Hsuan Yen is a family-owned business, with 50 employees including out-sourcing. An associated factory in China employs 90. China accounts for 70 percent of sales and Taiwan about 25 percent, with other markets making up the rest. Products include

sensors, long-life potentiometers, push button switches, tact switches, slide and toggle switches, power sockets, fuse holders, indicator lights and auto cigarette plugs. "We sell everything - we're like a supermarket!" Hsuan Yen's Stephanie Wu said. "That is what we offer to customers. If they come to buy push-button switches, they see we have indicators, then we can be a single supplier for the customers so it makes it simple for them." One of the firm's highlight products is its range of anti-vandal switches. "Our switches cost over 20 times more than competitors' ones, but ours are stainless and have a

flush finish, so they look more attractive and for the end customer they make the end product more sophisticated. Perhaps 80 percent of our inquiries are about anti-vandal switches," says Wu.

The company strongly believes that R&D to offer innovative products is essential, as well as improving service and product quality. Wu says that as an electronics component producer in a dynamic world market, Hsuan Yen has to be even more sensitive to product trends to meet customer needs. At AutoTronics, the firm will highlight its Anti-Vandal switch series and LED dimming switch series.



## Alltrade Cat Safety Utility Knife

This box cutter is designed and built for the harshest work environments. Cutting edge comfort and performance make it the right knife anywhere safety and speed matter. Use it in safety mode by squeezing the trigger bar to expose the blade. Then release the trigger bar to retract the blade for safe storage between uses.

**Booth # M0420**



## Arma Speed Carbon Fiber Intakes

Producing a huge range of carbon fiber- and Kevlar-reinforced parts, these air intakes and matching engine hood are made to fit the ever-popular BMW M4. Styled to match the rugged lines of the car's engine bay, the air intakes are available with raw or tinted carbon weave finish, along with a unique marbled effect on the engine hood itself. **Booth # M1220**



## Aromate Industries 4-in-1 Deodorizing Vent Pump

With on-demand pump control, the Aromate Industries Deodorizing Vent Pump provides the freshness of a deodorizer, along with a quality fragrance and anti-bacterial function all in one environmentally friendly package. It quickly and effectively eliminates odors rather than just covering them up, and a natural fresh scent ensures you enjoy a pleasant journey.

**Booth # L0701a**



## 911 Signal Technology Phantom Features

This warning system for motorcycles comprises a lighthouse with integrated siren and speaker that sit atop a pole-mount beacon and are matched to a remote controller. Made to enhance safety, it features a warning light available in single or dual colors with SAE, R65, and R10 certifications. 360-degree visibility provides maximum effect. The pole length is adjustable, and a robust aluminum bracket boosts longevity.

**Booth # N0506**



## All First Group K100 twin-cylinder and twin-motor tire inflator

An innovation award winner at AMPA in 2017, the K100 is a direct drive tire inflator. With an anodized aluminum alloy cylinder and high-performance PTFE piston ring, its twin-cylinder, twin-motor design ensure enhanced durability. Its lengthy 25-foot (7.6m) coil hose features an in-line pressure gauge and deflate device and is combined with an easily stowed power cord for a convenient carry. **Booth # L0108**



## Blacksmith Metal Co. Forged parts for steering, suspension, and chassis

With over 20 years of experience in making precision forged parts for the auto industry, Blacksmith Metal Company is certified to the widely used IATF certification for quality management. Capable of producing complex shapes to satisfy specific customer requirements, its range includes steering knuckles, control arms, tie rod ends, idler arms, center links, and ball joints. **Booth # N0012**







## Just In Hardware Seamless Aluminum Air Tank

Formed in one piece without welding, this seamless air tank is both safer and less prone to leakage. Made of lightweight aluminum and manufactured to the SAE J10 standard, it's a good looking option and is available with an anodized, polished, or powder coated finish. It has a rated working pressure of 200psi, while its burst pressure is more than 1000psi for peace of mind.

**Booth # N1403**



## Star Diamond Custom Rubber Mats

Need to tidy up and protect the back of your van or truck? As the largest manufacturer of customized rubber mats in Taiwan, Star Diamond will either have just the product already or be able to design and make one for your needs. Star Diamond mats emphasize anti-slip textures and other features. The factory is ISO 9001:2015 certified.

**Booth # L0003**



## Elig Brake Technologies Eco-Friendly Brake Pads

Free of both copper and asbestos, these organic pads use a unique eco-friendly friction material. Further boosting their longevity and environmental credentials is the NRS hook system. This 3D binding method allows the pads to be run down to the last few millimeters of material while still maintaining secure retention.

**Booth # I1017a**



## Gau Donq Lih S-RS Forged Brake Kit

The S-RS is staunch looking six pot caliper twinned to a two-piece floating rotor for maximum power and stable performance. The caliper is made of forged aluminum and the rotor of cast iron, with curved vents for cooling efficiency. Lower operating temperatures help prevent fade for consistent braking power.

**Booth # L1118**



## Chase Steering Parts Co. Steering Components

Concentrating on the manufacture of precision steering parts, the Chase range covers the complete span of vehicles from cars and heavy trucks to forklifts made by Japanese, Korean, European, and American companies. With huge stock and flexible management, it's able to offer a three-day turnaround on single parts or have a container sized order ready to go within a month.

**Booth # I0210**



## Lih Woei IVA Tech Throttle

Hit max torque earlier while improving drivability and response. Instead of simply increasing its size, Lih Woei's unique injection Vortex Air technology optimizes the throttle's internal radius, butterfly valve, and angle to directly manage airflow and compute the best ratio for ignition. The result is a throttle that always provides the maximum airflow regardless of engine loading.

**Booth # L1331**





## Everspark Industries Alternators, Starters, and A/C Compressors

Everspark is a leading aftermarket manufacturer of new and remanufactured alternators, starters, and A/C compressors in Malaysia. Founded in 1990, Everspark Industries has evolved with advances in technology to meet new specifications and quality standards. Certified to ISO 9001:2015 requirements for quality management systems, it offers an extensive range of aftermarket parts for Japanese, Korean, European, and American vehicles covering light to heavy-duty applications.

**Booth # N0209**



## Guangdong Chin Chak Trading LED Headlight

This LED headlight is compatible with a huge range of different cars. Running on the common 12-volt, 40-watt system, it's low in power consumption yet provides a good source of light. It is simple to plug in, and heat sink fins behind the LED ensure stable operating temperatures and longevity.

**Booth # NO605**



## Hanma LED Auto Lights

With a broad range of products, Hanma's LED illumination options include light bars, driving lights, work lights, and cube lights. With power ranging from 9 to 300 watts, they're all IP67 waterproof, allowing them to be used in the most extreme environments and making them suitable for everything from all-terrain vehicles to construction and agricultural machinery.

**Booth # N0210**



## Evereon Industries Hose Clamps

Taking care of the smallest details, Evereon Industries hose clamps not only look beautiful, but their smooth edges ensure there are no burrs or sharp surfaces to damage the hose. Made of high-quality and stable material, the clamps won't fatigue or be otherwise affected by hot or cold temperatures.

**Booth # K1127**



## Hu Lane Associate Inc Low Voltage EV Charging Module

As electric motorcycles grow in popularity, their makers need new ways of getting the juice in. This charging module is specifically designed for low voltage applications. It rigidly holds the charger in place, but if removed its weather- and dirt-resistant cover snaps back into place so that electricity can get in, but water and grime stay out.

**Booth # IO703a**



## Flex Wiper Enterprises 618 Metal Wiper Blade

These adaptable wiper blades are rated to last over one and a half million cycles. Easy to install on j-hook arm designs, they use a corrosion-resistant 1.2mm galvanized steel frame and stainless steel rivets to further prolong their lifespan. A unique frame shape also enhances the part's structural strength and imparts a clean look.

**Booth # K0725a**







## Keyence R-2000 1D/2D Code Reader

With an ultra-wide field of view, the SR-2000 series code reader can work at a range between 50mm to 1,000mm. With a greater depth of field at longer ranges, it's also able to read objects on the move. Weighing around 300 grams, an IP65 rating means it's immune to dust and resistant to damp.

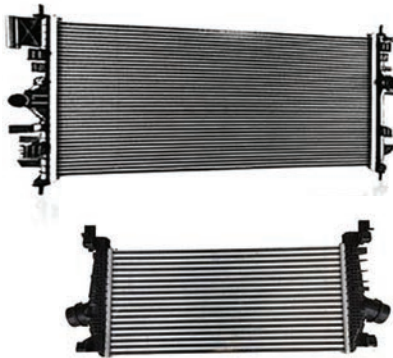
**Booth # 10017**



## Guangdong GW International Group Radiator

Light, efficient and economical. The wind-resistance of this compact radiator is very small, yet thanks to a clever design it manages an outsize level of cooling efficiency. By keeping the engine safe, even at high temperatures, it provides insurance against breakdown in even the most testing conditions.

**Booth # N0306**



## SLO Auto Motor Accessories LED headlight

This high-quality LED motorcycle headlight has twin 8-watt ow beam and far light function. Suitable for all types of motorcycles, its traditional fitting houses a modern high-power light. It's made of high-quality aluminum, that stabilizes the temperature and enhances the headlight's lifespan.

**Booth # L1330**



## Tzer Li Enterprise Oil Pump

Established in 1982, Tzer Li Enterprise Co. provides European and Japanese truck parts, including all kinds of rubber, plastic, aluminum and steel items. Located in the south of Taiwan, it's close to both Tokyo and Hong Kong making it easy for customers to visit. This high-spec oil pump is one of its latest products.

**Booth # K0216**



## Quitewin Battery Monitoring System

Always know your battery capacity in realtime via your smartphone. Able to address five different batteries for families with multiple cars, Quitewin's Battery Monitoring System can also check the functioning of the alternator, belts, connections, wiring, and controls to offer an early warning of failure. Easy to attach, it'll also create a daily and yearly record of battery performance.

**Booth # M0304**



## Speed Metal International Gasoline Saving Additive

This easy-to-administer fuel-saving additive uses the XSnano formula to lubricate, clean, and protect your vehicle. It also claims to increase fuel efficiency, boost engine power, and lower harmful emissions and pollutants. Designed to help remove pre-existing carbon residue and sediments, it should reduce maintenance costs and extend a vehicle's lifespan. **Booth # S0719**





## Richman Brother Auto Water brush

The auto water brush that can be extended from 39 to 63 inches to reach the trickiest spots. With an built-in soap dispenser to regulate the amount of cleaning product, it can also be directly connected to a water pipe. With an on-off nozzle to regulate the flow, its light and robust aluminum shaft features a comfortable foam grip.

**Booth # 10015**



## Tumold Nature Design Car Air Purifier

Taking just five minutes to filter all of the air in the car once over, the Tumold Nature Design Purifier uses an advanced HEPA h12 filter to provide a clean air delivery rate of 51.9 cubic meters an hour. With a unique fragrance spreading function and the ability to add filter cores to adjust the total between one and four, it's also suitable for use at home.

**Booth # L0022**



## Nagao Techno Reconditioned DPF, DOC & SCR filters

Nagao Techno's slogan is "perfect rebuilt parts." Taking care of the entire diesel exhaust after-treatment sequence, its new range comprises remade Diesel Oxidation Catalysts (DOC), Diesel Particulate Filters (DPF) and Selective Catalytic Reduction (SCR) catalysts. Using completely new filters, but saving other components, the refinished components are almost indistinguishable from new, but with a reduced cost and lower environmental impact.

**Booth # N0310**



## NUK Auto Parts Engine Cooling System Water Pump

One part of NUK's extensive manufacturing line is a range of water pumps for heavy duty applications. The latest addition to the brand's lineup is an engine water pump for the Komatsu S6D125 engine. It comes painted the correct yellow shade to match the original.

**Booth # I0612**



## Veleo International Carbon Fiber Steering Wheel

This carbon fiber car steering wheel boasts such advantages as higher strength, lower weight, and improved corrosion resistance. Formed into a complex ergonomic shape it has an improved feeling in the hand, along with a high-friction, anti-slip design. By putting the driver into a superior position, these features help direct the car exactly where you want it.

**Booth # N0609**



## Star Material Chameleon Spray Film for Lights

This highly flexible transparent color film can be sprayed directly onto surfaces such as car light housings. With two parts to the applicator spray mechanism, but only one pass necessary, the product creates a tinted appearance easily. The film adds basic protection from road debris, but can be easily removed.

**Booth # L1107**







## Adlee Powertronic E-Vehicle Traction Module

This traction module for electronic vehicles allows for regenerative braking, controls speed and torque, switches between forward and reverse, and monitors temperature, with all functions underwritten by overcurrent protection. With the option to switch between normal and turbo modes, the system benefits from easily integrated RS485 communication to allow the display of key metrics from the motor, battery, and vehicle itself.

**Booth # Q0327a**



## World Top Supply Chain Group Window Rolling-Up System

A leader in all manner of electromagnetic products such as onboard diagnostic linked speed locks, window closers, and auto headlamps, World Top Supply Chain Group introduces a new intelligent window rolling-up system. Simple to install and even simpler to use, it adds automation and security by automatically closing the windows when you lock the car.

**Booth # NO305**



## Hongkong Brightfort Co., Limited Off Road Light

This 10-30V DC off-road light has a color temperature of 3000-8000K. Uses include auxiliary driving light, SUV, car roof light, emergency light, work light, inspection light, or lighting for ambulances and construction vehicles.

**Booth # NO205**



## Challenge Industrial Electric Vehicle Chargers

Soon to be as ubiquitous as the petrol station filling pump, this AEVQC Series Electric Vehicle Fast Charger features high-frequency switching power supply technology. Providing charging through its intelligent charging-control algorithm based on digital DSP and PWM control technology, its power range is 60kW-150kW, making it suitable for public parking lots, bus charging stations, and highway service areas.

**Booth # Q0227a**



## Yangli Trading LED Work Lights

A high-quality die-cast aluminum housing provides a home for these LED work lights. Their high brightness and robust design equip them for a wide range of uses, from illuminating the wilderness on off-road vehicles to shining the way for construction workers. Also launched by the brand this year is a new range of signal, tail, and warning lights.

**Booth # NO613**



## Phihong Technology EV chargers

Phihong has developed a family of efficient EV Charging products, including a DC charging module, auxiliary power control and supervisor Unit (CSU), a discrete type DC charger, and a portable roadside assistance DC charger. The range caters to electric buses as well as private vehicles. It also offers software solutions and cloud-based management, which can be used for data analysis. **Booth # Q0123a**





## Aimmet Industrial Co. Super Waterproof FAKRA SMB Connector

Designed in response to the trend for smaller and smaller camera modules, Aimmet has specially designed this HSD and FAKRA series connector. Rated to the IP68 waterproof standard it allows a neat and direct match with the rear of the camera module's housing. It's part of a huge range of connectors able to comply with the requirements set by the automotive industry for high-speed data transmission.

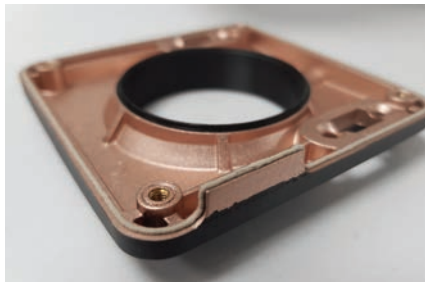
**Booth # P0121**



## Affiniti International Consultants Acushield Form-in-Place FIPG Gaskets

The Acushield form-in-place gasket application process precisely guides a fluid dispensing nozzle under CNC control. This enables the continuous application of intricate, small cross-section gaskets directly onto the contours of a component or substrate. With oil and fuel resistant material available the process boasts very low waste, along with the ability to create complex gaskets with minimal tooling costs.

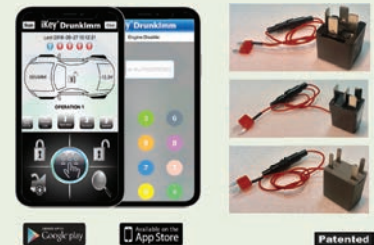
**Booth # P0630**



## Tesor Plus Drunk Immobilizer

Using an app with a randomly ordered and colored keypad, only inputting the correct code within a limited time will disable the wireless relay and start the car. The idea being that inebriated drivers won't be able to accomplish this complicated task. Automatically activated three minutes after the ignition is switched off, the app can be paired with up to five smartphones and will even help you locate your vehicle.

**Booth # P0314**



## Elig Brake Technologies Sintered Pads Standard

Manufactured from a sintered formula for low wear and a long life and made using an ecologically sound method and without asbestos, these pads provide superior driving safety and braking performance. Designed to be heat-fade resistant and perform well in severe and muddy conditions, they're ideal for motorcycle riders who want better braking than they get from stock ceramic pads.

**Booth # R0714**



## Choice Top Electronics Motorcycle Bluetooth Intercom Headset

The X-2 device can connect to your mobile phone via Bluetooth and allows you to receive phone calls, GPS voice instructions, and enjoy music from your mobile phone while riding. Besides this, the X-2 can pair to another headset in order to communicate with your pillion passenger or another rider within a 500-meter radius. **Booth # R1212a**



## Aspirit Enterprise Low-Pressure LED Valve Cap

See what state your tire pressure is in with a single glance. These clever valve caps light up to indicate the pressure level in each wheel. With red meaning immediate action is needed, they're a simple and low-cost way of improving safety. Benefitting from the standardized Schrader valve sizing, they're also universal and easy to fit.

**Booth #: P0223a**





## MOTORCYCLE

### CMI Continental Marketing International Motorcycle Front & Rear Stand

This easy fitting stand can be attached to either the front or rear wheel for convenience. Quickly assembled, and taking up a minimum of space when not in use, it nevertheless provides a stable platform for the bike. With in-built wheels, it makes maneuvering the bike easy, even with one hand.

**Booth # R0909**



## MOTORCYCLE

### Magura Asia HC3

The HC3, made from a CNC-machined aluminum housing, is designed for superbikes, supermotors and road sports specialists. The master cylinder is fully machined from solid aluminum to ensure it is both extremely rigid and extremely light. With a 90-degree radial design, the HC3 features a 3-way adjustable lever bearing point, Advanced Seal Technology and titanium fixing screws. It is ABS-compatible.

**Booth # R1109**



## MOTORCYCLE

### Looking Technology WIFI Motorcycle DVR

The compact dual-channel digital video recorder for motorbike riders covers front and back with a wide 160-degree viewing field. It could provide the evidence a rider needs in case of a collision. For crystal-clear images, it uses a waterproof lens and full-HD 1080P recording, while WDR technology improves video quality under high-contrast lighting conditions. With WiFi connectivity, riders can easily review the footage on your smartphone.

**Booth # R0919**



## MOTORCYCLE

### Paultex Hosiery Pro MX Sock

These cool looking camouflage socks boast plenty of motocross features. Knee-high in length and made of moisture-wicking materials, they'll keep you comfortable in extreme conditions. Made to fit with boots, the thick knit in the heel and sole offer comfort and shock absorption. Created from high-density material for durability, they employ a ribbed arch and ankle for fit.

**Booth # R0920**



## AMPA

### CMI Continental Marketing International Universal Pulley Holder & Fan Clutch Set

Adjustable to take on a range of common jobs, the CMI Universal Pulley Holder and Fan Clutch Set uses a variety of different screw-in pins to fit multiple different standards. With heads between 6-10mm, 8-11mm, 10-12mm, and 11-16mm, the wrench itself is adjustable between 1-1/2 to 8-5/8 inches. **Booth # N0202**



## MOTORCYCLE

### Shuenn Yueh Stem Comp Strg

A specialist in forging parts for motorcycles and other vehicles, Shuenn Yueh's latest product is this Stem Comp Strg, also known as a stem comp control. Bolting through the frame, it takes care of the steering while also providing a platform for the front suspension. This particular design is especially rigid because of its triangular assembly.

**Booth # R0304**



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# Nangang Exhibition Center

## Hall 1, 1F



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# Nangang Exhibition Center

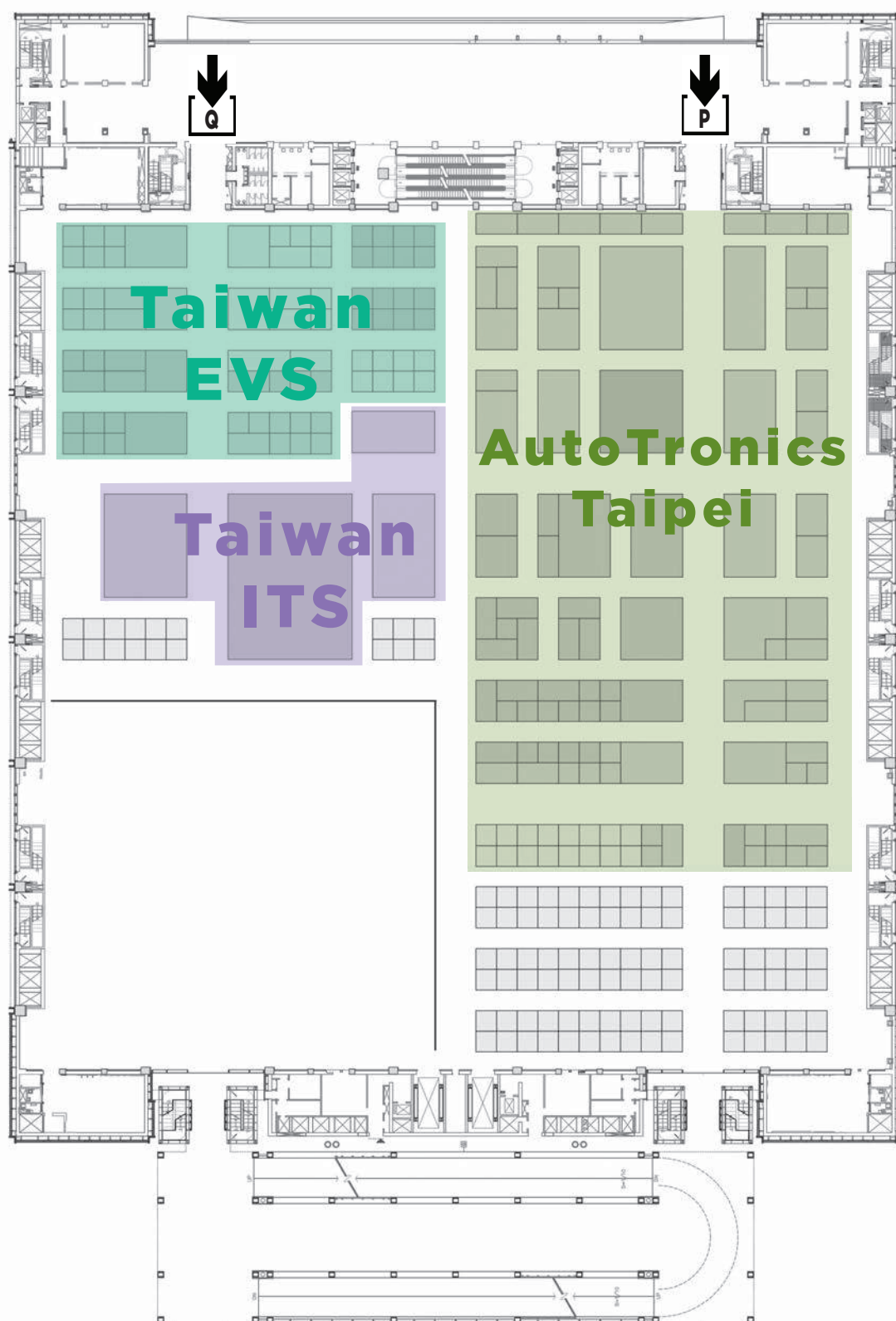
## Hall 1, 4F



**AUTOTRONICS****EVS****ITS**

# Nangang Exhibition Center

## Hall 2, 1F

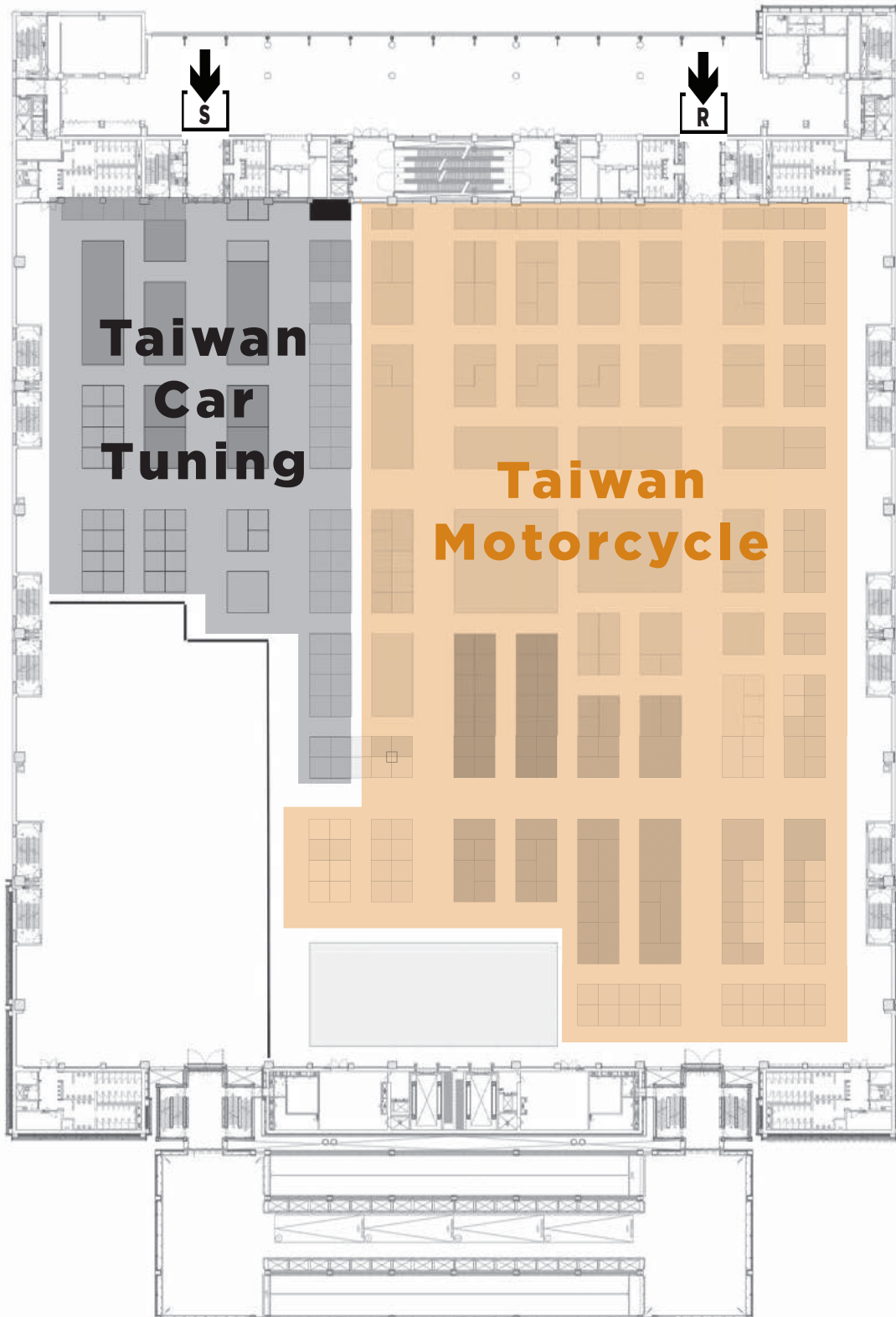




**CAR TUNING****MOTORCYCLE**

# Nangang Exhibition Center

## Hall 2, 4F



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## SHOW PREVIEW

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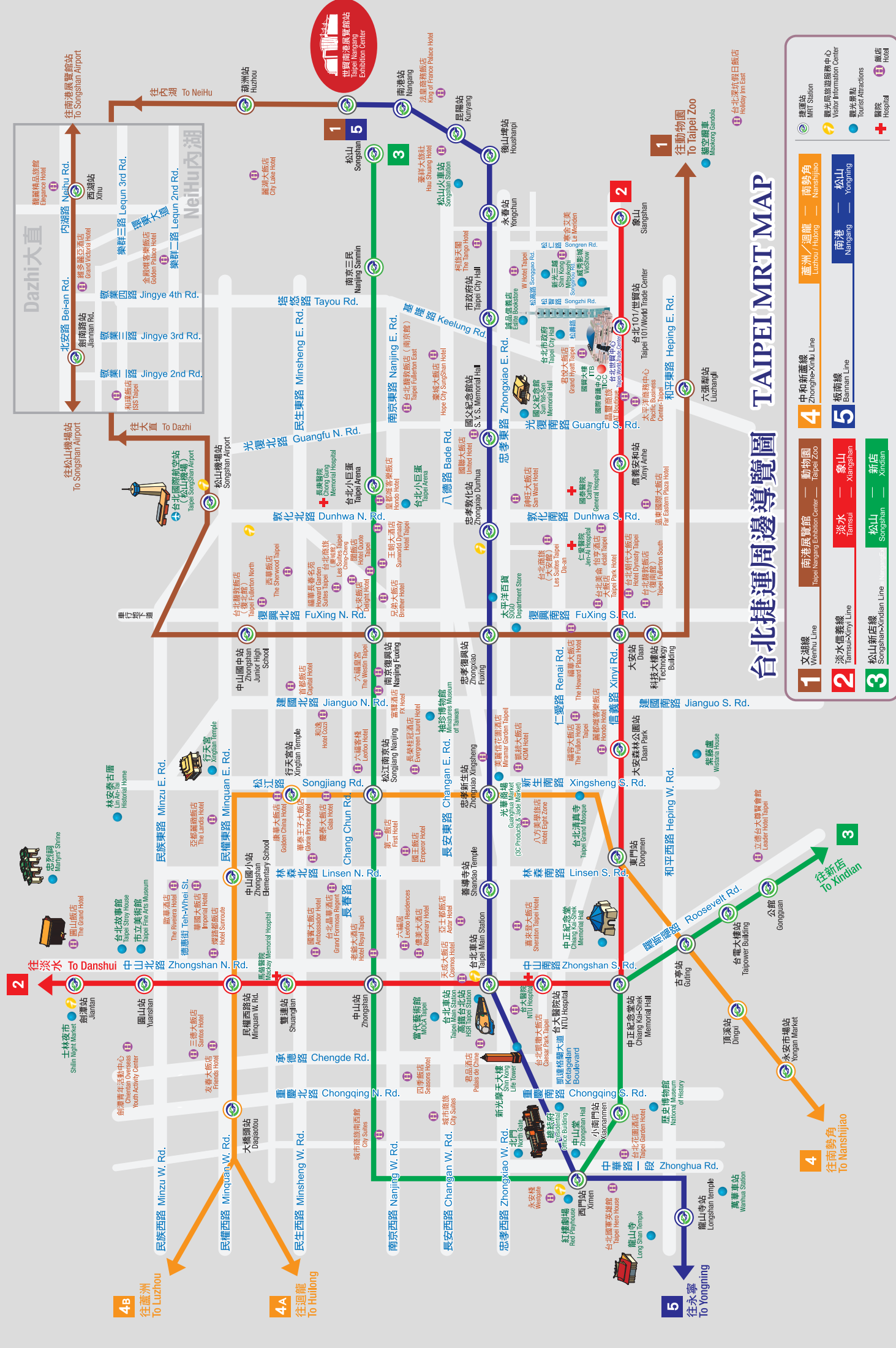
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# 台北捷運周邊導覽圖

## TAIPEI MRT MAP

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6 南港展覽館 Taipei Nangang Exhibition Center	7 動物園 Taipei Zoo	8 象山 Xiangshan	9 南港 Nangang	10 松山 Yongging
11 松山機場 Songshan Airport	12 台北101/世貿中心 Taipei 101/World Trade Center	13 台北101/世貿中心 Taipei 101/World Trade Center	14 台北101/世貿中心 Taipei 101/World Trade Center	15 台北101/世貿中心 Taipei 101/World Trade Center



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