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English Abstract Edition



TO GAIN INTERNATIONAL VISIBILITY, ELETTRONICA AV HAS BEEN ENRICHED WITH A SPECIAL “**ENGLISH ABSTRACT EDITION**”, PUBLISHED AND DISTRIBUTED IN DIGITAL FORMAT. CONTENTS ARE CAREFULLY SELECTED ACCORDINGLY TO THE MAIN TOPIC-AREAS: ELECTRONICS MARKETS, COMPANIES AND INNOVATION.

ELETTRONICA AV “ENGLISH ABSTRACT EDITION”

IS AIMED AT EUROPEAN INTERNATIONAL CORPORATE MANAGERS, MARKETING AND SALES, BUYERS, CONSULTANTS AND ELECTRONICS PROFESSIONALS.



8 *There is much concern about a global shortage of semiconductors and electronic components that will last until 2022, due to the impact that this situation may have on the recover.*

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by Fritz Walter

“Groundhog Day”

It is on such an important date for Italy and the Italians as 25 April that the Government sent Parliament the text of the PNRR, the National Recovery and Resilience Plan. This is the chapter that interests us most within the Next Generation EU programme, that 750 billion euro package agreed by the European Union in response to the pandemic crisis that we have already talked about many times.

This epochal action, designed to mitigate the economic and social damages caused by the coronavirus crisis, will also help (we can not hide it) to resolve the structural weaknesses (both economic and social) of a nation that for too many years has been in disarray and with a system of governance composed of “unfair” politicians (they tended to only hold the elected seat) who did not shine in terms of institutional capacity and “thickness”, culture or quality.

It is no surprise that the PNRR, as indicated by Brussels, has as its main beneficiaries the depressed areas of the “Mezzogiorno” (Italian word for the regions in the southern area), women and young people in order to accompany Italy on its path towards a more modern ecological and environmental transition. Also, it should propose measures to support the social inclusion and to focus attention on the poor with the aim of reducing visible inequalities. So, what is the true novelty of this?

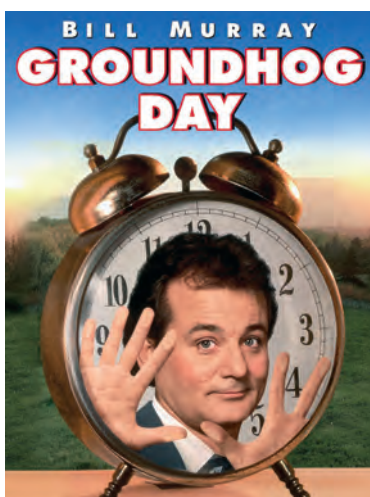
For years, many years, too many years, we have held out our hand to Europe and then have dropped a lot of cash It has offered us. For example, the “Structural and Investment Funds”, that were supposed to support the Europe 2020

strategy, and some more like the European Programming Funds 2014-2020 including programmes such as Horizon, Creative Europe, Life, Connecting Europe Facility, Cosme and so on. Don’t even get me started on, it would be very bad.

We can say that precisely the same thing happens in the movie directed by Harold Ramis where characters have to live through boring days and finding themselves constantly replaying the same situation while each time looking at it from a different point of view. Apparently we are willing to risk our own socio-economic survival (I repeat) but how many more times? We have to remember that the billions collected within the programme Next Generation EU, or similar like Sure, will be financed by issuing a common European debt with individual Member

Countries repaying the funding lent to them. Commitments are being honoured through cuts to other European funds and across services of individual Member States or (alas!) by increasing the internal taxation of single Member Countries. Major and structural reforms related to Public Administration, Justice system, Competition and Simplification in exchange for the money given by Europe are at the core of our own growth and are emerging from the recent and well-designed National Plan of Recovery and Resilience (PNRR) that, as many have noted, is quite different from that of previous Conte-bis.

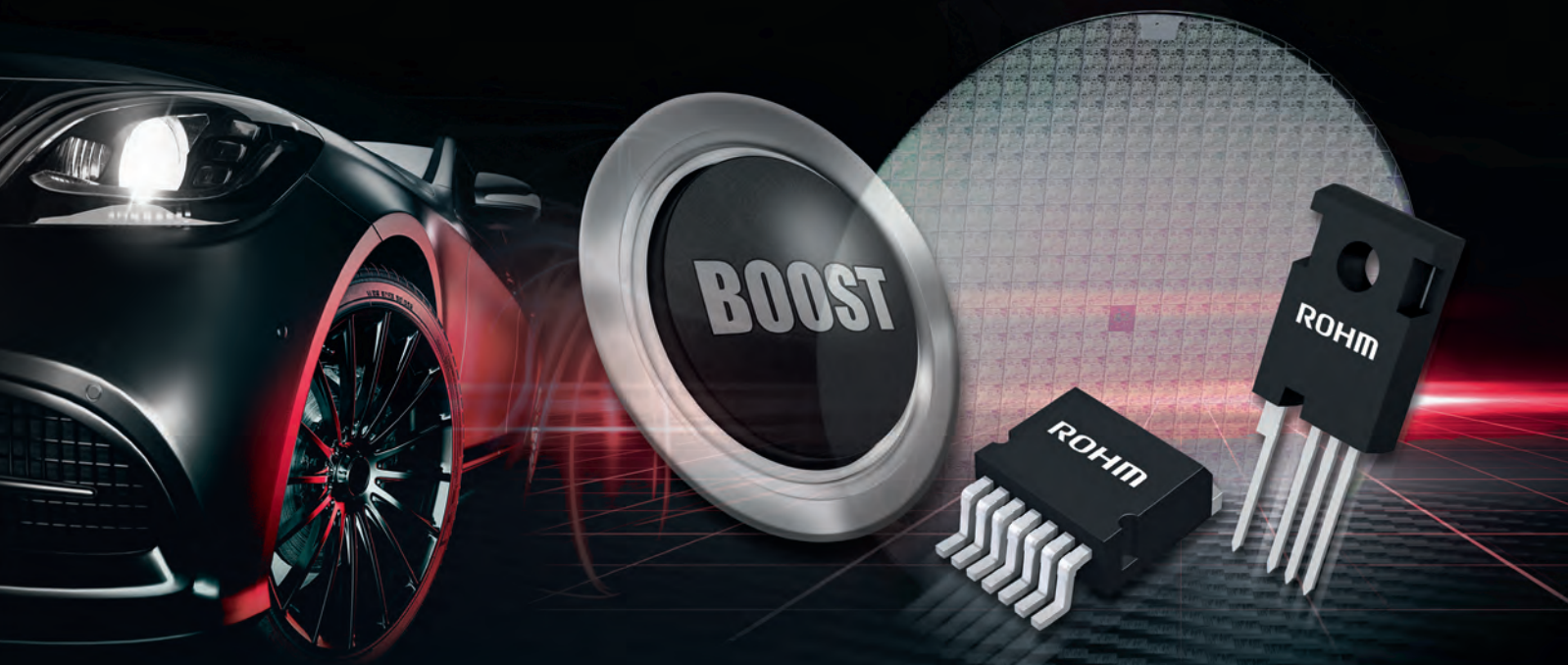
All in all, the characters of the movie have changed. Let’s hope the ending of our film could also be different and maybe, just maybe, tomorrow morning we would finally wake up not listening to “I Got You Babe” anymore.



WITH THE ORIGINAL TITLE
“GROUNDHOG DAY”
THIS 1993 MOVIE,
STARRING BILL MURRAY
AND ANDIE MACDOWELL,
OVER THE YEARS
HAS BECOME
A “CULT CLASSIC”
AMONG CRITICS
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by Alan Friedman

Biden as Roosevelt?

After 100 days of the Biden presidency we can really begin to say that America is back. Really. Joe Biden is not only vaccinating America incredibly quickly. He is also giving the U.S. and world economy a turbo-charged boost with a plan to spend \$6 trillion dollars on a range of rescue, stimulus, infrastructure and health, education and welfare plans that include the biggest job creation and anti-poverty programs seen in America since Franklin Delano Roosevelt.

Biden is committing the equivalent of 29 percent of America's annual GDP. Italy is spending €190 billion and adding €30 billion of deficit funding to reach its €220 billion NextGeneration EU plan. This is a large number for Italy, some 12% of Italian GDP. But if Italy were able to spend at American rates (meaning at the equivalent value of 29%) it would be spending more than €500 billion! Think about how many jobs that would create!

No wonder the U.S. economy is soaring with a strong rebound. Nearly 50% of Americans are vaccinated and the first quarter U.S. GDP growth indicates it is likely there will be at least 6.4% of annual GDP growth in 2021. And remember, there will be hundreds of billions of dollars of the Biden spending program that will end up in the coffers of European exporters and other companies, the smart companies that will take advantage of public investments in U.S. So the Biden spending spree will benefit the world economy as well.

But what stands out in Biden's spending plan the most is his radical approach, enough to satisfy Bernie Sanders and Elizabeth Warren and then some: spending on infrastructure that could create many millions of jobs, free college education, significant anti-poverty aid, financial aid to mothers with children, to the working poor, to the lower rungs of society.

The plan is for all of it to be taxed by higher taxes on companies and on Americans earning more than \$400,000 a year. And the most radical and leftwing policy of Biden is to double capital gains tax from 20 to 40% for those Americans who earn more than \$1m in a single year. America is going to have wealth taxes, finally. For decades Clinton, Bush and Trump repeatedly reduced spending on social assistance, they cut the safety net to shreds. Joe Biden will try and use fiscal policies to create a new social safety net for America. A big one. America has not seen such radical economic and social policies since Roosevelt in the 1930s, or since Lyndon Johnson in the 1960s.

President Biden is making history with his vision of Roosevelt-style New Deal funding that includes \$1.9 trillion of stimulus funding and a proposed \$2.3 trillion of jobs and infrastructure spending and now \$1.8 trillion of welfare assistance, free community college for all students, anti-poverty measures like legislating a minimum wage and more. Some of the plan will be watered down in Senate haggling but Biden has the votes to do much of what he wants to.

Importantly, Biden is committed to not merely economic growth that is inclusive in social terms but also to gender equality and racial justice through economic policies. That is historic. It is also historic that women and blacks and hispanics and

Asian Americans and LGBTQ people are all emerging in American society in a new challenge to the establishment authority of older white males. America is changing under Biden, more than it did under Obama.

Until now, only two American presidents have introduced sweeping social change with vast spending programmes aimed at job creation and social equity: Roosevelt and Johnson. It seems to me that Joe Biden may be the third, and his impact on America, after years of rising income inequality, could be of historic proportions.



Alan Friedman,
journalist, writer
and economics expert

Anie is ready for the recovery

What are the ways to catch up the post-pandemic recovery according to the Italian companies operating in the electrical engineering and electronic industry? We have asked it to **Maria Antonietta Portaluri**, General Manager at **Federazione ANIE**.

by Virna Bottarelli

Maria Antonietta Portaluri has no doubts: the way for recovery is the technological evolution. Contract lawyer and General Manager at Federazione ANIE since 2008, she believes that to recover the ground lost by Italian hi-tech companies in 2020 – the worst year in terms of revenue since 2009 – we need to focus on digital and sustainable evolution of the Italian production system by spending well the resources of the National Recovery and Resilience Plan (our PNRR Plan).

“The PNRR plan represents an extraordinary opportunity to relaunch the Italian manufacturing sector and it is functional to its repositioning in the global competitive scenario. Colossal public investments will be necessary to recover the ground lost and to relaunch our economy: it means to give more money to the Research and Development and to promote the private investments by easing the innovation inside our companies and strengthening their competitive ability”, says the General Manager. “Considering the green and digital transition and the greater use of digital technologies, especially during this last year, I also believe that our companies should be able to see the point of the market evolutions and choose the right opportunities that will be offered by the post-pandemic context.”

The Federation managed by Portaluri can properly support those companies that are dealing with the achievement of these goals by offering professional development programs: *“ANIE has always believed and invested in professional training, especially in this moment when the digitalisation of organizational and industrial processes has*

been sped up by the crisis and advanced technological skills are needed in today’s workplace. The ongoing transformation is not only technological but it has a cultural dimension which concerns the role of the entrepreneurs, of public policies and of the individual workers. This is the reason why we are always searching for new education models which can help those who needs to perform new tasks and acquire the necessary knowledges”.

How did you proceed to cushion the impact of the crisis on your companies in 2020, above all during the lockdown? And how are you still supporting them?

ANIE represents all those technological companies who, during the lockdown months, were at the forefront to guarantee the essential public services: from the keeping of electricity infrastructure to the public transport, from the maintenance of building technological plants to telecommunication sector. During the first months of lockdown, we asked our Government the “safe” reopening also of all the production activities, regardless of Ateco codes, by supporting our companies in the definition of Covid safety protocols in the factories as well in the building sites. In the first phase, ANIE obtained some significant measures like the price anticipation in the contracts and the advance billing to give companies the liquidity they needed. We should now consider to organize the refunds on investments for additional safety measures against Covid in any public and private contracts that companies will be forced to bear and to introduce some price review or some equalization systems to adjust the very much increased price of raw materials.

ISTAT data about the February industrial production show a positive trend and good performances for some ANIE sectors: which is the feeling of the companies?

According to ISTAT data, the Italian Technology industry – Electronic and Electrical Engineering – represented by ANIE recorded in February a positive sign on trend base in the industrial production: +3.8% the monthly shift compared to February 2020 (-0.8% the corresponding change with the average in the manufacturing industry).

Despite the increase of restrictions in Italy, Technology industry achieved good results in the first two months of the current year also thanks to an acceleration of foreign demand. This improvement should be considered within a macroeconomic context with a high level of complexity, unpredictability and uncertainty. The health emergency and its containment measures were a real shock for the economy and the ongoing uncertainty is still affecting the investment decisions and business operativity. Regarding the demand evolution in the coming months, the quantity and quality indexes show a careful optimism strictly linked to the success of the vaccination campaign.

According to your opinion, can Draghi's Government provide the conditions for the realisation of the "industrial policy project meant to ease those technologies which enable the digital transformation of Italian companies" as wished by the President Busetto during the ANIE Annual Meeting in the last October?

Draghi's Government is still carrying on what was already began with his predecessors. The National Industry 4.0 Plan, the main instrument for our industrial policy within the latest Budget Law and also included in the PNRR - National Recovery and Resilience Plan, is impressive and provides continuity with some improvements in terms of quantity and time planning to what has begun in 2017 and now extended to the end of 2022. Furthermore, the recently published Economic and Financial Document seems to resolve the question concerning the financial coverage of the non- 4.0 material assets (it was known as super-amortization) which were not included in the National Recovery and Resilience Plan while now they are.

What about the ANIE's companies in the international context? Which are their strengths and weaknesses?

ANIE's companies have traditionally an international vocation. The foreign channel represents an important growth driver for the field: the export ratio on the whole revenue is structurally more than 50% and our exporting enterprises amount to 40% of the total (twice in comparison to the average for the manufacturing industry). In the last years, our companies have strengthened the stronghold in foreign markets and diversified the target markets from a geographic point of view by achieving growth opportunities outside the traditional European borders.

Besides the big actors, the industrial players represented by ANIE include a structured production system made up by SMEs whose strength is the offer of customized products and the supply of high innovative technologies on turnkey projects. Working in the foreign markets for the smaller enterprises is a challenging process and one of the weaknesses comes from the size of the company itself, which sometimes can represent a difficulty for the production chains working in the great infrastructural projects. E



Maria Antonietta Portaluri,
General Manager at Federazione ANIE



The impact of shortage on economics growth

There is much concern about a global **shortage of semiconductors** and **electronic components** that will last until 2022 and, above all, due to the impact that this situation may have on the long-awaited recovery from the sector.

by Alan Friedman

If in the last issue of this magazine I dealt with the global crisis in the semiconductor supply chain, and if I come back to it now dear readers, it will be because the situation has worsened and the problem has spread in a short time and now it risks extend.

The other reason is that we need to understand and follow the trends in the global chip market because it could have a detrimental impact on the recovery, on global growth. It is an important risk factor for the macroeconomic situation. In other words, the current global shortage of semiconductors is

not just a case study of the impact that Covid has had on supply chains and production trends; it is also one of the biggest factors that could weaken the strength of the recovery in the United States and Europe and globally in 2021. President Joe Biden has been clear and decisive. He has rapidly assumed a leadership role and has tasked a top group of White House advisers to create a working group. To review proactive industrial policy for the chip sector. The issue is considered so urgent and strategic that it is being coordinated by the President's National Security Adviser, Jake Sullivan. In

February Biden ordered a 100-day review of the semiconductor supply chain in terms of U.S. national security. He also had a virtual meeting with the CEOs of 19 big companies. Congress is meanwhile backing legislation that Biden has proposed to insert into government infrastructure spending plans some \$50 billion of new funding for the U.S. semiconductor sector. But the situation remains difficult. Building a new semiconductor production facility can take billions of dollars and more than one year to complete. There is no quick fix, no rapid cure. So the new consensus among leaders of the semiconductor industry is that the crisis may improve slightly in the second half of 2021, but it will probably continue to cause problems until the middle of 2022.

Automotive sector is concerned

Car makers have been suffering the most, in Europe and the U.S. but now the problem is affecting **Apple** and other big home electronics companies. At the end of April, **Jim Farley**, the CEO of **Ford** said he believed that the global semiconductor shortage would not be fully resolved until 2022. Farley told investors that the ongoing chip shortage would cost it about \$2.5 billion and about 1.1 million units of lost production in 2021. *"Things will get worse before they get better,"* the Ford chief said. The same prediction came from **Pat Gelsinger**, the CEO of **Intel**, the world's largest chipmaker. He told The Washington Post that the global semiconductor shortage is going to take *"a couple of years"* to abate, as demand soars alongsi-

de limited manufacturing capacity. *"It just takes a couple of years to build more capacity,"* he explained. Gelsinger was among those senior executives who attended President Biden's virtual meeting. At that meeting, he said, medical equipment suppliers worried aloud about the lack of semiconductors.

The taiwanese reaction

Meanwhile, on the other side of the world, in Taiwan, the top producers are moving swiftly to meet the market demand and build additional productive capacity. The giant **TSMC** has committed to \$100 billion dollars of investment to build more manufacturing capacity. TSMC expects delays in the supply chain to continue into 2022, which could affect Apple and Qualcomm among others. The head of UMC, also one of Taiwan's biggest chipmakers, has also just announced plans to spend \$3.6bn to increase output capacity. *"Amid the semiconductor component shortage, we are working with our customers, suppliers and partners to alleviate the capacity tightness across the supply chain"* said the company's president, **Jason Wang**.

All of these developments are promising, but none of them deliver a short-term solution for 2021. And yet there is a silver lining in the cloud: There could be lower sales of smart phones and iPads and automobiles and many consumer products this year, but when the capacity is finally expanded, that pent-up demand should produce an even stronger rebound in 2022. 

Who is Alan Friedman

Alan Friedman is a journalist, writer, television host and economist. Correspondent for the *International Herald Tribune*, global economy columnist for the *Wall Street Journal*, he worked for the *Financial Times* in London from 1979 to 1993: in this period he was awarded with the *British Press Award* four times. He also had a professional experience as Presidential Management Intern in the administration of President Jimmy Carter. The scoop regarding the Iraqgate scandal in 1991, which involved the CIA and the Italian BNL, was one of his most famous.



The industrial market in a changing world

The pandemic, supply chain restructuring, changing energy sources, and **industrial automation** are among the factors that are shaping the outlook for the industrial market for **connectors** and the technologies that will drive it in the years to come.

by Ron Bishop

During 2020, making accurate predictions about the impact of the Covid-19 pandemic on the world economy turned out to be a difficult exercise. Even today, with the vaccination roll-out well underway in many countries, it remains to be seen how effective these will be against variations of the virus and how long it will take before we all need to be re-vaccinated. This uncertainty makes it difficult to predict the future outlook and performance for many industries, including the industrial market.

Apart from these considerations, there are other, less visible consequences of the pandemic. For example, how has and how will the Covid-19 pandemic influence our global supply chains? How will it affect our industries? And, as a result of all this, how will it affect the industrial market for connectors? In order to find out, we need to take a closer look at the manufacturing industry and energy sectors.

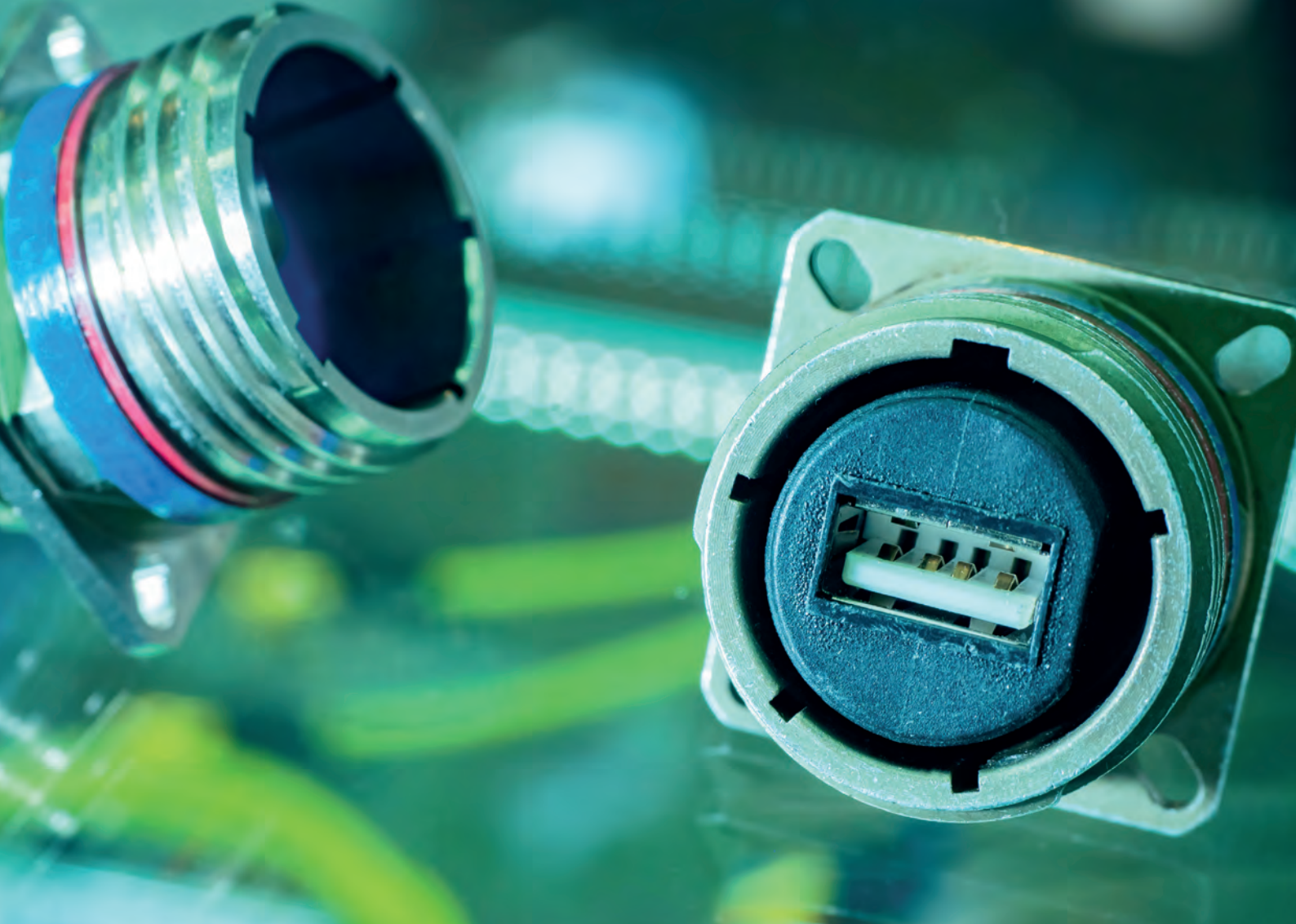
When we go back to the third quarter of 2020, the first surprise was that, after industrial production took a nosedive earlier in the year, the recovery was strong. Before the year was over, production output was back at 2019 levels. Instead of a long, drawn-out recovery, it turned out to be, at least for now, a V-shaped recovery. Global connector sales even broke records in Q4 2020. **Bishop & Associates** believes the connector sales growth experienced in 2020 largely came from a shift in demand, as societies around the world turned their focus away from services (dining

out, travel, etc.) and instead focused consumption on consumer goods (laptops, tablets, and white goods). Students and workers required new equipment as their schools and offices shut down and hospitals required additional equipment to treat the influx of Covid-19 patients. These conditions persist in many regions. Additional shifts came from a rise in demand for bandwidth capacity as more devices came online, requiring buildouts of server infrastructure. All of these conditions resulted in a skyrocketing demand for electronic components, as is clearly illustrated in the growth we have seen in the connector industry since mid-2020.

The key trends

These trends favor the computer and telecom/datacom sectors and do not necessarily boost all industrial markets. It is also important, however, to recognize there were already some megatrends shaping the manufacturing and energy sectors before the pandemic. These key trends include:

- **Digital transformation of the manufacturing industry, most notably the implementation of IIoT and Industry 4.0.**
- **Focus on energy consumption and a shift to cleaner, renewable, energy sources.**
- **Re-shoring of manufacturing (research from MIT Sloan School of Management and others indicate that some companies are restructuring their supply chains to get closer to the customer).**



If the pandemic did anything to the manufacturing industry - apart from disrupting it in the immediate short-term - it has probably accelerated the implementation of these megatrends. Digital transformation enables companies to improve their productivity and become more competitive, which will also allow them to shorten their supply chains and create regional production centers to serve regional customers better — of course, with the added advantage that shorter supply chains are less prone to disruptions. While some companies were already beginning to shift their

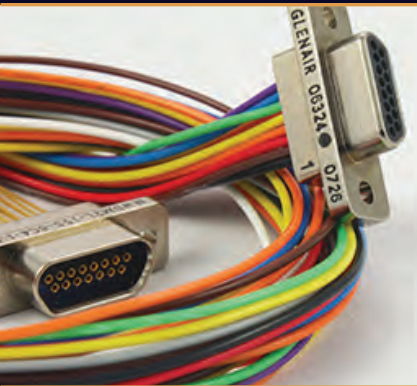
supply chains from global to regional structures, effectively optimizing them on a global scale to bring production facilities closer to the end user, the need to do this became more apparent during the pandemic. Shorter supply chains are more robust and positioning production closer to the point of consumption (closer to the customer) brings the advantage of being able to adapt quickly to changes in the market and customer demand, and to better anticipate changes in the industry's cost structures. The international competition we witnessed during the Covid-19

SEGMENT	2019	2020	2021	2021 VS 2020	2026	CAGR 2020-2026
Factory Automation & Machinery	5,312	5,165	5,542	+7.3%	7,286	+ 5.9%
Construction & Civil Engineering	852	846	893	5.6%	1,126	+4.9%
Energy Markets	1,150	1,126	1,203	6.9%	1,581	+5.8%
Industrial Equipments	586	584	613	5.0%	752	+4.3%
TOTAL	7,901	7,721	8,252	6.9%	10,747	+5.7%

Industrial connector market forecast by segment (2019-2026)
(billion dollar, source Bishop & Associates)

Hi-rel interconnection from Powell Electronics in Europe

Connectors, cables, value added assembly



Glenair

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Amphenol Aerospace

AB Connectors

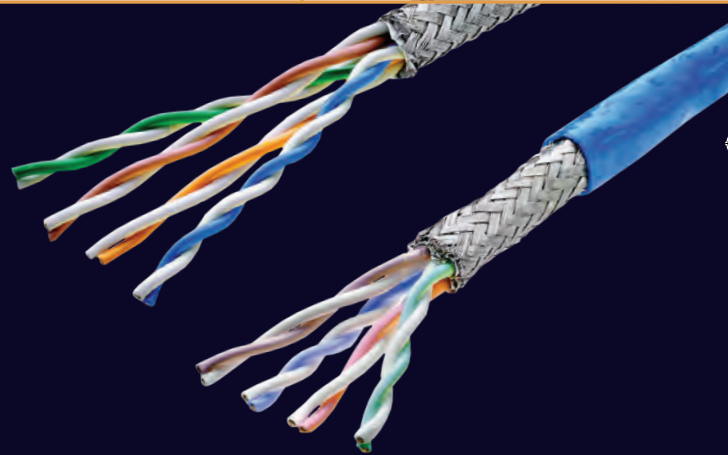
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pandemic for medical equipment, vaccines, and other resources only reinforced the need and the thinking that supply chains would better be short (i.e. preferably domestic) and manageable.

Re-shoring and off-shoring

When re-shoring - or in the other direction, off-shoring - several important elements are usually taken into consideration:

- **Cost** | Sectors with low labor costs and high logistics costs may bring production back home if the labor advantage in distant production areas is significantly reduced.
- **Level of automation** | Sectors that can increase productivity by means of advanced automation technologies are likely to bring production back home.
- **Innovation and intellectual property** | Sectors with relatively high R&D spending, particularly valuable intellectual property (IP) embedded within the manufacturing process, or significant patent applications may choose to manufacture at home to protect their IP.
- **Product quality and safety** | Sectors with stricter quality and safety regulations (e.g., food, drugs) are also unlikely to offshore production.
- **Essential business designation** | Businesses, sectors, or products officially designated as critical or essential by governmental authorities may not be allowed to offshore their production or certain parts of it. Military equipment would be a good example. Another example: Serum Institute

of India (SII), based in Pune, is the world's largest vaccine manufacturer, but the Indian government has restricted its exports, as there is a shortage of vaccines in India. Domestic need may outweigh obligations to service foreign customers.

- **Environmental regulations** | Criteria and costs to meet or exceed local emissions or pollution regulations may influence production location
- **Politics and geopolitical issues** | As we have seen in many trade disputes and also during the Covid pandemic, political tensions, trade disputes, and national interests can play an important role in the decision-making process to re-shore businesses. This would include (tax) incentives by (local) governments to attract new investments and companies.

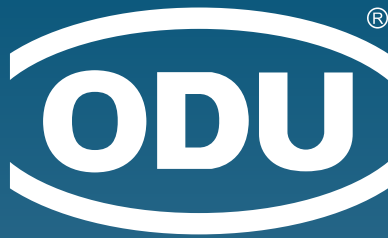
What it means for the industrial market for connectors will be determined by many factors, not just how the pandemic plays out. We'll see but how stimulus packages contribute to economic recovery, to what extent digital transformation in the manufacturing sectors accelerate, how we reorganize our supply chains, and, last but not least, how consumption patterns will develop in the aftermath of the pandemic.

For 2021, we expect a +6.9% growth of the industrial market for connectors versus 2020. Over the next six-year period (from 2020 to 2026), we expect the industrial market for connectors to grow with a compound annual growth rate of +5.7%, which is just below the global connector market growth rate of +5.9%. 

Who is Ron Bishop

Ronald E. Bishop is a world's leading connection expert. In 1985 he founded **Bishop & Associates**, a market research firm that specializes in the world electronic connector industry. The firm publishes "**The Bishop Report**", a monthly research newsletter and several weekly publications by connectorsupplier.com. A staff of 20 researchers produces reports centered on geographic regions, end-use equipment markets, connector products and interconnect technologies. The US headquarters is located in St. Charles, Ill., Chicago. The firm also has offices in Brussels, Sidney and Hong Kong.





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Fabless is beautiful (and profitable)

Revenue of **Top 10 IC Design Fabless** companies for 2020 undergoes 26.4% Increase YoY due to high demand for notebooks and networking products, says **TrendForce**.

by Cleopatra Gatti

As WFH and distance education became the norm, TrendForce finds that the demand for notebook computers and networking products also spiked in response, in turn driving manufacturers to massively ramp up their procurement activities for components. Fabless IC design companies that supply such components therefore benefitted greatly from manufacturers' procurement demand, and the IC design industry underwent tremendous growth in 2020. In particular, the top three IC design companies all posted YoY increases in their revenues, with **Nvidia** registering the most impressive growth, at a staggering 52.2% increase YoY, the highest among the top 10 companies. According to **TrendForce's** latest investigations, **Qualcomm** was able to overtake **Broadcom** for the leading position in the top 10 list primarily due to two reasons: First, the sudden demand surge for network devices; and second, Apple's

decision to once again adopt Qualcomm's base-band processors. Incidentally, US sanctions against Huawei also prompted other smartphone brands to ramp up their production volumes. Taken together, these factors collectively drove up Qualcomm's revenue last year. Likewise, although the US-China trade war hampered **Broadcom's** performances in 1H20, its smartphone RF front-end became a crucial part of Apple's supply chain in 2H20. Even so, **Broadcom** fell to second place in the rankings, since its revenue growth was relatively minor. The Mellanox acquisition substantially bolstered the depth and breadth of **Nvidia's** data center solutions, which generated nearly US\$6.4 billion in revenue, a 121.2% increase YoY. Owing to its data center solutions and gaming graphics cards, which performed well in the market, **Nvidia** posted the highest YoY revenue growth among the top 10 companies, at 52.2% as previously mentioned. 

Rank	Company	2020 Revenue	2019 Revenue	2020 vs 2019
1	Qualcomm	19,407	14,518	+33.7%
2	Broadcom	17,745	17,246	+2.9%
3	Nvidia	15,412	10,125	+52.2%
4	Mediatek	10,929	7,962	+37.3%
5	Amd	9,763	6,731	+45.0%
6	Xilinx	3,053	3,234	-5.6%
7	Marvell	2,942	2,708	+8.7%
8	Novatek	2,712	2,085	+30.1%
9	Realtek	2,635	1,965	+34.1%
10	Dialog	1,376	1,421	-3.2%
TOTALE		85,974	67,995	+26.4%

Revenue ranking of the Top Ten IC design companies (million dollars, source TrendForce)



To be in “pole position” to face the future challenges

Always ready to support the change,
as **Gianfranco Cardamone** explains , **NXP Semiconductors**
is ready to seize the new opportunities for the automotive sector
and the industrial world.

by Laura Reggiani

The history of NXP Semiconductors is full of success stories and records: it is leader in semiconductors industry and ranks among the top experts in transistors and the first manufacture for integrated circuits; during the years NXP has become a reference point in the automotive and industrial fields.

Thanks to his deep knowledge of the semiconductors market and of the final fields of application, **Gianfranco Cardamone**, Senior Director at **NXP Semiconductors** for Emea South-East and Italy Country Manager, talks about the strategy of the company, increasingly focalized on the automotive and industrial fields, the current market situation and the opportunities for the semiconductors industry.

Who is NXP Semiconductors as of today? Which were the most important milestones of its development? What is its business model?

NXP is a global semiconductors company. Its headquarter is in Eindhoven, in The Netherlands, and has a presence in 30 countries with 29 thousand employees, 11 thousand engineers and 26 thousand final clients. If we consider the recent past, a crucial point is represented by the merge with Freescale in 2016. Both companies shared a similar financial situation and a complex process through the management of Private Equity Funds, even though they were operating on different markets: NXP was the leader of “payment & identification”, indeed Freescale had a strong presence in automotive and industrial sectors. The new company

strategy has been more focalized on automotive and industrial markets, without forgetting some strategic sub-segments of the mobile market – important for the development of cybersecurity, identification, and payment solutions – and of radio infrastructures of telecommunications (5G and 6G). The current business model has remained unvaried, but the value proposition towards our final clients has changed. We have moved from a single component-based offer (also including the corresponding tool chains of software and hardware development) to serve the market with a complete solution in terms of a final application. The ecosystem supporting these solutions is critical: we have been dedicating to its development for the recent years to help meet new opportunities and face new challenges.

During the years there were several mergers. What do they mean for NXP? Should we expect other ones?

Marvell for the wireless connectivity represents the most important acquisition for the last few years that we have finalized at the end of 2019. It has been significant in order to expand our wireless portfolio with technologies and Wi-Fi solutions that we did not have before. Thanks to the Marvell investment we have been able to complete our Wi-Fi portfolio, in terms of IoT, so to enter some markets like industrial, appliance and building control. Nowadays, the semiconductors market is crucial for each industry. The field can witness important M&A operations and it is currently experiencing a wave of consolidation even into a complex geopolitical scenario. Our CEO **Kurt Sievers** has recently assured how our NXP's board is always ON and pays continuous attention to the market movements concerning the integration of technologies. He has also expressed his willing not to do acquisitions *"whatever it takes"*, he has a clear strategy in his mind for the future.

What has changed during this first year and what will be changing under the guidance of Kurt Sievers?

First, Kurt Sievers was not externally elected but he has professionally grown in NXP and was trained for two years for the current position as NXP President by flanking Rick Clemmer, the previous CEO. It was a change in continuity, which helped Sievers in a difficult year like 2020 to better ma-

nage the transition without any dramatic change to the strategy, except for the tactic. Kurt is just proceeding with our industrial plan that was clearly explained to the analysts in September 2018: a three-year plan strongly focused on automotive and industrial.

We are still experiencing a pandemic period. What have been the effects of Covid-19 on your results? What are the expectations for 2021?

When it comes to revenue, 2020 closed in line with 2019. The first quarter of the year began in a good way, even for the automotive, then we suffered a sharp slowdown in the demand due to the first wave of Covid-19 but already in the third quarter many areas, starting from China, experienced a rebound. In the second part of the year, China fully offset the numbers by overcoming the initial forecasts and helping to cover the losses from other geographic areas like Europe which improved the demand only later. Moreover, during 2020 some fields of application has massively accelerated, in particular medical, home appliances and partially for us mobile thus compensating for automotive. Also industrial did well and our regular clients in the field continued their growth throughout the year. Our outlook for 2021 is positive despite the challenge of shortage and delivery delays that are becoming important source of news due to their effects on the economic system.

According to your opinion, what are the causes and the possible consequences in this?

The delivery problem started in the second part of 2020, mainly caused by the manufacturers of silicon wafers, I mean the global foundries, who after the restart of the market faced a greater demand of products dedicated to PC, mobile and consumer markets. We at NXP were able to cope with this global shortage of silicon at that time thanks to risk management and buffer stock policies. We have been experiencing imbalances between offer and demand since the second quarter this year. As of today we are not registering any alarm concerning possible slowdowns of the demand and we are strongly focused on guaranteeing a greater short and long-term production capacity. This is an exceptional, anomalous crisis with significant geopolitical effects: many semiconductors' companies are thinking about the reshoring of foundries to bring them back to North America or Europe.

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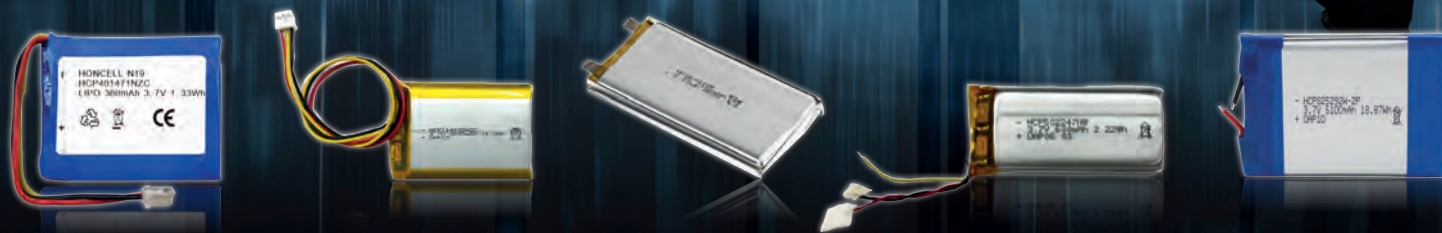
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THE MANUFACTURER

What role is Europe playing in the NXP's strategies? What does it mean in terms of investments?

Automotive comprises "demand creation" is particularly important for the EU market. Also industrial matters a lot. Many decisions about projects and platforms start from Europe and, for this reason, it is supreme for a company like NXP to guarantee its own coverage and technical support to the European R&D centres. The globalization shifted many production activities from Europe to APAC but strategic decisions are still taken here, in Europe. NXP invests a lot to support the European market, as confirmed by a revenue that is one-third worth of the global one, with money directly invested in client-supporting people and in the production. NXP allocates budget funds to advanced production plants specifically focused on cybersecurity solutions in Europe.

You entrust global players for the distribution. How much does the distribution count for NXP? Is there any chance of an evolution of its role?

The distribution for NXP has always been and still is an important demand-creation channel, especially in countries like Italy, characterized by a great fragmentation of the market and by small and medium-sized clients. Moreover, in the last few years the global role of the distributor has become more and more important also for his contribution to the complex supply chains of many big final clients. I think I am right in saying that the skills and the "value proposition" required to those who work in the distribution industry are changing due to technological drivers and supply chain support. When it comes to value creation, the technical skills go from artificial intelligence and machine learning to cloud, from big data to cybersecurity: they are all necessary to offer ready-to-use solutions. The role of the distributor is now associated with the capability to put all the parts together (solutions or contacts with companies and consultants) so to support the digital transformation offered by this specific period of time. This is a prime opportunity and a very good news. NXP can support both the distributors and the final clients by offering integrated solutions with reference board and development kit which benefit a quick time-to-market.

Gianfranco Cardamone,
Senior Director at NXP Semiconductors
for Emea South-East and Italy Country Manager

What has been changed in the electronics during the last 20 years? And what do you wish it still could change?

A lot has changed, but we have to always remember that we are operating in a field guided by the Moore Law. The change is still going on at a faster and faster speed. We should not be surprised by the innovation rate in the semiconductors industry. Electronics has become more and more pervasive and popular and it is affecting different fields, even those who used to be far from it. This is of help indeed, companies are changing their business model and creating new value. The semiconductors market is currently offering unique opportunities to every organization or company who wants and knows how to exploit them. According to my opinion, the potentiality of electronics in Italy has not been fully understood and optimized over the years and unfortunately this has led many companies to move their R&S activities outside our country. We are losing opportunities in a scenario that "technically" and theoretically appears to be simpler than the one it was the 1970-1990 era, during the so-called "golden age" of the electronics. 



An “alternative” distribution

Starday has always provided the market with brands and products beyond traditional proposition. This strategy was successful and took the company outside the national borders.

by Laura Reggiani

Independent distributor of active, passive, and electromechanical components in electronics since 1984, Starday has always focused on both clients, through products and services quality, and solutions, for specific needs, and on suppliers by supporting them in entering the Italian market and selling their products. The founders **Franco Fiorini** and **Giulio Pastorello** are at the guidance since ever, helped by **Livio Azzoni** – Marketing and Sales Manager - since some years. As they explained us, ever since Starday was founded it has presented itself as an expert in qualified and technological “alternative source” serving the market with innovative and quality products from “non-standard” providers rather than from top players. We have talked with them about the company and its business model, about the results and the growth plans.

What have been your main steps since the foundation of your company in 1984? How has Starday evolved in these nearly 40 years?

Starday has its origin in a feeling that was ahead of a market's need. It was the '80s years, a period of great development for the electronics and the components distribution. As Starday's founders, we suddenly needed to supply more products than what we expected and the natural shift was to create our own linecard to help better identify the company. The choice was to award new brands who approached the Italian market for the very first time and needed real advice and support. During these 40 years, the strategy has never changed, indeed it has become stronger like the company's mission of promoting un-common lines and products than those already existing.

Who is Starday up until now? What are its pros and its cons comparing to the other players?

Our business model is that one of the most tradi-

tional business plan in the business-to-business segment. We consider our own brands as strategic partners with requests and needs to meet. The acquired knowledge and professionalism, the ongoing education of our employees and the careful evaluation and qualification of our suppliers are since ever essential elements to our business. Not to mention our ability to understand and adjust ourselves to the needs of an ever-changing market with our typical flexibility and proactivity.

How are you organized from a commercial point of view? Who are your clients and what kind of service can they expect from you?

Our organization involves about forty people and many of them are committed to Sales. Our Sales network is live on the entire Italian territory and it is expanding also on international market to serve valued clients outside our Italian borders where we have exclusive relationships with some franchises. We have two Sales roles with different responsibilities who are helped by the Technical department in the north and south macro-areas. We serve clients of different sizes, mainly in the industrial, automotive and home appliances field.

We are an independent but global distributor, we are able to support both those small-sized clients who need small quantities of products without a planning capacity and still want to have access to a local stock and also those huge, big clients operating at global level through large productions and manufacturing plants all over the world with any request. We offer true added value services like the opportunity to stock physically (real and not virtual) into a dedicated place inside our own warehouse. We also offer the “kitting” by providing with a complete product kit, in addition to those of our linecard, thanks to the support of partners who allow us to meet the most complex client's demands.



From left, Franco Fiorini and Giulio Pastorello, Starday's founders

How much important is the presence on the local territory for Starday?

Starday was born at local level and we are proud to be listed among the 500 most important companies around Bologna. In the last ten years our client base has expanded beyond the borders of Emilia-Romagna and of Italy by bringing us to work at an international level, in some areas like France, East Europe and Russia.

An evaluation of 2020 trend and some predictions for 2021. What are your development plans for the future and what are the strategies you will use to reach your goals?

2020 was a difficult year for all of us and we have lost some revenues and not reached the expected goals, even though we have been able to keep our position on the market. Our positive financial situation allowed us to overcome 2020 without problems and to

start in 2021 some important investments in the HR department that to us it means the authentic company asset besides the stock. We have hired new people, young professionals who should be able to bring a cultural improvement and to support those development plans we have set for the next five years. Moreover, we have expanded our warehouse to help meet growing demand. We are truly customer-centric, solution provider and technology advisor, this is our recipe. We believe there are only few things left to improve, and to reach our goals we need to go on this way by saving our role of quality, innovative and alternative products supplier. Stiffening acquisitions in the market has led to a reduction in the number of the electronics components manufacturers. In this storyline, our clients especially appreciate the introduction of new suppliers as a key element for a technologically advanced and valid resource. 

A journey as a protagonist in the world of connection

Lemo celebrates being **75 years** in custom **connection** and **cable solution** business. The continuous search for innovation, quality and reliability have ensured the company leadership's development in the medical and instrumentation fields.

by Laura Reggiani

Lemo has a long history of success but above all it is a journey as a key player in the world of interconnection solutions.

The company takes its name from founder Engineer **Léon Mouttet**'s initials who established the company in Switzerland in Morges, on the shores of Lake Geneva, in 1946. Lemo's history began with the production of contacts in noble and rare metals then from 1957 it made a fresh start with the invention of the 'Push-Pull' connector until offering a full range of interconnection solutions: connectors, cables and assembly services. We met **Diego Romeo**, General Manager at **Lemo Italia**, and together we have looked at the company's milestones since it was founded in 1946. *"There are various moments that have structured our development. I think the key to our success was the invention of the 'Push-Pull' connector then patented. Another worth remembering turning point, which took place in the 1970s, was that relating to the definition of a coaxial connector standard designed and developed for Cern and yet still in use in many, many applications. I can recall well the success in 1985 for the fiber optic connector solution, with power and signal, for broadcast cameras that finally became the de facto standard and almost always used to the live streaming cams".*

Acquisitions over years: *"Redel in 1984. It is important because it allowed us to distinguish and to enter the plastic connectors market and Northwire, in 2014, an US manufacturer of standard and custom cables for diverse applications including FDA-certificate cords for the medical market. Thanks to this investment, we have been able to expand our busi-*

ness to the U.S. market and to offer our customers a unique cabling and complete solutions service".

A world's leading family-run business

Lemo currently employs over 1.800 employees within its 19 subsidiaries worldwide (the latest one in UAE). The manufacturing organization, as Diego Romeo explains, is managed in such a way to reach highest possible independence from outside suppliers: from raw materials to finished products, over 90% of the process is managed in-house. The Swiss manufacturing unit performs nearly all the production while the assembly phase for the plastic connectors is made in Hungary. As for the logistics system, strategic operations within Europe are provided by their European Distribution Centre situated in Haarlem (The Netherlands) while a number of warehouses in main locations, Italy included, covers the regional operations. Each subsidiary has its own building where goods are stored to ensure the region a high level of service with buffer stock and a clear overview of all bookings.

The company is still run by the third-generation family Pesci. Many advantages lay behind, Romeo continues: *"I worked for prestigious companies also at international level and thanks to these experiences I can now say that the work environment at Lemo is absolutely comfortable, it leads to positive results to the employees' performance and therefore attention to the customer. Agility, flexibility and the ability to react quickly to situations are also critical for our success. We are currently spending a great deal*

of time in our organizational transformation getting our group from where we are now to where we will need to be in the future and we are also looking to improve our structure by hiring new talent and by opening new manufacturing sites in order to boost our capacity to adapt to the growth we have been achieving for the last years”.

Quality and reliability

In Bishop & Associates research report, Lemo ranks at the top in the world for medical and the T&M. *“Quality and reliability of the product make all the difference and help establish a business identity”* Romeo continues to say. *“No connector-related incidents are allowed in the operating room; the reliability and the quality of our products have made it possible to establish our brand identity. We offer a connector solution especially for Test & Measurement able to perform up to 10,000 manoeuvres/cycles or up to 15 years of life and that means so much. This is also true in broadcasting where you start and can’t stop streaming”.*

Lemo also serves other areas of business where innovative, reliable and quality connectors are pillar: *“Our connectors are used in a wide variety of demanding applications in many industries, from industrial automation to telecommunications. I can see opportunities for growth also in home robots (as a matter of fact, we are already working on several projects with the Italian Institute of Technology in Genoa) and in the wearable technology where we have something with the rapid adoption of such devices suitable to be worn (from the shirt to the watch)”.* Also, *strategic partnerships with customers to ‘help understand what will happen in the coming years and what will be the needs of the future’ are fundamental. For example, IIT for robotics and Magneti, Ducati, Ferrari and Renault enabling us to join the vehicle electrification industry”.*

A strong presence in Europe and in Italy

Despite being a global company, Lemo has maintained an important focus on Europe: *“EU continues to be our primary market; not only because one third of our business comes from this area but also because Europe is the most popular Research & Development locations for some top productions that represent a key detail for us”.* Speaking about Italy,

Romeo explains the meaningful relationship existing between Italy and Lemo: *“Our first branch outside of Switzerland opened in Italy in 1964. Both the previous CEO, Marcello Pesci who was the husband of Mouttet’s daughter, and the current one, Alessandro Pesci, are from Italy and the country of origin still matters”.*

Lemo serves the Italian market through a sales office with eight people: *“We are few but so focused on business development and sales, we can call ourselves distributor for the Italian area. There is a good reason why we have not yet signed any agreement with pan-European distributors. Our parent company has always preferred to work directly with customers and by having this strong foundation, we are committed to make sure that every customer could have a great experience with our company. Personally, I have nothing against the role of the distribution but this model does not work with our business that offers a technology-based product. However, we made contracts with top global catalogue distributors, we work very well together with specialists such as Pei Genesis and Powell and also Avio Race, in particular for some niche sectors such as motorsport”.* **E**



Diego Romeo, General Manager at Lemo Italy



We built this city (on LpWan)

A series of **LpWan** innovations are opening up new opportunities for smart cities and smart buildings, creating seamless networks of continuity and able to support an infinite multitude of applications that can improve the quality of life of city residents, energy efficiency and public health.

by Alistair Fulton*

Smart cities will see a dramatic change over the next few years, as a new way of rolling out low power wide area wireless networks (LpWan) takes effect.

This will impact a huge range of applications, initially in the home but rapidly branching out across the streets, commercial buildings and public spaces that make up the modern city. Public safety has a much broader meaning after the Covid-19 pandemic. Monitoring footfall and occupancy of offices and shops has taken on a new significance. Tracking shipments across a city is even more vital with many more people working from home. The leading LpWan technology, based on Semtech's LoRa devices and the LoRaWAN protocol, is opening up these smart city applications with some key industry moves.

From smart factory to smart city

The technology has become the de facto standard for smart factories, allowing industrial equipment to be monitored quickly and easily with low power sensors that have a long battery life. The wireless frequencies it uses, at 868MHz in Europe and 915MHz in the US, enables a long range of many kilometres with secure, low latency links and data rates suitable for sensors. These networks are already being used for a wide range of industrial applications, monitoring hectares of forest for nascent fires, or monitoring the soil across smart farms to boost the production of food. These attributes are now making their way into the smart city. The city of Frankfurt in Germany, for example, is rolling out 40 gateways to cover the whole city with the long range

technology, connecting up sensors to monitor footfall. In Italy, Milan, Piza, Brescia, Bologna, Bari, Calabria and Cilento have all announced deployments of free city-wide LoRaWan networks. In one application related specifically to the current focus on public safety, **Polysense** has used LoRa technology to develop smart human body temperature monitoring products that allow healthcare workers in Italy to screen people using infra-red sensors.

Helium and Amazon Sidewalk

While mobile networks have bathed cities in high data rate wireless connectivity for smartphones, and Wi-Fi networks have dominated the home and office, the urban environment has struggled to find a cost-effective wireless solution. The need to control costs, to rapidly deploy and connect every sensor across a smart city, regardless of whether those sensors are underground, in buildings or in the public spaces in between, has until now prevented many cities from taking advantage of all that smart city solutions have to offer. A new generation of LpWan innovation is now opening up opportunities across the smart city and into smart buildings, creating seamless networks that can support an endless multitude of applications that can improve the quality of life for city residents, energy efficiency and most importantly public health. This is enabled by new pervasive ways of rolling out LpWan networks that will see an LpWan gateway become a fixture in most homes, enabling coverage not only of the entire home but, thanks to the range of LpWan, reaching far into the streets and city beyond. The peer-to-peer network **Helium** has already deployed over 14 thousand gateways across 1,000 US cities and is now turning its sights to Europe. Driven by a viral network deployment model, Helium leverages LoRaWan's ease of deployment and has created an innovative reward structure for customers, using cryptocurrency technology to provide secure access and to reward "gateway operators" for supporting community traffic as well as their own smart home needs. This allows households without their own gateway to still use the pervasive network for smart door locks, water sensors and connected smoke alarms, all without a monthly bill or expensive hardware, increasing the speed with which cities can realize the benefits of smart city applications for all residents not just a few. That model is set to become even more pervasive as Amazon rolls out its

own LpWan enabled Echo range of smart speakers as part of the **Amazon Sidewalk** network. Amazon Sidewalk will enable voice control and management of all kinds of equipment in the home, linking the LpWan network to the home Wi-Fi and then onwards to the whole of the Internet and back. While systems such as the Ring range of lighting and security products already use an LpWan link, Sidewalk will bring these systems together to provide a ubiquitous low cost network for every capable device in the home, including non-Amazon devices. With a simple deployment and set up process, devices can be easily paired and connect instantly to the cloud, to enable a vast range of smart home and smart city applications without the headache all too often associated with solutions today that use shorter range technologies like Wi-Fi and Bluetooth. Thanks to the extremely low power requirements of LpWan networks, devices can be connected for months or even years using simple coin cell batteries, enabling a range of solutions where charging a device or replacing a battery is simply impractical.

Security and protection

But the importance of this technology is that it extends far beyond the home and out into the smart city. Vehicles such as buses and cars can be tracked across the city, delivering detailed data to the travelling population, parcels can be tracked from warehouse to home and streetlights and other public infrastructure can be managed, dramatically reducing energy costs and environmental impact. This scales even further when it links to the smart factory. Electronic products in the factory can be tracked through the manufacturing process, through the delivery across multiple cities and into the home, all using one tag and the same network. That tag can deliver usage and reliability data, identifying when a customer needs setup support or flagging problems ahead of equipment breaking down and ordering a repair in good time, all automatically. As with all applications that exist within our homes and public spaces, data security is critical, particularly where networks or even sensors are shared resources. LpWan protocols are designed to be secure and are very difficult to intercept, unlike Wi-Fi and Bluetooth. 

* **Alistair Fulton**, Vice President and General Manager of Semtech's Wireless and Sensing Products Group



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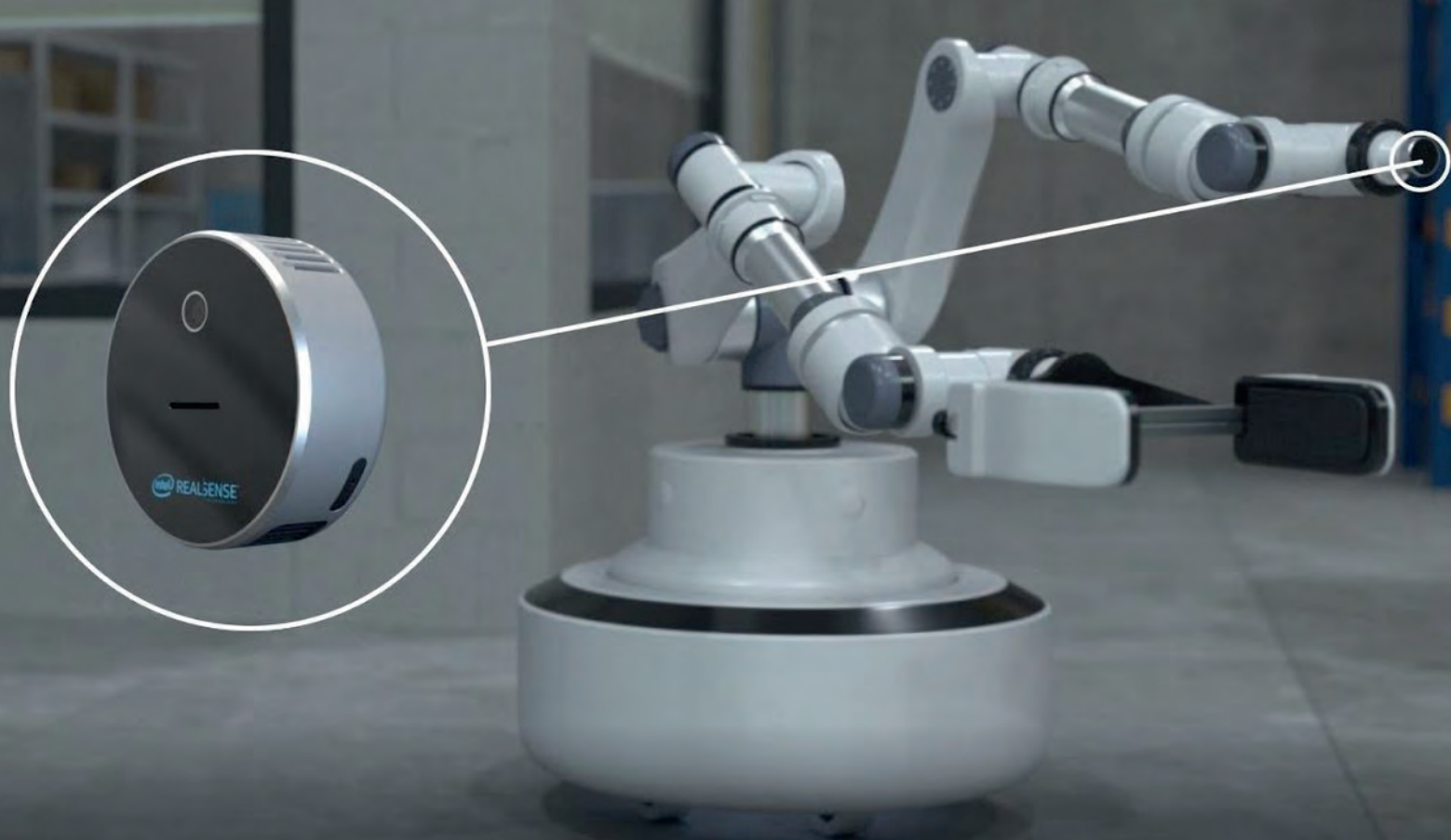
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The micro-mirror in the camera

World's smallest micro-mirror scanning technology from
STMicroelectronics chosen for **Intel RealSense**
High-Resolution LiDAR Depth Camera L515.

by Greta Gironi

LSTMicroelectronics has developed a tiny MEMS mirror with Intel enabling spatial scanning of an environment. Intel developed a Lidar system based on this micro-mirror, providing high-resolution scanning for industrial applications such as robotic arms for bin picking, volumetric measurements, logistics, and 3D scanning. Built into the Intel **RealSense Lidar Camera L515**, the small dimensions of the ST micro-mirror contribute to the Lidar camera's hockey-puck size (61mm diameter x 26mm height). The micro-mirror enables continuous laser scanning across the entire field of view. In combination with a custom photodiode sensor, the RealSense LiDAR Camera L515 renders a 3D depth map of the entire scene.

"With 30 frames per second and a field-of-view of 70° by 55°, ST's 2nd-generation micro-mirror continues to set the bar for 3D scanning and detection applications", said Benedetto Vigna, President Analog, Mems and Sensors Group, ST-

Microelectronics. *"Continuing the long-term supply relationship for micro-mirrors with Intel demonstrates our never-ending efforts to leverage our long-lasting leadership in Mems to meet the demanding technical and supply needs of our customers".* The L515 leverages the scanning capabilities of ST's Mems to deliver high-resolution depth with no interpolated pixels, the ability to control the field of view, and provides close to zero pixel blur driven by the low 50ns exposure time.

"Intel RealSense technology has been used to develop products and solutions for use in Robotics, Logistics, Scanning and other computer vision applications. The Intel RealSense Lidar Camera L515 using ST's micro-mirrors delivers unparalleled precision and is the world's smallest high-resolution Lidar depth camera, making it suitable for a variety of use cases", said Sagi BenMoshe, Chief Incubation Officer, Corporate Vice President and General Manager, Emerging Growth and Incubation Group at Intel. 

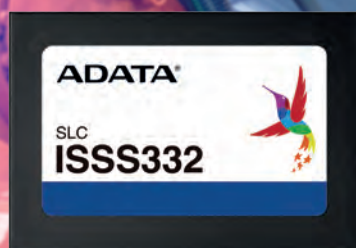
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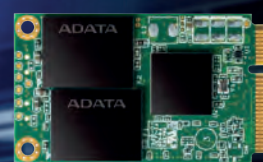
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AI-based image recognition

ON Semiconductor's RSL10 Smart Shot Camera platform, thanks to the combination of cloud-based artificial intelligence and low-power image recognition and acquisition functions, allows the development of next-generation IoT endpoints.

by Greta Gironi

ON Semiconductor introduces the RSL10 Smart Shot Camera, combining cloud-based AI with ultra-low-power image capture and recognition, to enable a new generation of IoT endpoints of applications. The RSL10 Smart Shot Camera adds the power of AI-based image recognition to ultra-low-power IoT endpoints, such as surveillance cameras, restricted areas, factory automation, smart agriculture and smart homes. A companion smartphone application provides a user interface for the platform and acts as the gateway to cloud-based, AI-enabled object recognition services.

Innovation and applications

The platform brings together a number of ON Semiconductor innovations, including the RSL10 SIP, which provides ultra-low-power Bluetooth Low Energy technology, and the ARX3A0 Mono 65° DFOV IAS Module. The module is a compact prototype used for developing compact cameras with 360 fps mono imaging based on the ARX3A0 Cmos image sensor. Complemented by advanced motion and environment sensors and power and battery management, these technologies provide a complete solution that can be used to autonomously capture images and identify objects within them.

Using the RSL10 Smart Shot Camera, developers can create an endpoint that automatically sends an image to the cloud for analysis when triggered by various elements including time or an environmental change, such as light or temperature. Equally, the camera platform can operate in low power mode while monitoring a specific part of its field of view, automatically taking an image when the scene's contents change. The image is then sent to the cloud

for processing, using AI to determine the contents of the image and then taking the appropriate action. The image data is transferred to the cloud through a gateway, connected over Bluetooth Low Energy, using the RSL10 SIP. Typical applications may include adding smart cameras to wearable safety equipment, such as hard hats. In a commercial environment, a smart camera could be used to monitor the contents of a shopping cart, to support automated checkout. In vehicles, to monitor the occupants, such as small children in rear seats.

Around the home, smart cameras can scan the contents of cupboards to build shopping lists. 



APPOINTMENTS

Nicola Della Malva joins Powell Electronics

POWELL ELECTRONICS, THE SUPPLIER OF CONNECTORS AND MORE FOR HIGH-REL APPLICATIONS INCLUDING DEFENCE, AEROSPACE AND INDUSTRIAL, HAS ANNOUNCED THE APPOINTMENT OF ELECTRONICS CONNECTOR VETERAN, NICOLA DELLA MALVA AS NEW COUNTRY MANAGER FOR ITALY AND SOUTH EAST EUROPE.

Previously with PEI Genesis, which he set up in Italy 11 years ago, ITT and Yamaichi, Nicola Della Malva is a well-known figure and will be able to bring design as well as commercial support to the role. Powell Electronics' European MD, Gary Evans, said: "It's fantastic to have Nicola on



board. His vast experience and knowledge of the connector market will prove invaluable to Powell, our customers and manufacturing partners alike".

Della Malva added: "I am very pleased to have joined Powell Electronics. Being based in the EU with stocks held in Ireland, Powell's customers can side-step all the problems that Brexit is causing. Powell already has a great line up of franchises including Glenair, Lemo, TE (value add products), Amphenol and Positronic and I am keen to start helping customers find the right solutions for their interconnection challenges".

ACQUISIZIONI

French company Steliau Technology acquires Special-Ind

The French company **Steliau Technology** a player specialized in the value-added supply of electronic solutions, has acquired **Special-Ind**, thus significantly expanding its European activities. The transaction, which is non-brokered, is fully consistent with Steliau Technology's strategic plan to expand across Europe, primarily through overseas growth. The new Group is expected to report annual sales of more than €80 million for the current fiscal year. Special-Ind will continue to operate on the Italian market as an independent entity, with its current name, business name and commercial and administrative structure. The logic of the acquisition lies in the complementary nature of the product range: Special-Ind brings with it automotive wiring, HEV and EV, connectors, electromechanics, embedded systems and displays, thermal and energy conversion, as well as standard and custom products for telecommunications and radio transmission.

Fabio Pietribiasi, Special-Ind: "I am particularly proud of the achievements of the Special-Ind teams. They have made decisive contributions to transform Special-Ind into a pre-eminent player in the Italian market", he said. **Fabio Pietribiasi**, (pictured left) president and

co-shareholder of Special-Ind. "I am confident about the future development of the company, which shares a common vision with Steliau Technology, on ways to meet the needs of its customers through the design of value-added and tailored solutions".

Equally positive is the comment of **Massimo Loche**, General Manager of Special-Ind: "This merger offers a huge number of development opportunities for the coming years, with expanded supplier networks and the potential to launch new value-added business".

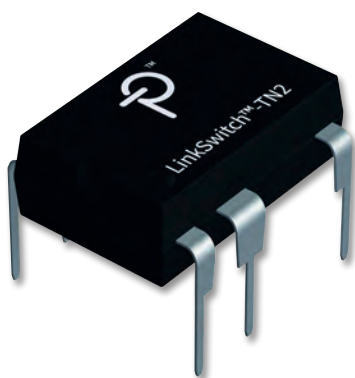


A real energy saving power conversion

High-efficiency **LNK3207** ICs developed by **Power Integrations** reduce BOM count and simplify buck converter design for appliances, sensors and metering applications.

POWER INTEGRATIONS ANNOUNCED A NEW MEMBER OF ITS ACCLAIMED **LinkSwitch™-TN2** AC-DC CONVERTER FAMILY. THE NEW **LNK3207** ICs FACILITATE HIGHER-POWER OFFLINE BUCK CONVERTER DESIGNS FOR APPLIANCES AND INDUSTRIAL APPLICATIONS BY INCREASING THE AVAILABLE OUTPUT CURRENT FROM **360 mA** TO **575 mA**, WHILE ALSO REDUCING BOM COUNT. The **LNK3207** AC-DC converter ICs increase the available current by 60% while also delivering greater than 80% efficiency and no-load consumption of less than 30 mW. Each monolithic LinkSwitch-TN2 IC incorporates a 725 V power Mo-

sfet, oscillator, on/off control for high efficiency at light load, a high-voltage switched current source for self-biasing, frequency jittering, fast current limit, hysteretic thermal shutdown, and output and input overvoltage protection circuitry. The new LinkSwitch-TN2 ICs target mass-market appliances such as washers, dryers and coffee makers, which benefit from their design simplicity. They are also suitable for sensor-based devices that require low power such as home security cameras and smart thermostats, as well as metering and IoT installations.



They say:

"These new LinkSwitch-TN2 ICs are pin-to-pin compatible with previous generations, making it simple for customers to upgrade to higher-power designs. A high-current buck converter can be created using a minimal number of easily available components while saving at least one diode over previous solutions".

Silvestro Fimiani, Product marketing manager at **Power Integrations**.

PARTNERSHIP

Semtech and AWS collaborate on AWS IoT Core for LoRaWAN

Semtech have teamed up with **Amazon Web Services** to integrate the LoRaWAN protocol on the Network Server with AWS IoT Core, AWS's managed Cloud service that lets connected devices easily and securely interact with Cloud applications and other devices. AWS IoT Core for LoRaWAN is a fully managed service that enables enterprise IoT developers to easily connect low power wireless devices over long range, wide-area networks to AWS without developing or operating their own LoRaWAN server. This simplifies the development of IoT solutions that leverage the long range, low power and security of Semtech's LoRa chipsets and the LoRaWAN protocol. To get started with AWS IoT Core for LoRaWAN, IoT developers can source AWS qualified gateways operating the LoRaWAN protocol

from the AWS Partner Device Catalog and select an array of LoRaWAN Certified CM devices from the LoRa Alliance website. From within the AWS Management Console, developers can rapidly register gateways with AWS IoT Core for LoRaWAN by providing the service, its unique identifier, and selecting LoRaWAN as the radio frequency.

To register devices with LoRa chipsets, developers simply input the device credentials, identifiers and security keys provided by the device vendor on the console and follow guided and easy instructions for specifying device configuration. In addition, AWS IoT Core for LoRaWAN includes a variety of device management capabilities, including security and a plug-and-play for the AWS IoT Analytics.

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IN-DEPTH

The current global shortage of semiconductors is not just a case study of the impact that Covid has had on supply chains and production trends; it is also one of the biggest factors that could weaken the strength of the recovery in the United States and Europe in 2021.



Touch Solutions for Hazard Prevention

World's First Safety Certified Capacitive Touchscreen Controllers for Home Appliances

Put safety first, while reducing cost and enabling modern user interface solutions in home appliances.

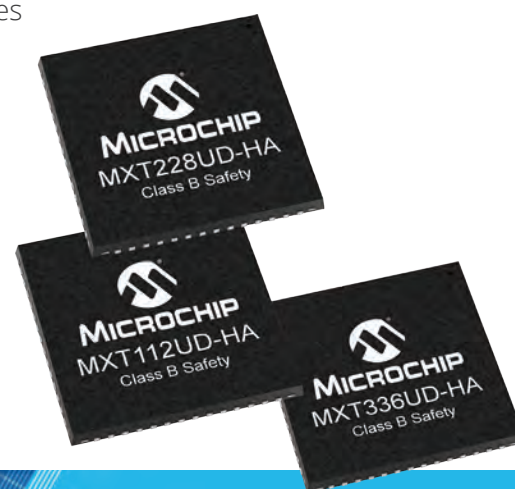
Microchip's latest family of maXTouch® capacitive touchscreen controllers offers system-wide, pre-approved IEC 60730 and UL 60730 Class B-certified firmware—a market first. These pre-certified touchscreen controllers help you achieve your required system certification in a single chip, while also eliminating the need for an additional microcontroller, reducing design time, cost and overall design risk.

Specifically designed for the home appliance segment, the mXT336UD-HA family features both power-on self-test and periodic built-in self-test diagnostic capabilities that ensure the intended operation and functionality of the CPU, timers, communication buses, memory and touch analog front end.

The embedded diagnostic features of this family of touch controllers ensure correct operation of the touch controller itself, as well as the connected touch sensor. When a failure condition is detected, the mXT336UD-HA family immediately notifies the host system, enabling the appliance to fail-safe and reduce hazardous threats.

Key Features

- Allows reliable detection and tracking of multiple fingers on surfaces exposed to moisture, water, grease and more—even if the user is wearing gloves
- Software and hardware tools available including maXTouch Studio, maXTouch Analyzer and evaluation kit



microchip.com/mXT336UD



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