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English Abstract Edition



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6 *On both sides of the Atlantic, big changes are coming. There is great potential in Europe for positive change and renewal, while in Usa Joe Biden will try to navigate America back toward some sense of national unity.*

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by Fritz Walter

“Bicycle Thieves”

There are many, perhaps too many films on which I could have based the first editorial of 2021. Due to the pandemic, the market, politics and much more I was simply spoilt for choice. It was former Prime Minister Matteo Renzi who, by favouring the exit from Conte Bis Cabinet of ‘Italia Viva’ ministers, started yet another government crisis to all intents and purposes and helped me at the very last minute! This led to the publication of merciless statistics: in 75 years of history of the Italian Republic there were 66 Governments; 29 Prime Ministers sat on the most important chair of Chi-gi Palace. In more recent times (since 1994 with the birth of the Second Republic) there have been 16 governments with 10 Prime Ministers.

For clarity sake: whether one considers the first Republic or the first and second Republics together, in the same period of time there have been more Prime Ministers than coaches of the Italian national team (which won two World Cups in the meantime).

It is true that, if one can tell a good day from the morning, our grandparents should already have been worried when Alcide De Gasperi, our very first Prime Minister, applied for the mandate in 8 consecutive coalition governments from December 1945 to August 1953! And it was in those very years that Vittorio De Sica shot what many consider to be

his masterpiece, set in post-World War II in Rome and involving a large number of non-professional actors.

It is more or less what we are experiencing now: in a country that has not yet emerged from its modern “world war”, a number of non-professional actors/politicians (or politicians/actors, if you will) try to impose a role on our beloved boot-shaped peninsula by bartering the future of the nation and its people to the Mount of Piety led by Ursula von der Leyen. A nation that has no more time left; a people that has no more bread and, when it does, is

not allowed to go and get it due to red, orange and yellow zones! A nation that, besides all that, will hardly afford to go to the polls in the year in which, among other things, the President of the Republic is to be appointed, something huge considering that the High Council of the Judiciary, the Army, Armed Forces and Secret Services depend on him/her: “all-in-one”!

What about the end result? For the umpteenth time the Prime Minister will not be chosen based on popular vote and, driven to exasperation by the terror of losing his/her beloved ‘bicycle’, he/she will attempt extreme gestures to get out of this tragic situation: and so off we go in search of those who have turned from ‘responsible’ to ‘willing’ individuals in a fortnight. Because in Italy words always have weight. And what about the vote? Much less!



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by Alan Friedman

What is needed for Usa is a period of healing

A period of healing. That is what is now needed in the country I was born in, a country that until recently was held up as the model of modern democracy (and will be again in future, I hope). Those who love the United States today feel great sadness, perhaps pity, and certainly considerable disgust for the appalling way that a sitting president incited insurrection. A blatantly criminal act, committed by a U.S. president. America no longer resembles the ideal of the Shining City on the Hill. Our model has faltered. We now resemble a semi-failed state whose autocratic leader has just incited a violent attack on the legislative buildings by egging on his fanatical and cult-like supporters. We need to recover our bearings and reassert our democratic principles.

Impeachment is not sufficient punishment for a president who incited violence and sedition, and thus betrayed his duty to uphold the Constitution. Trump needs to be made an example of, punished - otherwise future presidents will be able to get away with the same criminal behavior. But enough about Trump. Let us hope that he is the past, even though each of you reading this article knows full well that neither Trump nor Trumpism fade away quickly.

Enter Joe Biden. President Biden now needs to unite a torn and lacerated society. He has control of both the House of Representatives and the US Senate, so the good news is that he can get his Cabinet of ministers ap-

proved and he can then begin to un-do some of the more horrible things that Trump has done in four years. And he can get important economic stimulus programs approved that will help the U.S. and world economy and please Wall Street. Good.

Biden will be well received across Europe and much of the world. Once again a US President will speak with moral authority. The problem, however, is that Trump has downgraded American influence so much in just four short years that Biden will not find it so easy to regain America's previous position in the world. It is not a given. Washington needs to earn back its credibility with the allies it insulted. Meanwhile, Trump's abdication of American leadership has allowed China to accelerate its rise as the economic superpower of 21st century. Vladimir Putin has been delighted at how Trump attacked Nato and the multilateral system. What a lovely ending to the Trump administration for his dictator friends everywhere was his ordering violent and armed supporters to storm the US Capitol buildings. What lessons can America offer about democracy after this misfortune?



Alan Friedman
is a journalist, writer
and economics expert

So as I was saying, notwithstanding all the pain and the structural damage, a period of healing is needed. Biden will do his best in his rhetoric and in his actions to guarantee more social equity, more inclusiveness, more diversity, and more democracy. But it will not be easy. After all, we just nearly watched the burning of the Reichstag in Washington.



Big changes are coming

A time of **upheaval** but also perhaps of **renewal**,
on both sides of the Atlantic Ocean.

by Alan Friedman

On both sides of the Atlantic, big changes are coming. There is great potential in Europe for positive change and renewal, even as the pandemic rages on and the death tolls mount, and as our economies suffer.

That is largely due to the start of Next Generation European funds and the continuing expansionary monetary policies of the Bce. Europe is muddling through, and its biggest challenge now is vaccinating many people and quickly. But Europe exists, and this time it has shown it is capable of solidarity.

A difficult moment for Usa

In the United States the risk is of a divided society, despite Joe Biden's best intentions and his desire to heal the nation. Trumpism is not dead. The new U.S. President takes office in the

wake of unprecedented turbulence, in the middle of a surge in the Covid pandemic, and while his predecessor is preparing to stand trial on charges of having incited a mob to commit a violent insurrection that resulted in five people dying and an assault on the heart of our democracy.

In the United States the new U.S. president, unlike his predecessor, will respect his oath to uphold the Constitution.

Joe Biden will be a good and honest president who will try to navigate America back toward the center, back toward moderation, back toward some sense of national unity. He will face the continued threat of political violence and sedition from significant numbers of trumpists - and not just a few crazy people scattered like a Japanese soldier in the jungle who doesn't know that the war is over. In reality there are still millions of armed and pro-gun, pro-violence white

suprematists, cadres of militias and cultists and QAnon types who will believe whatever Trump says and who appear willing to engage in violent insurrection if he incites it. That is where we are today in the United States of America. This is not a good moment for our nation. We do however have a new Biden Administration that is full of promise and talent and competence, but a significant minority of the American population is still living in an alternate reality, based on conspiracy theories and propaganda rather than facts.

The good news about Biden, for those interested in the economy and financial markets, is that with control of the U.S. Senate he should be able to deliver two or three trillion dollars worth of new stimulus and rescue money for Americans, and with a focus on social equity as well this time. This will be welcomed by Wall Street and by the world. Big infrastructure projects should also be approved while the Democrats control both the House and Senate, and hopefully before 2022. And Biden's team, from Janet Yellen at Treasury to Tony Blinken at the State Dept, is first rate, highly competent.

What changes in Europe

Across Europe there is change coming as well in 2021, starting with the most important change, which may not be so good.

After 15 years **Angela Merkel** will be closing her time in office as Chancellor of Germany. Europe will lose its greatest defender of liberal democracy, and the one great leader who stood up to

Donald Trump and did not hide her displeasure. No successor of Merkel can be such a towering figure although it is positive that her successor will be a CDU moderate and committed Europeanist. In post-Brexit Britain meanwhile, **Boris Johnson** continues to teeter and totter onward, with the worst track record of poor governance of the Covid crisis in Europe. The incompetent Boris is losing supporters, and he could face a challenge to his leadership inside his own party this year, but they are all such a bunch of mediocre types that he might even survive the challenge.

The Italian political crisis

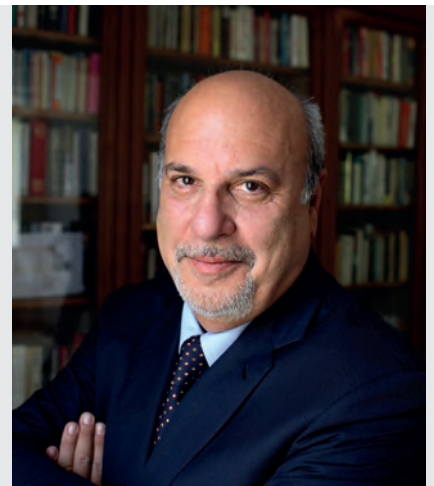
In Italy, meanwhile, the political crisis that began in early December has been an unfortunate distraction from the real priorities, which are vaccination and restarting the economy.

It would be good if - at the end of this melodrama - Italy were able to finally have a serious national debate about how to rebuild itself.

The Next Generation funds are the key to modernizing Italy's economy, and to making it more competitive. It is a great pity that so much time has been lost by political theatrics because only through the concrete implementation of the Next Generation projects we can even begin to kickstart some growth and employment for the Italian economy. So the prospect of renewal is there, it is in front of us, fully available, provided we can get through the political upheaval and refocus once again. 

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 book "Questa non è l'Italia", published by Newton Compton, is his ninth best-seller.





Identifying the Top 10 is harder

Identifying the right **connector supplier** is not an easy task. However, we can start with an accurate analysis of the greatest world manufacturers by classifying them according to different parameters: geographical area, final application and type of product.

by Ron Bishop

Design engineers and purchasing personnel want to use the best connector companies for their business requirements. However, identifying the best companies is not an easy task. Answers to the following questions are important:

- Which companies offer the products and services required?
- Which companies offer fast delivery, reasonable prices, and high-quality products?

- Which companies are easy to do business with on a regular basis?
- Which companies can we count on when there is a problem?

The answers to these questions are not easy to uncover. It takes experience. It takes time. Only a track record of quality products and service will identify companies that should become part of your supply chain. The first step is to identify successful companies. We believe identifying the top 10 companies,

MARKETS CONNECTORS

using different definitions of what constitutes top 10, is the logical starting point for identifying the best connector suppliers. Specifically, who are the:

- Top 10 in world sales
- Top 10 in each geographic region
- Top 10 by product type manufactured
- Top 10 within each market served.

This article will provide identify the companies in the above four classifications. You may elect to further refine your selection by considering factors such as region. For example, you might look at the largest companies that offer a specific type of connector in North America, Europe, China, Japan. Who are the leading companies in Germany that supply military circular connectors or have

heavy-duty power types? This is a more granular approach that serves specific company goals, but first, the designer or buyer should always examine the largest companies. We believe that achieving size suggests a level of quality. After all, customers have rewarded them with their business for a reason. The remainder of this article identifies the largest companies in total world sales, sales by regions, sales by market sector, and sales by product manufactured. In the last article, we identified the top 10 largest connector manufacturers by 2019 sales, in comparison to 2018 sales. The following table identifies the top 10 in the 11 market sectors and the 10 largest manufacturers of the 12 major product categories.

Rank	Computer	Education	T&M	Medical	Industrial	Automotive
1	Foxconn	Molex	Luxshare	TE Connectivity	Amphenol	TE Connectivity
2	Molex	TE Connectivity	Rosenberger	Molex	TE Connectivity	Yazaki
3	Luxshare	Jst	Molex	Amphenol	Molex	Aptiv
4	Lotes	Foxconn	TE Connectivity	Luxshare	Hartinh	Jae
5	Amphenol	Luxshare	Lemo	Lemo	Phoenix	Rosenberger
6	Shenzen Deren	Fuji	Foxconn	Samtec	Jst	Jst
7	Foxlink	Hirose	Hosiden	Odu	Belden	Sumitomo
8	Jae	Jae	Samtec	Fuji	Weidmuller	Iriso
9	Corning	Shenzen Deren	Amphenol	Winchester	Samtec	Avx/Kyocera
10	Samtec	Iriso	Radiall	Bizlink	Fuji	Amphenol

Rank	Transportation	Military	Telecom	Consumer	Other
1	Aptiv	Amphenol	Amphenol	Molex	TE Connectivity
2	TE Connectivity	JonHon	Molex	TE Connectivity	Aptiv
3	Amphenol	Glenair	Luxshare	Jst	Sumitomo
4	Molex	Carlisle	Jae	BizLink	Hirose
5	Carlisle	Bel	TE Connectivity	Luxshare	Amphenol
6	Yazaki	Radiall	Rosenberger	CommScope	Foxconn
7	Sumitomo	TE Connectivity	CommScope	Lumberg	Jae
8	Korea Electric	Souriau	Hirose	Amphenol	Molex
9	Souriau	Aptiv	Foxconn	Hirose	Odu
10	Hirose	ITT	JonHon	Foxconn	Korea Electric

The 10 largest manufacturers by final application market

(2019 revenue, fonte Bishop & Associates)



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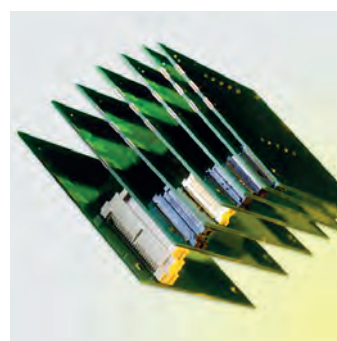
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Rank	Pcb	I/O Rectangular	IC Sockets	RF	Circular	Telecom
1	TE Connectivity	TE Connectivity	TE Connectivity	Rosenberger	Amphenol	Molex
2	Molex	Luxshare	Lotes	Amphenol	TE Connectivity	Luxshare
3	Amphenol	Foxconn	Foxconn	TE Connectivity	Lemo	Amphenol
4	Foxconn	Molex	Molex	Luxshare	Carlisle	TE Connectivity
5	Luxshare	Jae	Enplas	Huber+Suhner	JonHon	Foxconn
6	Jast	Amphenol	Yamaichi	I-Pex	Belden	CommScope
7	Samtec	Jst	Amphenol	Hirose	Souriau	Telegartner
8	Shenzen Deren	Aptiv	Sensata	CommScope	Glenair	Yamaichi
9	Jae	Yazaki	Foxlink	Radiall	Aptiv	Foxlink
10	Huber+Suhner	Lumberg	Aptiv	Erni	Rosenberger	Radiall

Rank	Fiber Optics	Terminal Block	Heavy Duty	Power	Specific	Other
1	TE Connectivity	Phoenix Contact	Harting	Amphenol	Aptiv	Jae
2	Foxconn	Wago	Amphenol	Molex	TE Connectivity	Hirose
3	Amphenol	Weidmuller	TE Connectivity	TE Connectivity	Yazaki	TE Connectivity
4	Molex	TE Connectivity	Molex	Jst	Amphenol	Amphenol
5	Corning	Amphenol	JonHon	Yazaki	Molex	Yazaki
6	CommScope	Molex	Souriau	Rosenberger	Sumitomo	Molex
7	JonHon	Wieland	Jst	Aptiv	BixLink	Winchester
8	Aptiv	Avx	Phoenix Contact	JonHon	Ket	Aptiv
9	Rosenberger	Eaton	Winchester	Luxshare	Kostal	JonHon
10	Huber+Suhner	Lumber	Aptiv	Erni	Rosenberger	Radiall

The 10 largest manufacturers of the 12 major product categories
(2019 revenue, fonte Bishop & Associates)

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.



The directions electronics industry will take

As part of **electronica 2020 virtual**, the CEOs of **STMicroelectronics**, **Infineon**, **NXP Semiconductors** and **Pepperl + Fuchs** discussed in the round table entitled: *“What directions for the electronics sector, in the era of Covid-19 and in the future?”*

by Virna Bottarelli

electronica 2020 virtual hosted the round table **“Which directions for the electronics sector, in the era of Covid-19 and in the future?”**

The meeting saw the CEOs of some of the most important companies in the sector confront each other: **Jean Marc Chery, STMicroelectronics; Reinhard Ploss, Infineon; Kurt Sievers, NXP** and **Gunther Kegel, Pepperl+Fuchs**. The CEOs were first asked how they dealt with the pandemic when the infections began to spread in Europe, at the beginning of 2020. The answer was almost unambiguous: the companies immediately prepared plans to reorganize their activities, taking the necessary measures to ensure the safety of the supply chain and of its personnel.

Kurt Sievers of NXP pointed out an interesting aspect: *“The biggest challenge was maintaining the spirit of collaboration between people”*. NXP’s experience has shown that the semiconductor market actually had a positive trend even in the year of the pandemic: *“The demand has grown for all those products that during the pandemic have served to main-*

tain contacts between people, to work and study from home”, Sievers said. *“Furthermore, among our outlet markets there are also all contactless applications which, in recent months, have increased significantly”*. A third element, highlighted by the CEO of NXP, was the recovery of the auto industry, with more people choosing their own means of transport, precisely to avoid public transport. **Kegel** also spoke of a recovery, and not only with regard to the auto industry: *“At the beginning of the pandemic we had estimated a recovery for the end of the year, and we are on the right track. We do not know if we will recover what we lost in 2020, but there are good prospects for 2021. A positive aspect for us concerns the growth of online purchases, which have seen the intra-logistics sector to have a boom”*. According to **Chery**, CEO of STMicroelectronics, the market will return to grow this year: *“Some vertical sectors are doing well - personal electronic devices, computers and infrastructure in particular. We are also seeing interesting trends in the field of car electrification and in industrial markets in Europe and America”*.

The global scenario

Another issue addressed in the round table was the tensions between the US and China. According to **Ploss**, CEO of Infineon: *“There have always been political interventions in the semiconductor sector, but the race to 5G, Artificial Intelligence and the enhancement of computing capabilities have made them even more pressing. Certainly, we should avoid depending on a single source of suppliers: a technological war is underway and in Europe we must be able to act as a block and strengthen our position, locally and globally”*. **Sievers** is of the same opinion: *“Intellectual Property is the determining aspect in the China-US confrontation. I hope that the result of the American elections will make relations more diplomatic and I also believe that Europe should act more as a single entity”*. The CEO of NXP also added: *“We have a vertical semiconductor supply chain rooted in Europe: it is a great value that we should be able to exploit better. Of course, the ban on selling to Huawei has had a strong impact, but the market will do the rest: the*

*demand for mobile phones will not disappear, so the Chinese brand's competitors will continue to produce, and we will supply them". More serious repercussions affect medium and small businesses, as **Kegel** explains: "Multilateral global trade is in danger. Additional fees and costs will negatively impact small and medium-sized businesses. In our case, 50% of what we do is within Europe, but the other 50% is outside. We therefore ask the EU governments to help companies here". Kegel also pointed out: "In all honesty, we don't think the coronavirus pandemic will be our biggest problem in the next year. We will see other shockwaves, and in particular the tensions between the US and China worry us much more. Sure, with the new administration in the US it is likely there will be more chatter and less Twitter, more negotiations and friendlier agreements, however, the general tension between the US and China and their struggle for the position of world leader will not disappear simply because we have a new president of the United States. The root cause of all tensions will remain: will the world be able to resolve it diplomatically or will we get even further into the trade war?". In terms of global commercial assets, **Chery** thinks that having many isolated economies would damage the ability to innovate: "In a world of many isolated economies, to access a market, you must produce and develop locally Intellectual Property too: this is to the detriment of innovation. If the challenge is to build an economy capable of growing, but respecting the planet, then we cannot think of an economic system divided into silos". A standpoint in itself is that of **Ploss**. Ac-*



Kurt Sievers, Nxp



Jean Marc Chery, STM



Reinhard Ploss, Infineon



Gunther Kegel P+F

According to Infineon we are seeing uneven competition, because there is no level playing field in terms of subsidies and guarantees, and Europe should focus more on how to carry out R&D programs: "Competing with local Chinese companies State-subsidized cannot be a successful strategy. For our part, with the acquisition of Cypress, we will strengthen our presence in the United States. We also want to strengthen our market in Japan and Korea, because we cannot expect to depend on China's growth in the long term".

The electronics market

Finally, the issue of acquisitions was another topic for reflection. In recent times, the electronics sector has seen several transactions involving large players. The most recent and significant one has ADI and Maxim as protagonists, but others in recent times have led the market towards increasing concentration. What is behind these operations? Opportunism or strategy? **Chery** gave his opinion: "Behind every mega deal there is always a strategy". An example is the acquisition of Arm by Nvidia: "It is clear that processors are the enabling factor for Artificial Intelligence in the cloud and at the edge, so if you want to attack this market with success, you need to control the enabling factor". Not only that, Chery highlighted another critical element: "If you want to become a leader in this market, size scale is essential, because expenditure in terms of research and development is high. I believe that the agreements that we will see also in the future will not be stipulated in an opportunistic way but will be supported by clear strategies". 



The clear always returns after the storm

Semiconductor Intelligence estimates a **14%** growth for the **semiconductor** market in 2021. The forecast is based on the expected strong growth in global GDP and the recovery in demand for PCs and smartphones.

by Giorgia Andrei

The third quarter 2020 semiconductor market totaled 114 billion USD, up 11.0% from second quarter 2020, according to World Semiconductor Trade Statistics (WSTS).

The 3Q20 growth was the highest since 11.6% in 3Q16. The strong 3Q20 growth follows a 2.1% decline in 2Q20 versus 1Q20.

The second quarter is normally a healthy growth quarter, averaging 4% over the last eight years. However, uncertainties due to the Covid-19 pandemic led to electronics companies cutting back on semiconductor purchases and some slowing of production. The strong 3Q20 market growth is due to electronics companies catching up to demand. Key markets for semiconductors have remained relatively strong despite the pandemic.

Trends in third quarter 2020 and supplier's forecasts

The revenue of the top semiconductor companies reflects the strong 3Q20. The combined revenue growth of the top 14 companies was 10% in 3Q20 versus 2Q20.

Intel and **SK Hynix** were exceptions, with revenue down 7.1% and 5.6% respectively. Seven of the companies saw revenue increases of over 20%. **AMD** had the strongest growth, up 45%, leading the company to claim the number 12 ranking. AMD's growth was due to strong demand for PC, gaming, and data center products. **MediaTek** revenue increased 44%, driven by increased market share in smartphones overall and strong 5G growth. The outlook for

MARKETS

SEMICONDUCTORS

the 4Q20 is mixed. Normally the fourth quarter semiconductor market is flat to down from the third quarter.

Of the ten companies providing guidance, five expect 4Q20 revenues to increase over 3Q20 and five expect revenues to decline. **STMicroelectronics** is the most optimistic with 12.2% guidance and expected growth in all its product lines except RF communications. **Micron Technology** is the most pessimistic, projecting a 14.1% revenue decline due to weakness in demand in the enterprise segment. Intel is guiding for a 5.1% revenue decline due weakness in data center demand.

What about 2021?

The global economy is expected to bounce back in 2021 from a severe decline in 2020. Forecasts in the last month call for GDP to recover from a decline of 4% to 6% in 2020 to growth of 5% to 6% in 2021. The forecasts

were made before the announcement of successful Covid-19 vaccine phase 3 trials by Moderna, Pfizer, and AstraZeneca. Updated forecasts will most likely call for stronger GDP growth in 2021. Third quarter data from **IDC** on two key semiconductor applications show an improving trend. PC units had a decline of 10% in 1Q20 versus a year earlier. The PC market has shown strong growth since then, reaching 15% year-to-year in 3Q20. Smartphones had double-digit year-to-year declines in the first three quarters of 2020. 3Q20 recovered to only a 1% year-to-year decline. Smartphones should return to positive year-to-year growth in 4Q20. Recent forecasts for semiconductor market growth in 2020 range from 3.3% to 5.5%. The forecasts made after 3Q20 **WSTS** data was available are 4.8% from the **Cowan LRA** model and 5.5% from **Semiconductor Intelligence**. With three quarters of 2020 data complete, it is safe to say the 2020 market growth will be somewhere between 4% and 6%. 

RANK	COMPANY	REVENUE	Reported 3Q 2020	Guidance 4Q 2020
1	Intel	18,3	-7,1%	-5,1%
2	Samsung	16	3,1%	n/a
3	SK Hynix	6,9	-5,6%	n/a
4	Qualcomm	6,5	33%	-1,7%
5	Micron	6,1	11%	-14,1%
6	Broadcom	5,8	1,4%	n/a
7	Nvidia	4,7	22%	1,6%
8	Texas Instruments	3,8	18%	-7%
9	MediaTek	3,3	44%	-4%
10	Kioxia	3,1	23%	n/a
11	Infineon	2,9	15%	2,4%
12	Amd	2,8	45%	7,1%
13	STMicroelectronics	2,7	28%	12,2%
14	Nxp	2,3	25%	8,1%
Total of above companies			10%	n/a
Memory companies			4%	n/a
Non memory companies			14%	0%
Excluding Intel			28%	3%

Top Semiconductor Companies' Revenue

(billion dollars, source Wsts)



Custom-made connections of German quality

Global presence, focus on future-oriented markets, customizable solutions and ownership of all expertises and technologies make **ODU** a reference point for those looking for reliable **connections**.

by Laura Reggiani

German company founded in 1942 by Otto Dunkel, inventor of the “springwire” contact, and still family-owned and financially independent company, ODU is a globally operating manufacturer of connection systems.

It combines all relevant industrial competencies and key technologies in one company: design and development, machine tool and special machine construction, injection moulding, moulding, turning, surface technology but also assembly and wiring. ODU employs around 2,300 people, it has its headquarters in Mühldorf am Inn, Germany, around 80 km away from

Munich, and manufacturing and logistics sites in Romania, United States, Mexico and China and sales offices all over the world, from China to Japan, from Sweden to France.

Since 2014 the company has been also operating in Italy, led by Regional Sales Manager **Fausto Comi** who explained the Group’s strategies for niche sectors including medical, military and T&M as well as growing and future-oriented markets, such as industrial automation and automotive. Mister Comi told about the company’s new focus on providing clients with customised “turnkey” connection systems.

How do you differentiate your business from others in the connection market?

One of Odu's strengths is undoubtedly its historical market presence and its extreme specialization in niche sectors. For instance, the company stands out for having been based on the patent for an internal contact that is still used and allows reaching up to a million operations. ODU serves high-tech applications including medical, military and industrial equipments, T&M instruments and some specific areas in Automotive where high-performance products are needed. For these fields of applications ODU is prominent for high reliability, quality, performance and good value for money. Many of these applications do not require particularly high volumes, as is the case with the consumer sector, but demand rather specialised connection systems. This is why ODU is increasingly focusing on "turnkey" systems, supplying its own connectors, also wired, and developing connectors with an eye on the relevant connection system so to speed up product development timing while it prevents customers from wasting time in finding their way out of the jungle of the market.

What does the Italian market represent for the Group? How has the business evolved since 2014?

In Italy, until six years ago ODU was practically unknown in many application sectors including industrial automation, military and medical. Things have changed, today ODU is becoming quite a well-known player. Italian market is fragmented in many small and medium-sized enterprises, we have taken a long time in recent years to marketing our business, to promote the company, its product catalogue and, above all, its potential. In our industry, especially in the military and medical fields of applications, many projects take several years before they generate business. We have therefore started from scratch to create a stronger

business that has gradually grown and now, due to some new projects, prospects for future growth are good.

How did 2020 end and what is your forecast for 2021?

ODU's future is definitely positive. The company is running well, it has been growing organically year on year for quite some time and is also making the right investments. As far as Italy is concerned, 2020, which we had assumed to be a year of growth over 2019, had led to a slight contraction, mainly due to the industrial automation market that came to a halt during the first lockdown. We have achieved a partial recovery in the end of the year but did not get compensation for losses we have had.

2021 should be a year of growth, or our budget is expected to grow, at least. In 2020 several new projects were brought forward that should become real and give us hope. I am of course assuming it for obvious reasons linked to Covid and the health situation. 

Fausto Comi
is Italy
Regional
Sales
Manager
at ODU





DESIGNSPARK



Diego Comella
is Country Manager Italy
at RS Components

The Digital Company offering value service

The historic multi-channel distributor **RS Components** continues its strategy of change that led it to become a “**Digital Company**”, as Country Manager for Italy **Diego Comella** tells us, offering the market not only products but also high-value services.

by Laura Reggiani

Well-established on the market due to its 50 years of experience, **RS Group** has established itself over time for the distribution of the widest portfolio of electronics, automation and maintenance products and for the speed of its delivery service.

In the last few years the company put Digital Transformation on the top agenda of its strategy by networking a system of digital and innovation with human relationships and customizing relationships which it goes so far to place **RS Components** as a “digital company” with 70% of the sales through e-commerce. **Diego Comella** is at the helm of the company in Italy as Country Manager for two years. He is driving the Italian team towards the consolidation of the company’s objective to become a point of reference and also the first choice for clients and suppliers while enhancing support to customers and assisting them throughout their

“journey” from design to manufacturing, maintenance and product delivery.

How has RS evolved in recent years? What is it still changing in the company in terms of strategy and market approach?

In the last few years **RS Components** has become a global multi-channel distributor, supplying products and services to several areas of application from transport to utilities, railways to food with a strong push to accelerate digital transformation. **RS** was the first company to invent a B2B transaction site in 1997 in the UK acting once again as a pioneer. Since then, investment in digital has never stopped, which is confirmed by approximately €100 million invested on an annual basis to maintain the digital infrastructure and the team that manages it. It is also important to highlight acquisitions which for **RS** have always had the twofold objective of increasing turnover and acquiring specific skills to penetrate new market areas.

Inventory, maintenance, design and procurement are the areas in which you aim at specializing in your range of services. Can you explain a little bit more about these objectives?

We have chosen these four areas to offer high level services. In the area of inventory, that is stock management, we offer services using platforms to scan missing products on production lines and place orders directly through company's procurement. In the area of maintenance, we operate through a team of 50 specialized engineers who monitor the operation of plants and implement preventive and prescriptive maintenance programmes when necessary. In the area of design, we work with specialists from OKdo and with the support of the DesignSpark community to help designers bring their ideas to life. In the area of procurement, on the other hand, we can provide companies with proprietary software for management of purchasing processes giving the advantage of reducing the number of suppliers, monitoring expenditure and also preventing money tied-up in stock and cash flow.

The sale of electronic components accounts for around 40% of your business. What are your specific strategies in this regard?

Electronics has always been important for RS and of course it could not be otherwise, especially if we look at market trends including Internet of Things or electrification which involve huge opportunities for growth. We still have to work a lot to improve our offering in the specific field and to have more products available. We want to consolidate our position as a key player in the electronic components market being an essential step in our strategy. This is why our offering will increase even further in the coming months.

In 2022 RS will celebrate 30 years of business on the Italian market. What is the importance of the Italian market in the Group's strategies?

Italy is the second largest manufacturing market in Europe and for RS group it is a "tier-one market". Expectations are extremely high as are investments that the Group intends to make in the next few years to accelerate the growth process that will not be only organic but will also include potential acquisitions. We share with the Group the same founding values and objectives, the focus on innovation, the centrality of customers, the speed of service however we have developed specific features over the years. I am now

thinking, for example, of promotion of 'Made in Italy' products through a dedicated platform which has enabled us to launch on the market several Italian manufacturers. There are indeed Italian excellences, new wave of small companies that we can encourage with our showcase.

Last year you moved to a new office in Sesto San Giovanni (Milano) and also opened a sales outlet in Vimodrone (Milano). What were your goals?

RS Italy headquarters moved in late 2019 from Cinesello Balsamo to Sesto San Giovanni at Edison Park, an innovative centre with offices reflecting our digital soul, a technological, dynamic, flexible working environment which also enabled us to reconvert during the health emergency by setting up remote access to all activities from home and ensuring business continuity for our customers. We also have opened in February 2020 a 7,200 sqm logistics centre in Vimodrone, it's about a physical point of sale aimed at having direct contact with customers and providing them with a relational experience and a laboratory opened in collaboration with Tektronix so to offer calibration services for all our customers' instruments.

How did RS close this difficult 2020 compared to the previous year? What results do you expect from the year that has just begun?

The Group's figures, referring to the first fiscal half of the year, show a turnover of £908 million, down 7% on the previous year. This result was negatively impacted by the Spring months while the Summer quarter showed a change in the trend. As far as the end of the fiscal year is concerned, which closes at the end of March, we are optimistic and expect to further limit losses by positioning ourselves for flat growth, a result that would be exceptional for us, especially considering how many competitors are suffering.

How do you see RS over the next five years? What will future challenges be?

As I mentioned, RS focuses significantly on servitization. We work a lot to offer advanced services and assist our customers and meet their needs. We are convinced that this offers us actual and important opportunities to stand out on the market, getting out of the "commodity box" in which we are all the same and competition only stems from price. We want to play a more prominent role and we will do so by continuing to invest, also in Italy, in acquisition of new specialist skills. E



The power of partnership

Rutronik and Comelec join their sales and technical strengths to support the Italian market in the framework of power solutions.

by Laura Reggiani

Since December 2020 Rutronik Italia and Comelec have started to cooperate in the field of power electronics. Founded in 1983 in Collegno, Torino, as a regional manufacturer and distributor of connectors, over the years Comelec has been able to build an organizational and productive structure offering complete supply in the field of connection throughout Italy. It has subsequently signed a number of agreements with important companies in the electronic components industry for the distribution of qualified components in order to increase the range of products and services to offer. “Since our foundation, we have tried to expand our range of products coupled with the full range of services offered and tailored to the long-term needs of our customers”, explains **Loris Cavallotto**, Ceo at **Comelec**. “In addition to connectors, Comelec has over time specialized in high-quality products such as passive components and power se-

micconductors” and the partnership with **Rutronik**, the German broadliner distributor operating in Italy for over 15 years with a well-established organization led by **Pino Cosenza**, is exactly this kind of area.

The market of Power

Power is a healthy market, also in Italy, as the players of the agreement explain. It involves significant figures, confirmed by Dmass data, estimating its value at around € 110 million even in a tough time this 2020. It is above all an expanding market which will significantly grow in the next few years. It is expected to witness growth at about 40% driven majorly by the rising of electrification and recharging - not only of cars but also bicycles, scooters, industrial vehicles - and by developments in other sectors, including renewables, an area where important upturns are wanted, and in the railway with huge potential. “Power electronics is a niche market but strategic

requiring highly-technological products and very skilled professional players”, explains Cosenza. “Such partnership makes us an ideal choice for dealing in the power electronics business. We are indeed implementing a brand-new department consisting of professionals in the field who exclusively devote to this market helping customers with experience and expertise”. The two partners put together a unique set of skills: Comelec brings its know-how and technical background and also knowledge of the customer base while Rutronik helps with a product portfolio covering 100% of power applications, a first-class service with cutting-edge logistics and a consolidated and well-structured sales teams: “Competing in the electronics market is very difficult and even more so in the power electronics field; this is why critical masses are needed like the one we have achieved”.

A strong lasting bond

Comelec and Rutronik are extremely enthusiastic and particularly willing to establish a solid and long-lasting link. “I am a romantic, one of those who still put people before business. The synergy between Rutronik and Comelec is undoubtedly aiming at an economic opportunity but it is also based on a personal feeling established. We wanted this coopera-

tion with the right setting and harmony since the very beginning that made everything a lot easier”, explains Cosenza. The two companies may indeed seem to be incompatible but, as Cosenza explains, they have many things in common: “Companies of different sizes, Rutronik and Comelec are very similar: they are two family-owned enterprises where the management follows the message from the owner as if it were its own in an entrepreneurial logic”. “Two companies sharing the same philosophy and similar principles and basing everything on the value of people. I completely agree on this vision and I am absolutely convinced of the success of this partnership and of the results we will achieve”, confirms Cavallotto. “The cooperation with Rutronik means a lot to us and will enable us not only to offer our customers, in addition to Infineon which is undoubtedly one of the drivers of this initiative, a broader product portfolio from IGBTs to capacitors, from power modules to filters, but also to present our services and products to first-class customers having a carefully structured sales organization behind”, he continues. “All people at Rutronik have shown the greatest willingness to cooperate and total openness, which is unusual in business. We expect it to be right, achieving high satisfaction scores quickly and go far far away”. **E**



Loris Cavallotto Comelec Ceo



Pino Cosenza Italy Country Manager Rutronik



Towards proof-of-value: a tale of IIoT maturity

IIoT deployments are moving fast up the **maturity chain**, from pilot projects to large-scale implementations that are delivering real value today. We take a look at some **examples** and **figures** to map out where the market is today, and what will shape tomorrow.

by Martin Keenan*

“**T**hink big, start small, scale fast” has been a tagline for digital startups for many years, but the story of the maturing Industrial IoT market brings new meaning and perspective to the phrase.

Initially tipped to be a runaway success, with a market worth \$933.62 billion by 2025, at least according to the latest analyst estimates, the Industrial Internet of Things market has been a slower starter than initially forecast.

Overcoming the challenges

A fragmented market, competing technology standards and lengthy cost and implementation periods have been key barriers preventing IIoT adoption at explosive rates. Other challenges have included complex integration procedures, with multiple new sensors and data streams generating false positives and requiring recalibration. The journey from concept to full maturity has been plotted in many different ways over the years, including Gartner's much-quoted 'hype cycle'. Gartner's Hype Cycle for Emerging Technologies in 2018 placed IIoT in general at the "peak of inflated expectations", ready to crash down into the "trough of disillusionment" before beginning the plateau into maturity. But the big question unanswered was when this plateau would be reached.

The beginning of proof-of-value

Analyst house **Deloitte** recently went on record to state that they believe IIoT is finally reaching that maturity, and that their clients are now looking beyond proof-of-concept and towards proof-of-value. Speaking to Information Age, **Robert Schmid**, chief IIoT technologist at Deloitte, gave an example of a plastic manufacturer client that planned to build a new production line to satisfy demand for a specific product. However, by connecting a variety of processes with IIoT devices and overlaying analytics, Deloitte were able to help increase the manufacturers throughput by almost 10%, as well as save £20 million by not building a new manufacturing line

Diverse use-cases emerge

Manufacturing turns out to be the tip of the iceberg in terms of live IIoT applications, with significant traction in oil and gas, mining, utilities and agriculture adding fuel to the fire. One example via **McKinsey** is of an anonymous Top Ten global energy company using IIoT applications and devices as part of a broader programme of process and technolo-

gy upgrades, which has resulted in a 33% reduction in unit production costs over five years. According to the analyst firm, the enterprise saved more than \$9 billion in capital costs, and in addition deployed IIoT analytic tools to assess drilling data, which resulted in increased yields from existing mature oil wells

Utilities see the value

Another early adopter, **GE**, has been developing IIoT solutions to the challenges of renewable energy generation, attaching sensors to wind turbine blades to finesse blade angles in order to maximise efficiency in changing winds. Feeding the overall windfarm data into efficiency analysis tools meant that the economic loss from downtime for each turbine could be used to drive maintenance schedules, enabling engineer time to be used more effectively.

A slightly more left-field IIoT pilot launched recently is tracking water leaks in Kent, UK. South East Water has partnered with **Vodafone's** low-power NB-IIoT network to deploy digital water meters, sensors and acoustic loggers on underground mains water pipes. This will enable the system to 'listen' for escaping water within the network to determine when leaks have occurred and pinpoint the precise location.

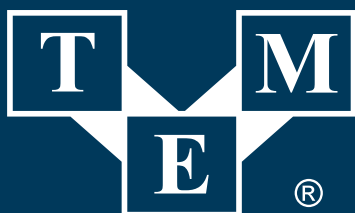
The move may not be entirely unprompted, as UK utility watchdog Ofwat has demanded that all water companies reduce water leakage by 15% by 2025.

Healthcare data analysis delivers

Philips has been actively piloting IIoT in healthcare devices for some years, and has migrated from proof-of-concept towards proof of value as a result of analysing IIoT data garnered from the firm's ultrasound and CT scan machines.

The data harvested by Philips showed that healthcare providers waste significant amounts of time recalibrating CT machines between head and abdominal scans, and used this information to create scheduling software to ensure the number of recalibrations are minimised. 

* **Martin Keenan**, Avnet Abacus Technical Director.



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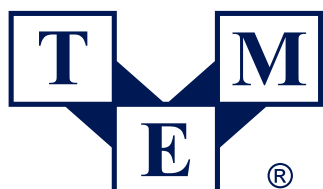
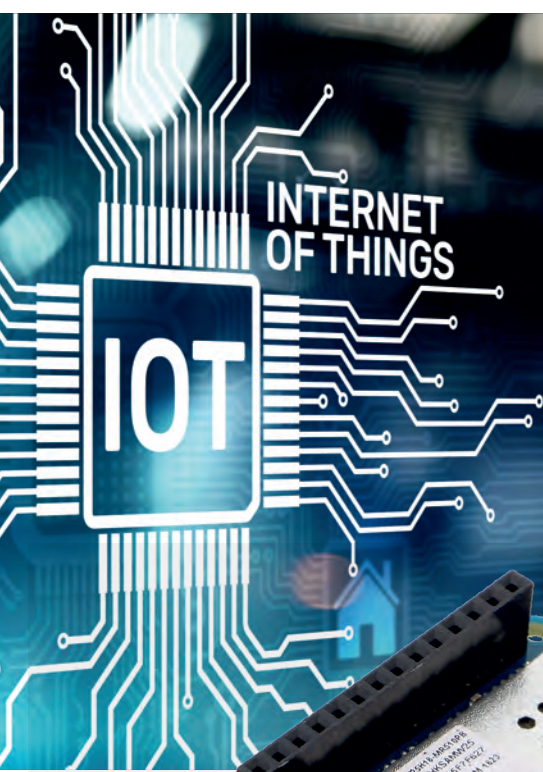
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Together for future Adas

Subaru selects ON Semiconductor image sensing technology to enable camera-based Adas in the car manufacturer's new-generation EyeSight Driver Assist platform. The Levorg, a 2020 All-Wheel Drive Sports Tourer, is the first model to offer the new system.

by Greta Gironi

ON Semiconductor has announced that Subaru has selected its image sensing technology to enable camera-based Adas in the car manufacturer's new-generation EyeSight Driver Assist platform. The Levorg, a 2020 All-Wheel Drive Sports Tourer, is the first model to offer the new system.

The EyeSight solution

Winner of numerous safety awards, Subaru's EyeSight is one of the most well established and widely deployed vision-based Adas solutions in the market. The new generation continues the stereo camera architecture, providing a range of Adas features including adaptive cruise control, lane keep assist and pre-collision braking system. As with previous versions of EyeSight, ON Semiconductor's image sensing technology acts as the 'eyes' to enable this important safety functionality. The new-generation Eyesight, recently announced in the Japan market, provides additional features such as active lane change assist and an emergency driver stop system. "We have teamed with ON Semiconductor for every generation of the EyeSight Adas system and continue to adopt its image sensing technology optimized for image recognition performance in automotive applications with higher resolution," explained **Eiji Shibata**, General Manager, EyeSight development project at Subaru. "Our engineering partnership and technical collaboration on this system are vital to achieving our shared vision of improving safety and achieving Zero traffic fatalities in the near future".

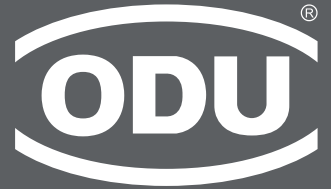
Partnership and collaboration

"Next-generation vehicles require several different kinds of sensors, including LiDAR, radar, and cameras, comprising the vehicle's Adas. These sensors gather data and feed it into a much larger

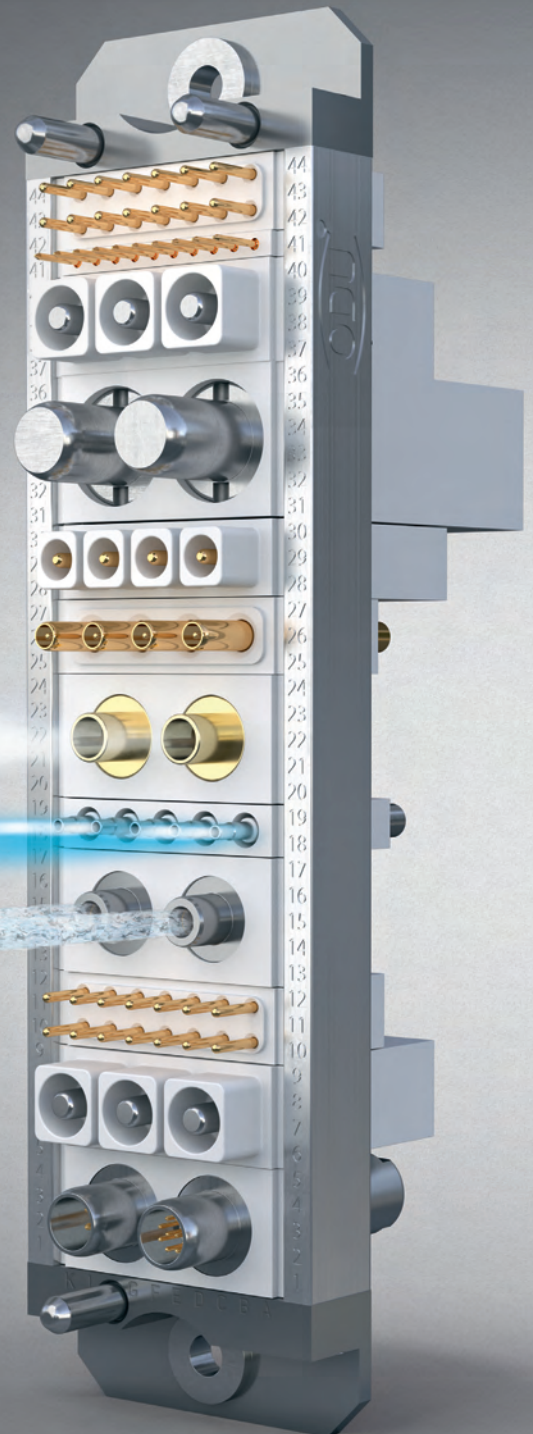
processor (or set of processors) capable of making real-time decisions about what's happening outside and inside the vehicle, and how the vehicle should respond," stated **Patrick Moorhead**, founder, President and principal analyst at **Moor Insights & Strategy**. "I believe ON Semiconductor's market leading position and proven track record of more than 50 years in the automotive market, coupled with a focus on safety and quality, a global support structure and roadmap featuring all sensor modalities makes them a compelling choice for any Oem or Tier 1 automotive manufacturer". "Subaru's high quality standards and commitment to road safety make their choice of our technologies a powerful endorsement," commented **Ross Jatou**, Vice President and General Manager of Automotive Solutions, Intelligent Sensing Group at ON Semiconductor. "We are thrilled to continue to collaborate with them and together save lives with safer roads from Adas and autonomous vehicles." 



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The recession in Europe seems to slow down

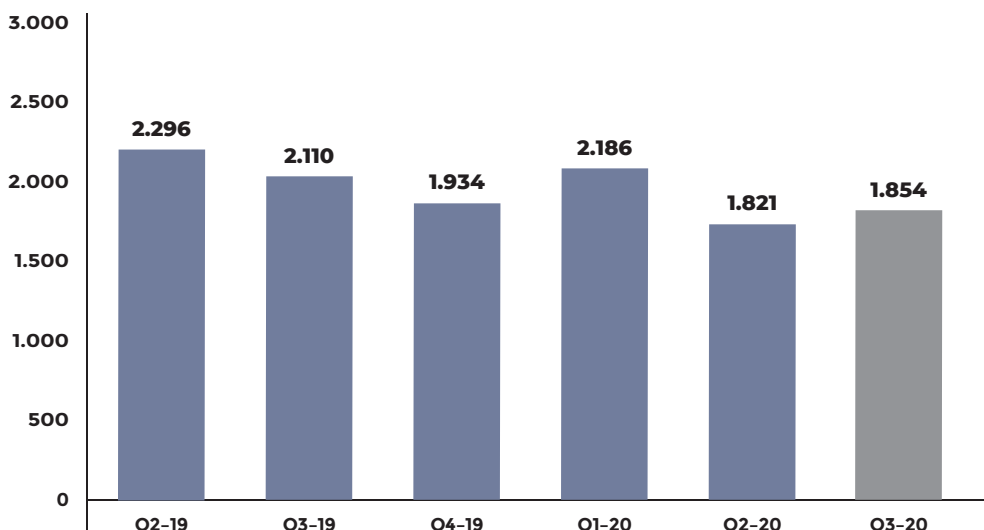
Semiconductor sales decreased by 12% in 2020 third quarter; from Dmass data, the impact of Covid-19 remains strong, but the recession in Europe is slowing down.

THE EUROPEAN SEMICONDUCTOR DISTRIBUTION MARKET SEEMS TO HAVE SEEN THE WORST BACK IN 2020 AND A RETURN TO GROWTH IS HIGHLY LIKELY IN 2021. WITH COVID-19 IMPACT EASING AND A RETURN TO STRONG GROWTH IN ASIA DRIVING COMPONENT DEMAND, THE DEMAND IN EUROPE IS GROWING TOO. HOWEVER, Q4/2020 STILL RESULTED IN A SLIGHT DECLINE. ACCORDING TO DMASS., SALES IN THE EUROPEAN SEMICONDUCTOR DISTRIBUTION MARKET FELL BY 3.8% TO 1.86 BILLION EURO. THE FULL YEAR ENDED WITH -12.4% AND TOTAL SALES OF 7.72 BILLION EURO.

Georg Steinberger, chairman of DMASS: "While the 2nd wave of the Covid-19 pandemic is still in full swing and transportation hurdles make it difficult to get high-tech goods into Europe in time, the demand of customers – particularly in the automotive sector – is growing strongly. Longer lead times and price increases from manufacturers will likely dominate the first half of 2021. It remains to be seen if the extremely high bookings level is sustainable beyond summer." Country-wise, any country or region with a strong contract manufacturing base did relatively well in Q4, growing healthily in some areas, while bigger regions still suffered the downturn effects. The spread of growth/decline ranged

from -24% to +22%. Germany again declined more than the average, by 8.2%. Italy did considerably better, with a decline of only 3.9%. France declined by 10%; and the UK, despite some Brexit-related pre-shipping, dropped by 15.1%. The Nordic countries, like Italy, ended at close to the average, with -5.7%. The entire East region, including Eastern Europe (+2.3%), Israel and Turkey actually grew, as did Benelux, with +14.7%.

Steinberger: "The most conclusive insight from the data is that, wherever there is strong contract manufacturing, the market recovers faster. The second obvious development is that Germany, as a stronghold for the European market, gets smaller, in part driven by increased outsourcing to Eastern Europe. So far, the UK has been spared any significant Brexit effect although we will no doubt see more impact as 2021 progresses." From a product perspective, Q4 showed some positive development in Discretes, Power and Sensors, as well as in Flash Memories and Microcontrollers, while most other products meandered around the average decline. Only Microprocessors, Programmable Logic and Standard Logic saw a double-digit decline.



European semiconductor distribution quarterly trend
(sales in billion euro, source Dmass)

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ST MICROELECTRONICS HAS SELECTED SCHNEIDER ELECTRIC AS A STRATEGIC PARTNER TO SUPPORT ITS GOAL TO REACH CARBON NEUTRALITY BY 2027.

Schneider will support ST in this next stage of its ongoing efforts to reduce its global environmental footprint. The companies will collaborate on the overall reduction of energy consumption on ST's manufacturing and design sites, the renewable energy sourcing strategy across all of ST's locations and the identification and implementation of credible and relevant carbon avoidance, and sequestration programs. The partnership builds on a longstanding relationship between the two companies. Today, ST supplies a variety of energy-efficient components to Schneider for use in its variable speed drives, power monitoring systems, building management systems and uninterruptible power supply systems. Under the new agreement, ST and Schneider will increase their cooperation to develop additional joint



products, technologies, and solutions focused on energy efficiency improvement, supporting digital transformation in buildings, datacenters, industrial applications, and infrastructure. The partners will specifically look at the possibilities enabled by wide-bandgap semiconductors, AI-enabled sensors, and connectivity.

Hassane El-Khoury is the new ON Semiconductor's CEO

ON SEMICONDUCTOR ANNOUNCED THAT HASSANE EL-KHOURY HAS BEEN NAMED AS THE COMPANY'S PRESIDENT, CHIEF EXECUTIVE OFFICER AND MEMBER OF ITS BOARD OF DIRECTORS, EFFECTIVE DEC. 7, 2020. Prior to joining **ON Semiconductor**, El-Khoury served as president, chief executive officer and member of the board of directors at Cypress until its sale to Infineon. He held various roles spanning business unit management, product development, applications engineering and business development during his thirteen years at Cypress. After immigrating to the United States from Lebanon at the age of 17, El-Khoury obtained a Bachelor of Science in electrical engineering from Lawrence Technological University and master's in engineering management from Oakland University. He was a 2018 recipient of Silicon Valley's 40 under 40 and is currently a member of the board of directors at KeraCel.



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Flexible and configurable analog and digital peripherals

Microchip announces microcontrollers that solve tough analog system design challenges.

MICROCHIP ANNOUNCED THE PIC18-Q41 AND AVR DB MCU FAMILIES THAT ARE THE FIRST TO COMBINE ADVANCED ANALOG PERIPHERALS AND MULTI-VOLTAGE OPERATION WITH INTER-PERIPHERAL CONNECTIONS FOR INCREASED SYSTEM INTEGRATION AND REDUCED SIGNAL ACQUISITION TIMES AND OFFER THE CONVENIENCE AND EFFICIENCY OF OPERATING IN A SINGLE DESIGN ENVIRONMENT. PTo address the need for signal conditioning in space-constrained sensing and measuring applications such as IoT end nodes and industrial, medical devices, wearables, automotive and lighting systems; the PIC18-Q41 MCU has a configurable Operational Amplifier and Analog-to-Digital Converter with computation and Digital-to-Analog Converters. It is particularly well-suited for IoT and large-scale artificial intelligence at-the-edge, including predictive maintenance edge nodes in a smart factory. Offered in compact 14- and 20-pin packages, the PIC18-Q41 MCU also makes a good companion to Microchip's 32-bit MCUs and other controllers that require analog integration. Mixed-signal IoT systems often

include multiple power domains, and the AVR DB MCU simplifies the challenges of these designs while reducing cost by integrating true bi-directional level shifters. This features lowers cost in a wide range of applications including automotive, appliances, HVAC and liquid measurement. The addition of 3 independent and highly configurable Op Amps, a 12-bit differential ADC, 10-bit DAC, three zero cross detectors and CIP makes the AVR DB MCU ideal for virtually any application involving analog signal conditioning and processing functions.

"Microchip is bringing easy-to-use analog capability to cost-effective PIC and AVR MCUs so designers can meet the requirements of large-scale IoT systems. With a unified, seamless development tool experience, designers can use these MCUs as a single-chip controller, or as an intelligent analog signal conditioning component in a larger system".

Greg Robinson, Vice President for Microchip's 8-bit Mcu.



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2020 for electronic components market closed with a downturn less critical than expected. The prospects for 2021 are of recovery, even if attention has to be paid to a possible scenario of shortage, allocation, lengthening of delivery times and average prices increases.

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