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## ASSOCIATIONS

**AREI - South Africa**

Association of Representatives  
for Electronics Industry

**ASPEC - Russia**

Association of Suppliers of  
Electronic Components

**ASSODEL - Italy**

Associazione Nazionale Fornitori Elettronica

**CEDA - China**

China Electronics Distributor Alliance

**ECAANZ - Australia**

Electronic Components Association  
Australia and New Zealand

**ECIA - United States**

Electronic Components Industry Association

**ECSN - United Kingdom**

Electronic Components Supply Network

**ELCINA - India**

Electronic Industries Association of India

**ELKOMIT - Finland**

Suppliers of Electronic Instruments and Compo-  
nents Association

**FBDI - Germany**

Fachverband der Bauelemente Distribution

**FEDELEC - Tunisia**

Tunisian Federation of Electric  
and Electronic Industries

**SE - Sweden**

Svensk Elektronik Trade Associations

**SPDEI - France**

Syndicat Professionnel de la Distribution  
en Electronique Industrielle

# Component availability: The "F" & "A" words and World of Pain....

*All sorts of euphemisms are being used to describe the developing availability situation currently affecting certain sectors of the electronic components supply network. Terms such as "constrained supply", "tight market", "undersupply", "demand supply imbalance" are becoming commonplace but thus far the dreaded "A" word (Allocation) is largely being avoided. Adam Fletcher explains how Forecast (the "F" word) is able to have such a significant effect on the "A" word.*

by Adam Fletcher  
ECSN

Chairman of ECSN end idea



Today, most organisations operate within a supply network with only a very few very large organisations operating within supply chains. The term "supply network" infers that organisations that operate within it accept some responsibility for the well being of other organisations in the network and are therefore mutually dependent on the accuracy

of information available to members both up and down the network. Unfortunately most electronic systems integrators (OEMs ODMs CEMs) have consistently under-invested in the processes needed to accurately forecast their organisation's material demand and have therefore failed to communicate effectively within their supply network.

## To IDEA News readers

*Just to let you know that the time has come for me to finally retire! The next and all subsequent IDEA News publications will be edited by my long-term colleague, Aubrey Dunford. I joined, F & E, a UK distributor for Cannon Plugs, in 1960 and I am happy to end my 57 year career in the electronic components industry working with my good friend Silvio Baronchelli in that super organisation IDEA. Good luck for the future folks!*



**Gary  
Kibblewhite**

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## A PERFECT STORM?

The electronic components market is today facing what many commentators are describing as “a perfect storm”. Poor forecasting has constrained investment by component manufacturers - particularly semiconductor companies - in new capacity and in-process inventory.

**“The electronic components market is today facing what many commentators are describing as “a perfect storm” //**

This is understandable in an uncertain market, as few organisations are prepared to take the huge financial risks of adding new manufacturing capacity even though the cost of borrowing is at an all-time low.

They have in fact used availability of inexpensive capital to consolidate via mergers and acquisitions to better utilise resources - particularly manufacturing capacity - whilst also improving their return on investment and flattering their growth performance. Capacity constraint coupled with demand increasing above poorly forecast levels and the uncertainty caused by M&A activity inevitably results in extending **manufacturing lead-times.**

The vast majority of electronic components are today seeing a modest increase in manufacturing lead-times but most products – E-Mech, batteries, displays,

interconnect, power supplies and lighting - remain within reasonable lead-times of less than 12 weeks.

That said, many semiconductors and some passive products are currently on lead-times of circa 16 weeks and some have already moved out to 20 weeks and beyond.

A small number of these critical products are now being quoted as having lead-times in excess of 26 weeks and of these a smaller number of manufacturers have begun to whisper the dreaded “A” word, **“Allocation”**.

## WHAT IS ALLOCATION?

The dictionary defines allocation as “the action or process of sharing out something”.

For us in the electronic components supply network allocation generally means that the manufacturer has orders in excess of its manufacturing capacity and in partnership with its authorised distributors who serve the majority of customers, finds itself having to determine how to equitably apportion the available output to best serve customers’ requirements.

**“Many semiconductors and some passive products are currently on lead-times of circa 16 weeks” //**

This is inevitably a “world of pain”: The management time and effort required to allocate

products to customers fairly whilst striving to bring on additional capacity quickly is a nightmare scenario for all and no one wins in the process.

### **“PROPRIETARY” OR “COMMODITY”...?**

In periods of allocation “proprietary” products produced by a very few organisations get a much higher priority in available manufacturing capacity than “commodity” products that are multi-sourced and available from many organisations because customers are entirely dependent on the manufacturer(s) for their supply.

As a result availability issues around “proprietary” products - typically semiconductors - are normally resolved reasonably quickly whilst the allocation period for “commodity” products is often much longer and steeper. It’s worth remembering however that very complex interconnected semiconductor manufacturing processes often involve multiple specialist third party organisations and even in normal times, demand a cycle time in the range of 12-to-16 weeks.

This can be accelerated by the use of die banks or partially processed products but multiple bottlenecks are inevitable and need to be overcome. Accelerating the production process also increases costs significantly, which ultimately impacts the manufacturer’s profitability.

### **AUTHORISED DISTRIBUTORS**

The electronic components markets are fiercely competitive and even in a period of allocation competing manufacturers are desperate to retain their customers and hold on to or even boost their market share.

Manufacturers’ authorised distributors have a critical role to play in bringing the electronic components supply network back into balance and maintaining its stability.

***“Customers are well advised to remember that a period of “allocation” is only likely to impact a very small number of specific and identifiable electronic components”***

They are often the largest “customer” of the manufacturer and use their internal forecast of their customers’ demand to prioritise the manufacturing mix and allocation of finished goods.

Most customers purchase a range of proprietary and some commodity products from a particular manufacturer so there is always a precarious balancing act to ensure adequate supply of both product types to meet the customer’s needs. Distributors maintain a wide ranging inventory

investment to support the manufacturer and their customers and often have the technical expertise in place to advise customers of more generally available alternative product from the manufacturer that may be acceptable even though it might be a different speed grade, package or temperature range etc.

### **CUSTOMERS**

Customers are well advised to remember that a period of “allocation” is only likely to impact a very small number of specific and identifiable electronic components.

A knee jerk reaction to the fear of product shortages impacting their organisation and jeopardising their output is understandable but does nothing to help them or the broader electronic components supply network.

The more considered response for most organisations is to review with their suppliers the current manufacturing lead-time against all items on their BOM and identify if any are “at risk” and put in place a plan to monitor and manage the supply of these products.

In this context **“at risk”** can be applied to any components where

the lead-time is in excess of 20 weeks.

### **FORECAST OR PREDICTION...?**

I’m confident that the competitive nature of the global electronic components supply network will resolve the emerging allocation problem reasonably quickly but the global electronic components market is in a growth cycle and short-term recovery may well depend on the demand for electronic components in the Asia-Pac region in the second half of 2017. If demand grows strongly the recovery period will unfortunately extend.

Now’s the time for all parties in the supply network to fully recognise the role that the “F” word has in mitigating the worst excesses of the “A” word problem. All organisations need to communicate their needs to their component manufacturers and their authorised distributors honestly and effectively and work with all partners in the supply network to help maintain market stability.

However, I suspect that overall manufacturing lead-times are likely to remain in the 6-to-8 week range for at least the next few years.





# Q3 performance in Europe is normally poor ...it wasn't this year!



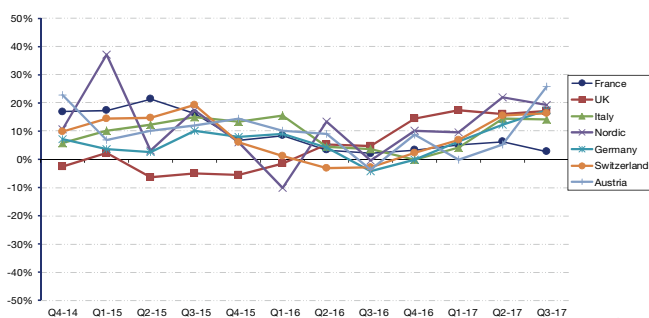
by Gary Kibblewhite  
[www.ideaelectronics.com](http://www.ideaelectronics.com)



Just to remind readers. If you would like to have the original graphics used in this article just email to the IDEA secretary at [segreteria@ideaelectronics.com](mailto:segreteria@ideaelectronics.com)

The IDEA statistics are taken from actual bookings and billings returns made by a substantial percentage of the electronic component distributors in Europe, including all the major distribution groups. Their sales represent over 66% of the total European electronic component distribution market so the trends shown are truly representative. These published statistics now include, from Q3 2015 onwards including historical adjustments, Switzerland and Austria.

3RDQTR. 2017 TOTAL COMPONENTS TENDENTIAL INDEX BY COUNTRY(Q.QY-1) Graphic T6  
Trend showing growth/decline % in quarterly sales of all components through distribution split by country compared with same quarter prior year

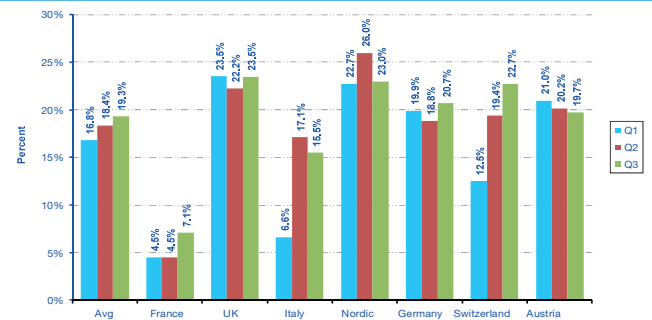


[www.ideaelectronics.com](http://www.ideaelectronics.com)



Even though the total components Book:bill for Q3 was once again a little down on the prior quarter ( it has dropped slightly every quarter this year),the trend growth in all regions stayed positive in Q3. France's poor performance in Semis was offset by their great bookings and billings numbers in Emech. The UK, **Germany** and **Nordic** topped the league with **12%** or more growth over the same quarter last year. Last quarter I used the phrase "stability at last" well it is still looking good, at least for the moment, but the continuing spectre of shortages and an overall economic "topping out" of stock markets across the world could lead to major market adjustments. Hopefully, later rather than sooner!

3RDQTR. 2017 TOTAL COMPONENTS YTD BOOKINGS TREND Graphic T5  
Cumulative orders for Electronic components via distribution by country for current year to date compared with same period prior year



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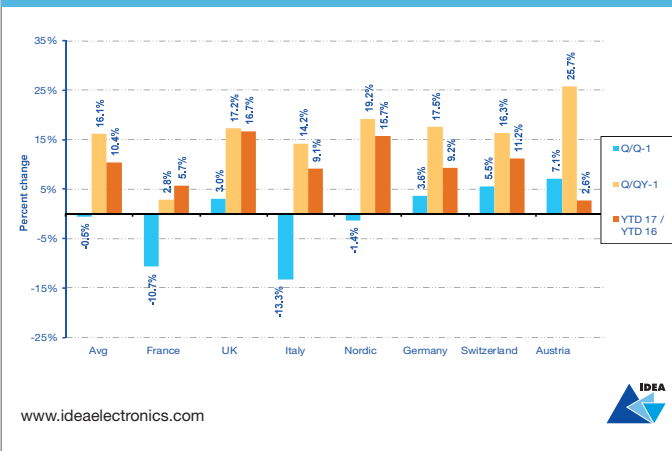
Despite Q3 being historically a poor quarter, total components bookings continue to grow in most regions with every region apart from France posting a 15% plus growth in total component bookings over the same quarter last year. France, however, still grew but at a lower rate. However, the continuing gradual drop in **Book:bill ratio** remains a concern.



### 3RDQTR. 2017 TOTAL COMPONENTS BILLING TREND

Graphic T3

Distribution sales for Electronic components by country comparing current qtr with prior quarter (Q/Q-1) and same quarter prior year (Q/QY-1) and YTD 17/16

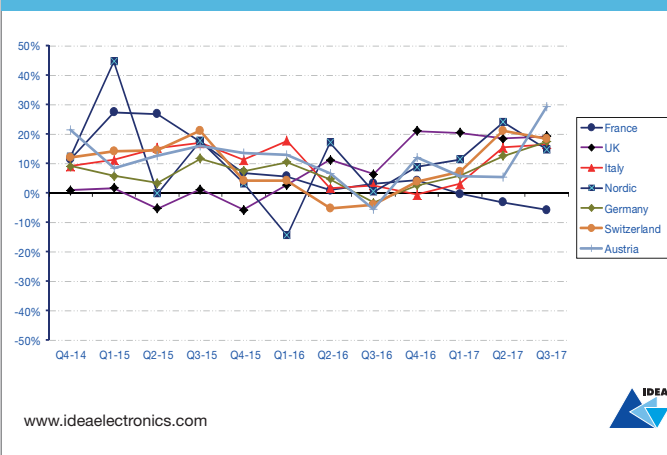


The total components billings trend shows that all regions apart from France, Nordic and Italy are even showing a growth in total component billings over Q2 this year! Also, every region is showing growth over the same quarter last year. The **UK** has maintained a recovery compared with last year but undoubtedly the UK Pound exchange rates with both the US dollar and the euro has affected these Euro-based statistics.

### 3RDQTR. 2017 SEMICONDUCTOR TENDENTIAL INDEX (Q/QY-1)

Graphic S6

Trend showing growth/decline % in quarterly sales of semiconductors through distribution by country compared with the same quarter prior year.



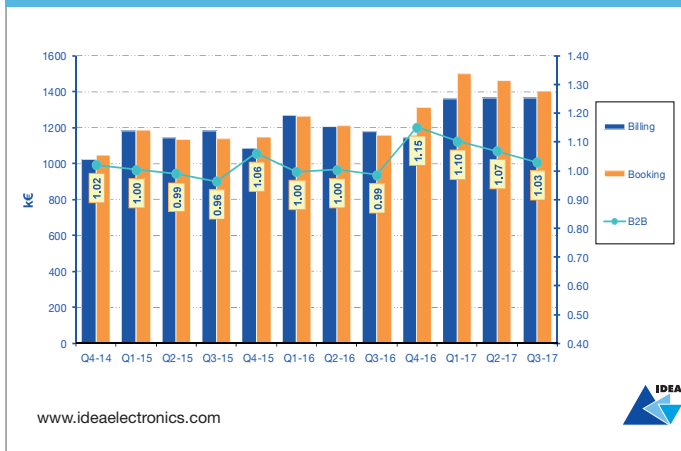
France continues to underperform other regions in Europe posting a continuing decline in sales when compared with last year. The **10-20%** growth in the other major European markets has, however, offset this.

**"Economic "topping out" of stock markets across the world could lead to major market adjustments"**

### 3RDQTR. 2017 SEMICONDUCTOR BOOKINGS, BILLINGS & BOOK: BILL RATIO

Graphic S1

Semiconductor components bookings, billings & book:bill ratio for Germany, France, Italy, UK, Sweden, Norway, Denmark, Finland, Switzerland and Austria

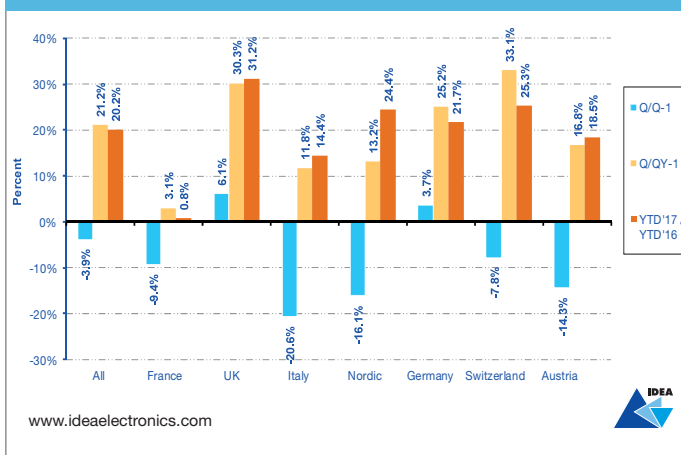


Total **Semiconductor** bookings and billings remain remarkably strong, continuing at an extremely high level that is likely to lead to a record year in 2017! However, the continual gradual decline in semiconductor book:bill throughout the year could well give us problems for 2018!

### 3RDQTR. 2017 SEMICONDUCTOR BOOKING TREND

Graphic S2

Distribution orders for semiconductors by country compared with the prior quarter (Q/Q-1) and the same quarter prior year (Q/QY-1) and YTD 17 / 16

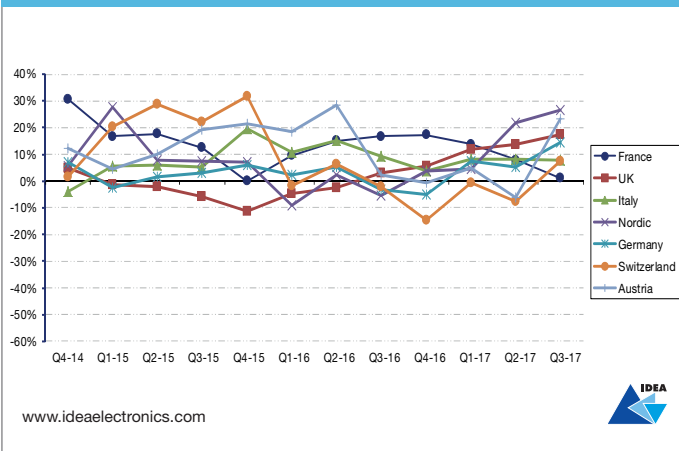


After a fall in bookings-growth of semis in Q1 this year, Q2 and Q3 have shown excellent growth in almost every region. The fact that the largest single region, Germany, has posted a 21.7% Bookings growth bodes well for Q4 billings.

**"Semiconductor bookings and billings are likely to have a record year in 2017!"**

### 3RDQTR. 2017 **PASSIVES TENDENTIAL INDEX BY COUNTRY (Q/QY-1)** Graphic P6

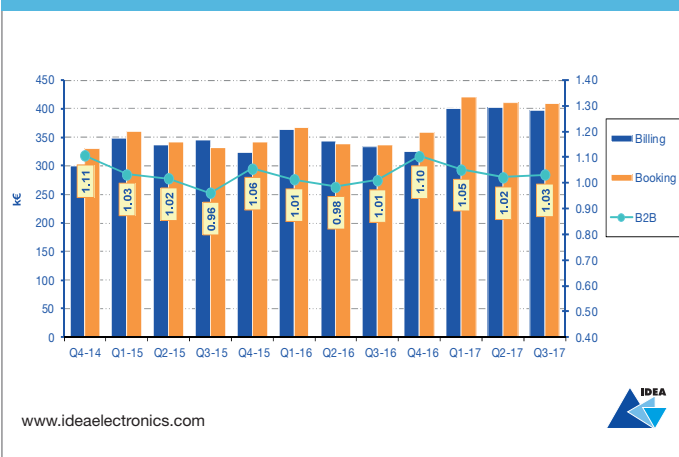
Trend showing growth/decline % in quarterly sales of passives through distribution by country compared with the same quarter prior year.



A great performance for **passives** this quarter! Every region other than France showed not only a growth over the same quarter last year but also an improvement in the growth % rate.

### 3RDQTR. 2017 **EMECH COMPONENTS BOOKING, BILLING & BOOK-BILL RATIO** Graphic E1

EMECH components Bookings, billings & book:bill ratio for Germany, France, Italy, UK, Sweden, Norway, Denmark, Finland, Switzerland and Austria

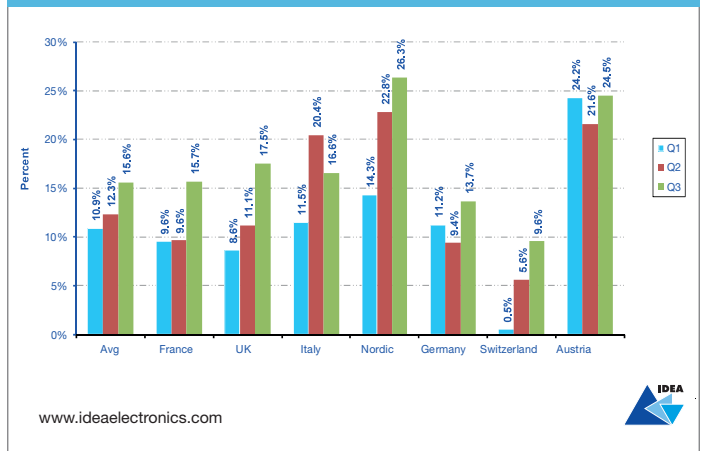


The graphics above speak for themselves! A super performance once again from **Emech** and, of course, a strong Emech helps distribution's overall margin -performance. It was a strong performance in Emech components in France that offset their poor performance in semis. Overall a year-to-date growth in total Emech billings of over 15% compared with last year is excellent.

**"Not only are Emech billings doing well but bookings are performing even better"**

### 3RDQTR. 2017 **PASSIVE YTD BOOKING TREND** Graphic P5

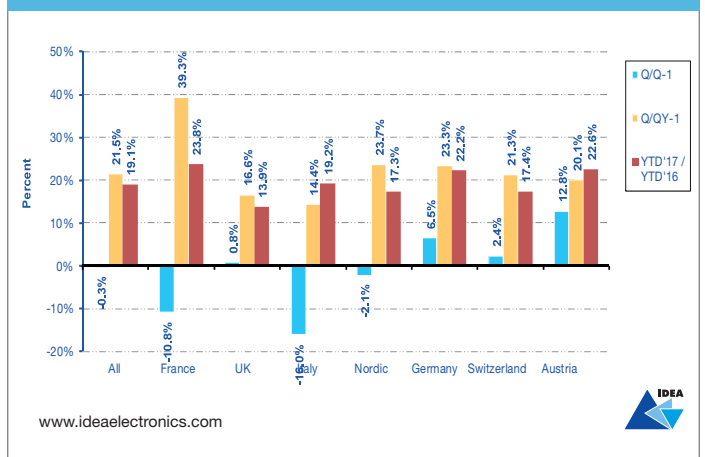
Cumulative orders for Passive components through distribution by country for the current year showing the growth/decline % compared with the same period prior year



Passives are following the overall upward trend with all regions growing over the same period last year in all three quarters of the year. Total book:bill ratio for passives has remained constant for the year at around 1.07:1 so passive billings are likely to be strong for the last quarter this year.

### 3RDQTR. 2017 **EMECH COMPONENTS BOOKING TREND** Graphic E2

Distribution orders for passive components by country comparing Q1 2017 with the prior quarter (Q/Q-1) and the same quarter prior year (Q/QY-1)



And not only are Emech billings doing well but bookings are even better with an overall growth of Emech bookings for 2017 to-date almost 20% up compared with last year.



## News

### Broadcom to acquire Qualcomm for \$130 billion

Broadcom, a semiconductor device supplier to the wired, wireless, enterprise storage, and industrial end markets, announced a proposal to acquire all of the shares of Qualcomm for per share consideration of \$70.00. Qualcomm's cellular business is complementary to Broadcom's portfolio, and the combination will create a strong, global company. The combined Broadcom and Qualcomm, including NXP, will have pro forma fiscal 2017 revenues of approximately \$51 billion.

### NXP development center for automotive electronics in China

NXP Semiconductors, the Chongqing Economic and Information Technology Commission and Chongqing Laingian New Area Administrative Committee have signed an agreement to establish the NXP China Applications Development Center for Auto Electronics. The center will help China's domestic carmakers quickly gain the needed knowledge and expertise to build Electronic Control Units (ECUs) using NXP solutions to drive growth, innovation and industry standards for automotive electronics.

Source: [www.europelectronics.biz](http://www.europelectronics.biz)

# Legal certainty - quo vadis?



by **Jens Dorwarth**  
Manager E&C Hy-Line,  
Chairman of the WG Environment  
& Compliance at the FBDi



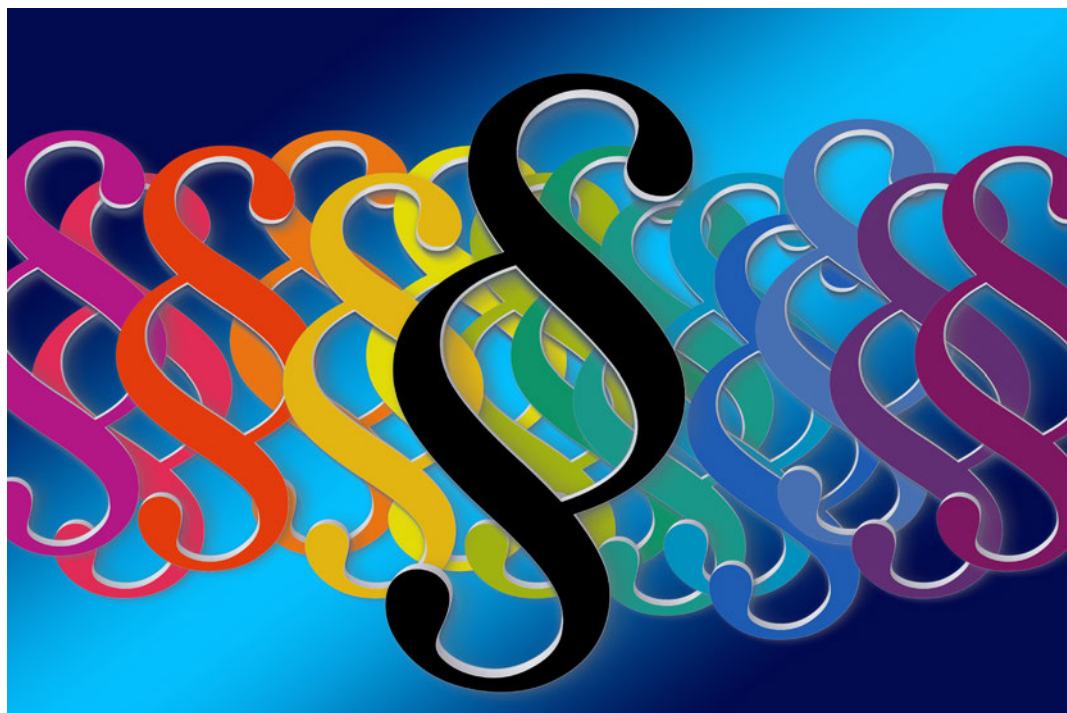
**C**lear instructions provide certainty and direction. They also prevent misunderstandings. Sounds logical, doesn't it? And if something is unclear, we simply leave it out or make a detour around it –

which is certainly what the current method of dealing with some conformity regulations appears to be like at least.

What sounds absurd is the sad truth in the electronics industry: different interpretations between manufacturers, notified bodies and authorities have led to the EU Commission withdrawing several guidelines.

**“Different interpretations between manufacturers, notified bodies and authorities have led to the EU Commission withdrawing several guidelines”**

It's happened to the **EMC Directive** (refer to the commentary on the ICSMS website in relation: “A guide will soon be available to assist with the common application of Directive 2014/30/EU. The guide has no weight in law, but deals with a number of practical issues that will be of interest to manufacturers and other stakeholders.”) and to the **RE-D Directive** as well in both contexts addressing component parts, modules/assemblies and “components”. The legislation needs to be applied, that is for sure. The question is how this is to be done correctly, if it is unclear whether modules, as an example, are contained in the RE-D





or not, and what requirements are made of them? Or if no definite guidelines exist and the “who”, “how”, “where” and “what” is missing? I’m saying this because, the related guidelines simply disregard critical passages and refer to ongoing discussions at the next committee meeting, without providing a date. Shame to him who thinks evil of it.

**“We urgently need clarification to make sure that an end is finally put to these different interpretations!”**

We, the distributors and importers, are asking ourselves, “How is this going to work in day-to-day operations?” and “What are we supposed to do now?” It is not acceptable that participants in the market are being forced to act without legal protection. We urgently need clarification to make sure that an end is finally put to these different interpretations! A solution will not be in sight, however, until the stakeholders stop disagreeing about the concerns, requirements and implementations, and the measures for monitoring and sanctions. For the European Commission, the forgoing task remains the **responsibility of the individual countries** and it is up to the member countries to implement it. So far so good. In Germany, however, the task has been delegated at federal

state level, where apparently it is now languishing unloved and ignored.

**“Everything is lying idle. No one feels compelled to speak up and solve the problem”**

Since the legislation is not clearly explained in terms of concerns and requirements, the customs authorities are incapable of monitoring the market in line with clear instructions. So, everything is lying idle. No one feels compelled to speak up and solve the problem. But, as long as the various committees do not start being clear about things, there is no guarantee of legal certainty for importers and distributors, and ultimately no protection for the consumer. And even with all the will in the world, how on earth are you supposed to follow guidelines if there aren’t any clear instructions?

**“When will someone finally have the guts to make a decision?”**

We are all familiar with William Shakespeare’s portrayal of his hero Hamlet musing about, “To be, or not to be, that is the question”, – well, if you were to ask the same question today, you can be sure that the answer would be a clear “Maybe”. Which brings us to the question of when will someone finally have the guts to make a decision?

## Association of Representatives of the Electronics Industry South Africa 2017/2018

by Warren Muir  
AREI

[adec@icon.co.za](mailto:adec@icon.co.za)



The Association of Representatives of the Electronics Industry (Arei) of South Africa had its **Annual General Meeting** at Kyalami Country Club near Johannesburg on 19<sup>th</sup> October 2017 and was well represented by the members. The committee reported that they had concentrated their efforts on the following strategies during the past financial year:

- Increased Membership
- Focused engagement with Government
- Focused engagement with Educational Institutions
- Engagement with other Associations

They had been successful with increasing the membership by recruiting five new members representing a broad spectrum of the industry. However, due to the decline in the economy three members had resigned various reasons, so the nett growth was only two for the year. There were a few companies who had applied or would be applying but the association were awaiting payment

of their membership fees before confirming their membership. The committee had initiated a few engagements with Government Institutions with various levels of success. Engagements with other associations had been successful, and the association were in the process of signing Reciprocal Membership agreements with the SAEEC, SAIMC and IESA amongst others. There had been several engagements with Educational Institutions and the committee remained positive that they would be able to establish a link between institutions and Industry. The committee reported that arei represented its members at the Manufacturing Indaba at Emperors Palace in the Eastrand in June.

**“Through Collaboration in the Manufacturing Sector we would be able to save the economy in South Africa”**

Although the attendance was not overwhelming, the interest in AREI, its members and the Industry was significant. Despite the underlying poor economy general sentiment of those who visited the stand was positive, and many echoed that they believed that through Collaboration in the Manufacturing Sector we would be able to save the economy in South Africa. The chairman acknowledged that the committee had made good progress in the financial year, and would proposed that the committee remained unchanged for FY18 except for any. He confirmed that the committee continue with the strategies that were defined in 2016 with focus on arei’s mission to grow the South African Electronics Industry through Collaboration.





## News

### Optoelectronics, sensors/actuators and discretes climb

More than a dozen product categories in optoelectronics, sensors and actuators, and discretes semiconductors (O-S-D) are on track to set record-high annual sales this year, according to a IC Insights.

Driven by the expansion of the Internet of Things (IoT), increasing levels of intelligent embedded controls, and some inventory replenishment in commodity discretes, the diverse O-S-D marketplace is having a banner year with combined sales across all three semiconductor segments expected to grow 10.5% in 2017 to a record-high \$75.0 billion.

In 2017, above average sales growth rates are being achieved in all but one major O-S-D product category - lamp devices, which are now expected to be flat in 2017 because of continued price erosion in light-emitting diodes (LEDs) for solid-state lighting applications. For the first time since 2014, all three O-S-D market segments are on pace to see sales growth in 2017. Moreover, 2017 is expected to be the first year since 2011 when all three O-S-D market segments set record-high annual sales volumes, according to IC Insights.

Source:  
[www.europelectronics.biz](http://www.europelectronics.biz)

# 2017 CEDA Executive Conference & Top 100 Leading Electronics Component Distributors in China's Market

by Amy Wang  
 CEDA



To Serve China's constant industry upgrades and to provide a one-stop component supply chain solution to China innovation and also to support China's integrated Circuit development, CEDA will conduct its annual event

**DATE: DECEMBER 7-8, 2017**

**Venue:** Intercontinental Hotel Wuxi, Jiangsu Province  
**Organizer:** China Electronics Distributor Association(CEDA), Under the leadership of Ministry of Industry and Information Technology of People's Republic of China, City Government of Wuxi

**"2017 CEDA Executive Conference"** in Wuxi, Jiangsu province.

***"CEDA will conduct a conference to bridge local component and IC suppliers with the help of the international distributor association IDEA"***

CEDA will announce the Top 100 leading electronics component distributors' in China's market.

Along with this event, CEDA will award excellent distributors and semiconductor suppliers covering renewable energy, automotive electronics and IOT market areas, conduct technology seminars as well as conduct a conference to bridge local component and IC suppliers with international distributors with the help of the international distributor association IDEA.

Contact  
[amywang@cedachina.org](mailto:amywang@cedachina.org)  
 if you are interested in participating or sponsoring this event, thanks.

## AGENDA

### December 7 Morning session:

CEDA Executive Conference on Electronics Information Industry and Top 100 Leading Electronics Component Distributors in China's Market.

### December 7 Afternoon Session:

Frontier Technology Seminar on Renewable Energy Artificial Intelligence, Automotive Electronics, Healthcare and IoT.

### December 7 Night Session:

Award Ceremony and Dinner

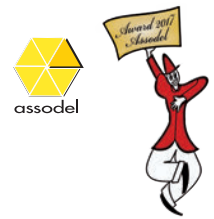
### December 8 Morning Session:

International Distributor and Local Component Supplier Conference

### December 8 Afternoon Session:

Individual Meeting/Local Visits

# 2017 Italian "Oscars" to the electronics manufacturers



by Silvio Baronchelli  
Assodel



The **Assodel Award** is the recognition that **Assodel** (the Italian Federation of electronics clusters) assigns every year to best manufacturers. Now in their 15th Year, the presentation of the 2017 Awards took place in Reggio Emilia during the traditional Assodel Gala dinner, dedicated to all the electronics community, with more than 400 people attending.

**"The 2017 Italian  
"Oscars". Now in  
their 15th Year"**

Assodel Awards to the best manufacturers of the Italian market are recognized and respected by the electronics community. The votes from the electronic supply chain are assigned by using specific performance indicators such as excellence

in logistics, technical support, effectiveness of communication and distribution policies. The prize-giving ceremony took place on the 20<sup>th</sup> September during **Power Fortronic**, a unique Italian event devoted to power electronics.

## 2017 WINNERS

### CATEGORY SEMICONDUCTORS

Winner:

#### ST Microelectronics

*For its innovation, the quality of its products and its support given to the distribution channel. In the Semiconductor market, ST has a strong leadership in the MEMS segment, the power and in the IoT components market.*

### CATEGORY IP&E

Winner:

#### MOLEX

*Molex celebrates 44 years of leadership in the connectors market. Thanks to its wide distribution network, its constant support to the supply chain and its product portfolio, Molex is a all-round company.*

### CATEGORY OPTO

WINNER:

#### OSRAM

*From smart lighting to horticultural lighting, from architectural to outdoor lighting, from automotive*

*to human centric lighting, OSRAM's LEDs can perfectly answer any applicative market requirements thanks to one of the widest products portfolio in this sector.*

### CATEGORY WIRELESS

Winner:

#### SILICON LABS

*A strong know-how in CMOS technology and in wireless make Silicon Labs leader in IoT components, included Bluetooth and Wi-Fi, and in MCUs and sensors. Silicon Labs is appreciated for its technical support through development tools, embedded software and cloud services.*

### CATEGORY POWER

Winner:

#### ON SEMICONDUCTOR

*After the Fairchild acquisition, ON Semiconductor has*

*become Number 2 in discrete components for power applications. With a full portfolio, also from a technological point of view.*

*"... Power is the focus of the company" said Keith Jackson, CEO of ON Semiconductor in 2009. Now it's official*

### CATEGORY SENSORS

Winner:

#### TE CONNECTIVITY

*A technological company of 12 billion dollars specialized in connectors but also in sensors... TE today is a manufacturer of sensors with a full portfolio of smart, efficient and high performing products for every type of application: Automotive, Industrial, Medical, Aerospace, Consumer and Transportation.*



# Finnish market developments

by Kari Pekkela  
Chairman Elkomit



## ELECTRONICS & ELECTROTECHNICAL

Turnover is growing for the first time since 2008. In comparison to the corresponding period in 2016, the turnover of companies in the electronics and electrotechnical industry (telecommunications equipment, electrical equipment and medical technology) in Finland increased by nine per cent between January and April.

In 2016, turnover amounted to **13.3 billion**. In 2008, prior to the recession, the electronics and electrotechnical industry turnover in Finland totalled **EUR 30.4 billion**. Both new orders and order books in the electronics and electrotechnical industry were up in April-June. This year, the industry's turnover will grow for the first time since 2008. The electronics and electrotechnical companies that took part in the

Federation of Finnish Technology Industries' survey of order books reported that the monetary value of new orders in the industry between April and June was nine per cent higher than in the preceding quarter and 18% higher than in the corresponding period in 2016.

At the end of June, the value of order books was eight per cent higher than at the end of March, and 11% higher than in March 2016.

***“Turnover is growing for the first time since 2008”***

Judging from order trends in recent months, the turnover of electronics and electrotechnical industry companies in the autumn is expected to be higher than in the corresponding period last year. The number of personnel employed by electronics and electrotechnical companies in Finland declined slightly in the April-June period from the 2016 average. At the end of June, the industry employed approximately **39,100 people**. Personnel decreased by just under one per cent, or 300 employees from the 2016 average.

## TOTAL TECHNOLOGY INDUSTRIES IN FINLAND

In comparison to the corresponding period in 2016, the turnover of technology

industry companies in Finland increased by 11% between January and April. In 2016, turnover amounted to 67.3 billion. In 2008, prior to the recession, the technology industry turnover in Finland totalled **EUR 85.7 billion**. Both new orders and order books of technology industry companies increased substantially between April and June. Growth was boosted by major ship orders, among other factors.

The number of requests for tenders received by technology industry companies continued to increase. Competitiveness will ultimately determine the extent to which these translate into actual orders. The technology industry companies that took part in the Federation of Finnish Technology Industries' survey of order books reported that the monetary value of new orders between April and June was 25% higher than between January and March and 47% higher than in the corresponding period in 2016.

Of the respondents, 49% reported that the number of new orders was up since the January-March period, 42% said it was down and 9% said it had remained stable. At the end of June, the value of order books was 10% higher than at the end of March, and 18% higher than in June 2016.

47% of companies reported an increase in the level of order books from March, while 39% reported a drop and 14% had seen no change.

Judging from order trends in recent months, the turnover of technology industry companies is expected to be higher in the autumn of 2017 than in the corresponding period last year. The number of personnel employed by technology industry companies in Finland increased somewhat between April and June from the 2016 average.

***“At the end of June, the Electronics and Electrotechnical industries employed approximately 39,100 people”***

At the end of June, the industry employed 296,000 people. Personnel increased by two per cent, or 6,000 employees from the 2016 average. The recruitment activities of technology industry companies picked up markedly in 2017 in comparison to recent years. They recruited a total of **22,600** new employees between January and June. In 2016, total recruitments came to 28,500. Some companies were increasing their personnel, while others were hiring new employees due to retirements and employee turnover.



# Russian market

by Ivan Pokrovsky  
Executive Director ASPEC



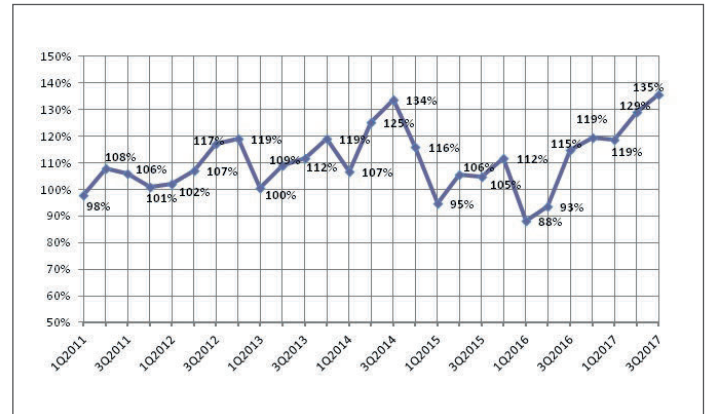
The Russian electronic components market is recovering. The last quarter was the best in our history. For local distributors: plus **18%** to the third quarter year ago and plus **5%** to the previous quarter. For global: plus **45%** to the third quarter year ago and plus **28%** to the previous quarter. The graphs are shown below. Local distributors sales compared to 4Q2011 – 100%, global distributors sales compared to 4Q2015 – 100%. The monitoring of global distributors sales started later.

The main drivers for the growth are government regulated civil markets – fiscal equipment, telecom equipment, data centers, transport equipment, lighting.

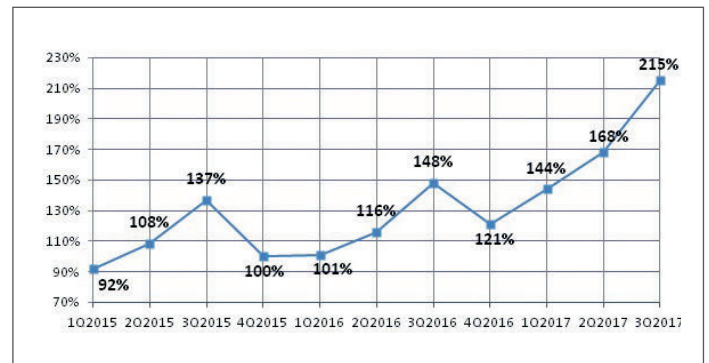
Government regulations protect Russian OEMs by the technical requirements or by the price subsidies. By the way the markets, which depended on the government budget expenses, are not growing significantly. We see just a little improve of these segments due to a better currency rate compared to the last year.

**“The last quarter was the best in our history”**

All market trends were discussed at the Annual Distributors Forum. In October it had gathered more than 100 top-managers of electronics companies, not only distributors, but also components manufacturers, OEMs, EMS-providers. The main topic was called «transformation of the



Pic. 1 Local distributors sales compared to 4Q2011



Pic. 2 Global distributors sales compared to 4Q2015

electronics market». But the most important issue in the discussion was transformation of the mind and vision. In the past Russian private companies were oriented to the West experience.

The relations with global companies looked like between students and professors meanwhile it was relations colonists to aborigines. Today the most business owners and leaders are not looking for wise foreign guide

for the “right way” but looking for their own way.

**“The “own way” proposes more cooperation opportunities between local companies”**

It is not obvious at a glance but the “own way” proposes more cooperation opportunities between local companies and “right way” propose more competition with no chances for long lasting development of local business.



# Top 10 Connector Manufacturers 2016 Results

by Ron Bishop  
Bishop & Associates



The top 10 connector manufacturers, as a group, achieved **\$32 billion** in annual sales or **59.8%** of world connector demand.

The following *Table 1* identifies the top 10 as defined by total world connector sales.

The table reveals some interesting trends:

- The top four connector manufacturers are all U.S. based companies (TE Connectivity #1, Amphenol #2, Molex #3, and Delphi #4).
- There are four Japanese companies in the top 10 (Yazaki #5, JAE #7, JST #9, and Hirose #10).
- There is one top 10 company from the Asia Pacific region (Foxconn (FIT), Taiwan #6).
- There is one top 10 company from China (Luxshare).
- This is the second year a Chinese company has achieved top 10 ranking.
- The top 10, as a group, reported a sales increase of 7.5% in 2016. This compares favorably to an industry wide sales increase of 4.1%. The better performance of the top 10 was aided greatly by acquisitions. Note, the three largest companies, **TE Connectivity, Molex** and **Amphenol**, are very active acquirers.

## THE TOP 10 MARKET SHARE (1980-2016)

The *Table 2* compares the top 10 combined annual sales to world connector demand. The top 10 accounted for 38% of the world connector demand in 1980 and **59.8%** in 2016. Much of this growth can be attributed to acquisitions made by the top 10.

***“The three largest companies, TE Connectivity, Molex and Amphenol, are very active acquirers”***

In the last five years alone, TE acquired Deutsch (\$670 million – 2011), Delphi acquired the MVL division of FCI (\$950 million – 2012), Molex acquired Oplink Communications (\$200 million – 2014), and Amphenol acquired FCI (\$600 million – 2015). In addition to those mentioned, manufacturers listed in the top 10 made an additional 38 acquisitions during this five-year span! The following graphs top 10 market share gains over the past 36-years.

## TOP 10 LANDSCAPE CHANGES

Since 1980, there has been a dramatic change in the companies that comprise the top 10.

Some companies have moved up in rank, others

## TOP 10 RANKED BY WORLD SALES

Table 1

2016 Rank	Manufacturer	2015 Sales	2016 Sales	Percent Change
1	TE Connectivity	\$ 8.209,0	\$ 8.573,0	4,4%
2	Amperol	\$ 5.239,1	\$ 5.922,3	13,0%
3	Molex Incorporated	\$ 4.169,3	\$ 4.367,9	4,8%
4	Delphi Connection System	\$ 2.736	\$ 2.931,0	7,1%
5	Yazaki	\$ 2.459,0	\$ 2.570,0	4,5%
6	Foxconn (FIT)	\$ 2.327,0	\$ 2.517,9	8,2%
7	JAE	\$ 1.428,0	\$ 1.528,0	7,0%
8	Luxshare	\$ 1.138,9	\$ 1.483,3	30,2%
9	J.S.T.	\$ 1.321,0	\$ 1.435,0	8,6%
10	Hirose	\$ 1.093,5	\$ 1.046,4	-4,3%
Total top 10		\$ 30.121,7	\$ 32.374,8	7,5%
Total all other		\$ 21.928,1	\$ 21.788,8	-0,6%
Total world		\$ 52.049,8	\$ 54.163,7	4,1%

Source: Bishop & Ass.

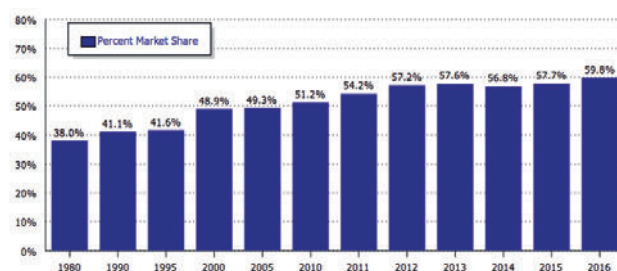
## TOP 10 BY MARKET SHARE (1980-2016)

Table 2

Year	Top ten	World	Top market	Top share
1980	\$ 3.417,0	\$ 8.989,0		38,0%
1990	\$ 7.063,0	\$ 17.166,5		41,1%
1995	\$ 9.850,0	\$ 23.700,5		41,6%
2000	\$ 17.462,6	\$ 35.692,7		48,9%
2005	\$ 18.841,0	\$ 38.185,4		49,3%
2010	\$ 24.542,7	\$ 47.938,7		51,2%
2011	\$ 27.760,6	\$ 51.193,0		54,2%
2012	\$ 28.477,2	\$ 49.814,9		57,2%
2013	\$ 29.505,6	\$ 51.183,4		57,6%
2014	\$ 31.461,1	\$ 55.402,0		56,8%
2015	\$ 30.121,7	\$ 52.049,8		57,9%
2016	\$ 32.374,8	\$ 54.163,7		59,8%

Source: Bishop & Ass.

## TOP 10 MARKET SHARE PERCENTAGE OF WORLD MARKET



Source: Bishop & Ass.

## TOP 10 BY NAME (1980-2016)

Table 3

Rank	1980	1990	2000	2005	2010	2016
1	Amp	Amp	Tyco Electronics	Tyco Electronics	Tyco Electronics	TE Connectivity
2	Amphenol	Molex	Molex Inc.	Molex Inc	Molex Inc	Amphenol
3	ITT Cannon	LPL/ Amphenol	FCI	Amphenol	Amphenol	Molex
4	DuPont (Berg)	ITT Cannon	Delphi	FCI	Yazaki	Delphi
5	3M	3M	Amphenol	Delphi	FCI	Yazaki
6	Augat	Bumdy	Yazaki	J.S.T.	J.S.T.	Foxconn (Hon Hai)
7	Winchester	DuPont (Berg)	ITT Cannon	Yazaki	Foxconn (Hon Hai)	JAЕ
8	Cinch	J.S.T.	3M	Foxconn (Hon Hai)	Delphi	Luxshare
9	Bumdy	Hirose	JAЕ	Hirose	Hirose	J.S.T.
10	Molex	JAЕ	J.S.T.	J.S.T.	J.S.T.	Hirose

Source: Bishop & Ass.

## TOP 10 BY REGION (1980-2016)

Table 4

Region	1980	1990	2000	2010	2016
North America	10	6	6	4	4
Europe	0	1	1	1	0
Japan	0	3	3	4	4
China	0	0	0	0	1
Asia Pacific	0	0	0	1	1

Source: Bishop & Ass.

have moved out of the top 10 and still others have gone out of business or have been acquired by larger companies. The following table provides a history of the top 10 over a 36-year time frame.

Some highlights include:

- **TE Connectivity** has remained the largest connector company since 1980. The name changed from AMP to Tyco International to Tyco Electronics and currently to TE Connectivity.
- **Molex** and **Amphenol** have remained in the top 10 throughout the 36-year time frame. Molex moved from the tenth largest in 1980

to the third largest in 2016. Amphenol, the second largest in 1980 fell to fifth in 2000, but moved up to the third largest in 2010 and the second largest in 2016.

**“There were no Asian companies in the top 10 in 1980. In 2016, there were six Asian companies represented in the top 10”**

- Companies that were in the top 10 in 1980 but have not retained a top 10 ranking are **ITT Cannon**, **3M**, **Winchester**, **Augat**, **Cinch**, and **Bumdy**. Dupont/Berg was acquired

by Framatone (FCI) and later by Amphenol.

- There were no Asian companies in the top 10 in 1980. In 2016, there were **six Asian companies** represented in the top 10.

The Table 4 shows the number of top 10 companies by region of the world over the 36-year period (1980-2016).

Luxshare achieved a top 10 rank in 2015, making it the first and only Chinese company achieving top 10 status. They maintained this ranking in 2016. Europe has not had a company achieve top 10 ranking since 2011, when FCI sold their motorized vehicle division to Delphi, already a top 10 manufacturer. In the near future we will analyze to 10 connector manufacturer rankings by

region, products manufactured and markets served.

**“There is one top 10 company from China (Luxshare)”**

This analysis is interesting and informative because it highlights many additional companies that have achieved success by implementing a focused product and market approach.

### Bishop & Associates

has published a 10-chapter research report that provides a complete analysis of the World's Top 100 Electronic Connector Manufacturers. This report furnishes detailed statistics that benchmark the leading connector manufacturers by 2015/2016 total sales, sales by end-use equipment market, sales by product category, and many other key industry measurements. All manufacturers are exhibited by 2016 sales, and are ranked by region of the world with percent year-to-year change. The report provides all the key data needed to analyze each of the top 100 worldwide electronic connector suppliers.

[Click here for more information](#)





## News

### Automotive drives semis through 2021

The **PC market** is headed toward its sixth consecutive year of decline. Meanwhile, the semiconductor industry is on pace for its best year ever. As the PC has waned as the killer application for semiconductors, a host of new applications has risen in prominence. Among them is the automotive semiconductor market which is becoming the most important market for semiconductors.

In fact, market research firm **IC Insights** forecasts that the automotive semiconductor market will be the strongest end market for chips through 2021. According to the analyst, automotive electronic system sales are forecast to rise by a compound annual growth rate (CAGR) of 5.4 percent from 2016 through 2021.

Source: [www.eetimes.com](http://www.eetimes.com)

### Xilinx invests in Ireland

Xilinx announced its intention to invest \$40 million to expand its research, development, and engineering operations at the company's EMEA headquarters in Dublin and Cork.

The company will recruit 75 senior electronics engineering staff for its regional headquarters in Dublin and for its centre in Cork.

Source: [europeelectronics.biz](http://europeelectronics.biz)

# It's Time to Reexamine Date Code Practices

by Barbara Jorgensen  
ECIA (EPS NEWS)



In the electronics supply chain, component date codes are ubiquitous. Similar in concept to the "use or sell by" date on perishable super-market items, date codes are an indicator that a part may be too old to perform to spec. Electronic components do have a shelf-life. Metals in components can corrode. **Moisture** and **electro-static discharge (EDS)** can damage components.

In addition to telling a component's "age," date codes are used by original component manufacturers (OCMs) for traceability, to indicate material or process changes in manufacturing; and to show a batch of components performed consistently under testing. Date code practices, however, haven't kept pace with electronics industry advancements.

The optimum lifespan of a component has long been considered to be two years.

*"Historically, the concern about component aging was solderability,"* explains **Keenan Evans**, senior vice president for quality, EHS & CSR for **ON Semiconductor**. *"After a couple of years components may not solder well or they'd develop tin whiskers".*

Since the 1980s, though, electronics component makers have adopted new materials; embraced total quality management; and set strict storage and handling standards.

Components considered "fresh" for two years perform just as well after four. Moreover, date codes may be contributing to one of the supply chain's biggest problems: excess or obsolete inventory. Components are rarely, if ever, consumed immediately by end customers. Finished products may sit on a warehouse shelf for months or even years. Date codes can expire if components aren't moving. Expiration, in turn, drives up costs across the supply chain. Simply storing parts in a warehouse requires investment in facilities; ESD and climate control; and personnel. Shipping parts between warehouses is also an expense.

Once a product expires, its value begins to decrease. If customers don't accept "expired" products, they can be returned to the OCM; sold in the secondary market; or written off/down on a balance sheet. None of these options recoup 100 percent of the component's original value.

***"Date code practices, however, haven't kept pace with electronics industry advancements"***

Even with these limitations, suppliers and distributor agree date codes are essential. However, many OCM and distribution executives think it's time to reexamine date code practices and update them if necessary.

### WHY DATE CODES?

Date codes are extremely important for component traceability on shipments from manufacturers to distributors and shipments from distributors to customers, according to a distribution industry executive. Along with manufacturer part numbers, date codes are an essential data element in verifying the specific components shipped, the validation of returns, the identification of product change



notifications (PCN), and for recalling defective products. Date codes are also essential for FIFO (first in, first out) inventory management.

OCMs also use date codes to manage significant product changes without changing manufacturer part numbers, explained ON's Evans.

***"Components considered 'fresh' for two years perform just as well after four"***

Examples include transition to lead-free finishes, chemical composition changes, and quality improvements which do not meet the manufacturer's definition of "form, fit or function."

Many customers, especially those in mission-critical industries such as defense, aerospace and medical, specify date codes within their orders.

*"Customers feel they have the probability of improvement during the manufacturing process or in test programs", said Evans. "Customers also believe that newer components may have been subject to less of the risks associated with transportation, handling and storage condition variables", added a distribution executive, "or that buying components from a single date code offers some potential for component consistency that may be an advantage to product performance".*

However, said Evans, minus any changes in an OCM's manufacturing process, a component that is four years old performs just as well as a two-year-old device. Traceability has become a primary concern as the spot – or "gray" – market has become a force in the supply chain. Excess and obsolete inventory is often sold to

non-authorized distributors that in turn re-sell it to other customers. In the past, counterfeit components have been mixed in with authentic goods; components have been re-marked and sold as higher-value devices; and damaged components have been sold as new.

***"A committee within the ECIA is spearheading an effort to bring date code practices – quite literally – up to date"***

As a result, many OCMs won't honor the warranties for parts that have passed through the gray market. Date codes are one way to verify a component came -

or did not come - from an OCM factory. *"Some customers believe that the longer that components are in the supply chain, the more opportunity there is for ownership transfers and the loss of uninterrupted traceability back to the original manufacturer",* added Don Elario, senior director and global quality leader for Arrow Electronics Inc. OCMs and distributors agree date codes play an important role in the supply chain, but they also point out the two-year "expiration" standard is a holdover from distribution's early days of the 1940s. A committee within the ECIA is spearheading an effort to bring date code practices – quite literally – up to date.



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temporary showroom of lighting/LED solutions and design products

### >International fairs

participation to the most important fairs and events in Italy and abroad

### >Workshops & Events

conferences, events and forums devoted to new technologies

### >Communication

Web, directories, newsletters, magazines



in partnership with



### >Roadshows

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