

CBI MARKET SURVEY

THE ELECTRONIC COMPONENTS MARKET IN THE UNITED KINGDOM

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Report summary

This CBI market survey discusses, among other things, the following highlights for the electronic components market in the UK:

- Between 2005 and 2010, the UK market should maintain a positive trend (2.8%) slightly below those of main other Western European countries. .
- Despite a large fall in production value in the period 2000-2004, the UK remained one of the largest producers in the EU. Many EMS (electronic manufacturing services) providers left the UK, but a considerable number of the remaining British companies have shifted focus on high value niche markets.
- Among some UK buyers interviewed, there is a good level of interest in doing business with suppliers of electronic components from developing countries.
- DCs accounted for considerable import shares in 2005 (18%), 3% up compared to 2004. Next to China, other major DC suppliers to the UK were Malaysia, the Philippines, India and Thailand. Most striking were the newcomers the Philippines and India.

This survey provides exporters of electronic components with sector-specific market information related to gaining access to the UK. By focusing on a specific country, this survey provides additional information, complementary to the more general information and data provided in the CBI market survey 'The electronic components market in the EU', which covers the EU in general. That survey also contains an overview and explanation of the selected products dealt with, some general remarks on the statistics used as well as information on other available documents for this sector. It can be downloaded from http://www.cbi.nl/marketinfo.

1. Market description: industrial demand and production

Industrial demand

Total market size

The second largest EU market, the UK, has shown good signs of recovery: the component market stopped falling in 2003 and, pulled by active components, grew almost 8% in 2004. According to table 1.1, which gives the developments in the several subgroups, the UK market should maintain a positive trend (2.8%) between 2005 and 2010, slightly below those of main other Western European countries (3.4%).,Industry experts expect some fall from the automotive sector in particular, due to today's British car industry difficulties that were confirmed again in 2006 with French conglomerate PSA announcing a plant closure. On the other hand, others state that the automotive industry will remain strong as most of the major car manufacturers' highly stringent requirements on quality and approved manufacturing techniques have restricted the use of off-shore facilities, while electronic systems continue to be used to create new features and improve existing ones.

Table 1.1 UK market electronic components, 2003-2010, € million

	Market value				Growth rates (%)		
	2003	2004	2005	2010	04/05	05/10 (annual)	
Active components	4,100	4,542	4,266	5,154	-6.1	3.9	
Passive components	595	583	549	497	-5.9	-2.0	
Electromechanical components	2,062	2,130	2,110	2,291	-1.0	1.7	
Total	6,757	7,256	6,925	7,942	-4.6	2.8	

Source: Decision (July 2006)



Electronic assemblies

After Germany, the UK was the second market for EMS (electronic manufacturing services) in 2004, with a value of \leqslant 4.3 billion in that year. Computer automotive and telecommunications were the most important end user industries.

The market for PCBs, part of the EMS market, has declined by 1% since 2003 to reach a value of € 365 million in 2004 and is forecast to decline to a value of around € 350 million in 2009. Multi-layered PCBs was the largest sector, accounting for 51% of total sales. The most important application for PCBs was in automotive electronics, which in 2004 accounted for 32% of all sales.

Market segmentation

The largest end user sectors in the UK are electronic data processing (EDP), automotive and industrial. In all these sectors, many foreign OEMs have important facilities in the UK. Examples of these, as well as of domestic end users, are listed in table 1.2.

Table 1.2 Some examples of UK end users of components

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End users	Category	Website				
BAE	Industrial: defence	http://www.baesystems.com				
Systems						
BMW (Rolls	Automotive	http://www.bmw.co.uk				
Royce)						
Brother	EDP: faxes, among others.	http://www.brother.co.uk				
International						
Hitachi	EDP and automotive: Disk drives and automotive parts	http://www.hitachi-consumer-				
		<u>eu.com</u>				
JVC	LCD and Plasma television	http://www.jvc-europe.com				
Kenwood	Audio/hi-fi equipment/systems, radio communication	http://www.kenwoodworld.com/uk				
	equipment and mobile communication systems					
NEC	Mobile communication systems and PCs	http://www.nec.co.uk				
Nissan	Automotive	http://www.nissan.co.uk				
Marconi	EDP: ICT equipment	http://www.marconi.com				
Smiths	Industrial: engineering	http://www.smiths-group.com				
Telent	Telecommunication equipment	http://www.telent.com				
Thales	Industrial: fefence, aerospace and electronics	http://www.thalesgroup.co.uk				
Toshiba	EDP: Information Systems	http://www.toshiba.co.uk or				
		http://uk.computers.toshiba-				
		<u>europe.com</u>				

Sources: Investment and Business Development Agency (2005) and own research (2006)

Production

Total production

Table 1.3 shows an indication of the production of electronic components in the UK. Please note that reliability of Eurostat data is limited. However, they can be used to analyse the development over years. Total production value in the UK declined fast in recent years: 61% in the period 2000-2004. This is in line with the European trend. Volume decreased even more in that same period: 98%. In total production value, the UK – still one of the large producers in Europe – ranked fourth in Europe after Italy and France in 2004, but ahead of Spain and the Czech Republic. In the field of domestic electronic assemblies, the country lost almost half of its production to low wage countries in the period 2000-2004.



Table 1.3 UK production of electronic components, 2000-2004, € million and million units

	2000		2002		2004	
	value	volume	value	volume	value	volume
Active components	2,481	895	1,890	1,464	724	2
Electromechanical components	1,703	1,589	1,158	797	946	595
Passive components	1,095	34,682	793	29,039	399	266
Electronic components (excl ass)	5,279	37,167	3,841	31,300	2,069	864
Electronic assemblies	7,069	29	6,952	-	3,933	1

Source: Eurostat (2006)

Although the country lost a major part of production value in the period 2000-2004, the UK still counts over hundreds of component manufacturers. In the meanwhile, the focus of the UK equipment manufacturers has been shifting towards high value, low volume business to business products. Innovation has been the key driver of the British electronic components industry. While volume production was replaced to low wage countries, the country developed into a centre of technological excellence in the fields of semiconductor design, optoelectronics and 3G mobile communication technology. More than 40 science parks were set up in the country; some of these are centred around universities (approximately 70 universities are involved in semiconductor design research) and others around key business locations. A very sounding name in the area of semiconductor design is ARM (http://www.arm.com). A vast majority of the portable telephones sold in the world work on a technology developed by this British company. Further, British trade specialists confirm that, while assembly of mobile phones and large goods moved offshore, most production of business to business applications remained in the country. Reason is that cooperation and communication between supplier and customer for these – most tailor made – products is very important.

Major players

Table 1.4 contains examples of British manufacturers and their product ranges.

Table 1.4 Examples of British producers of electronic components

Table 1.4 Examples of British producers of electronic components						
Company	Products	Website				
Cambridge Silicon	Single-chip radio devices for	http://www.csr.com				
Radio	short-range wireless					
	communications, including					
	Bluetooth silicontechnology					
Filtronic	Microwave electronics systems for	http://www.filtronic.co.uk				
	wireless, telecommunications and					
	defence industries					
General Dynamics	PCB assembly	http://www.generaldynamics.uk.com				
Oxford Semiconductor	Communication bridges and	http://www.oxsemi.com				
	connectivity ICs for consumer					
	electronics					
Swindon Silicon	Semiconductors for automotive,	http://www.sssl.co.uk				
Systems	industrial, consumer, military and					
	communications markets					
Ubinetics	Wireless communications	http://www.ubinetics.com				
	technology					
Wolfson	Mixed-signal semiconductors for	http://www.wolfson.co.uk				
Microelectronics	the digital consumer electronics					
	market, including chips for the					
	iPod and Sony's PSP					

Sources: Facts Figures Future (2006)

Of course, the UK is also home to a range of multinationals. Some examples of these are Amphenol (http://www.avxcorp.com), Conexant (http://www.conexant.com) and Visteon (http://www.visteon.com; automotive). Some major multinationals in the PCB industry are Tyco Electronics (http://www.tycoelectronicsamp.co.uk)



and TT Electronics (http://www.ttelectronics.com), of which the latter is also a major EMS provider. While several EMS providers left the UK, Flextronics (http://www.flextronics.com) still has more than five plants in the UK.

Trends in production

- British companies focus more and more on high value niche markets. A good example is the company MicroEmissive Displays (http://www.microemissive.com), a leading developer of light-emitting-polymer based microdisplays.
- Multinationals keep on rationalising their operations in the UK and almost all EMS providers left the UK, transferring production to low wage countries.

Opportunities and threats

- + Growing market for electronic components.
- Local production declined fast in the period 2002-2004.
- Local production of components is highly specialized and, on average, labour-extensive.

Interest in developing countries

In February and March 2006, FFF held an indicative online questionnaire among 3 UK buyers of electronic components. It can be roughly concluded that there is an interest in developing countries in all sectors in the industry. Some highlights follow hereafter:

Level of interest

There are certainly several larger but also smaller UK companies looking for trade opportunities in developing countries. Interviews with the buyers of electronic components in the country show that they think they will start doing business with DC companies in the coming years, especially in categories where price is important. They regard both 'buying products' as well as 'electronic assembly' as opportunities.

Developing countries considered

Countries that the buyers mentioned are (in order of importance) India, Thailand, the Philippines and South Africa. Further, UK market specialists especially mention the English-speaking nations India and South Africa as possible trading partners for the coming years. They have seen a trend of producers leaving the country, and they don't rule out that more will follow. What they fear most, is that R&D services will eventually follow production and leave the country. Especially the two English speaking nations mentioned will probably be good bases for establishing R&D centres.

Products considered

(Power) resistors, "connected home technology", capacitors and connectors are products that have the best opportunities, according to the UK buyers interviewed. The smaller capacitors and connectors that are mass made by machines are also products that DC companies could easily make as well.

Useful sources

- British Electronic and Allied Manufacturers' Association http://www.beama.org.uk
- Trade association for the UK hi-tech industry http://www.intellectuk.org
- UK Trade and Investment http://www.ukinvest.gov.uk



2. Trade: imports and exports

Imports

Total imports

In 2005, the UK was the second largest importer of electronic components in Europe, far behind Germany, but just ahead of France and Italy. Regarding electronic assemblies import, the country takes a third position behind The Netherlands and Germany, but far ahead of Ireland and France. In line with the market trend, total import value in the UK declined fast in recent years: almost 80% in the period 2001-2005. The most important suppliers were Germany, the USA, Japan and China. Germany and The Netherlands were the leading suppliers to the UK of locally produced components. Beside China, other major DC suppliers to the UK were Malaysia, the Philippines, India and Thailand. Compared to 2004, the total share of DCs rose 3% to 18%. Most striking are the newcomers the Philippines and India (both 2% in 2005). In the field of assemblies, there were two new DC suppliers as well: Costa Rica (7%) and the Philippines (3%).

Imports by product group

Table 2.1 shows that all product groups, as well as the electronic assemblies, decreased in value between 2001 and 2005. Imports of actives was almost annihilated, whereas electromechanicals were least hit. In each product group, as well as in assemblies, China is the most important DC supplier. Malaysia and the Philippines are well represented in passives and assemblies. Furthermore, Costa Rica is a large DC supplier of assemblies, while India's shares in actives and electromechanicals are noteworthy too. Compared to 2004, most striking is the 9% growth of DCs' share in passives, caused by the Philippines' share growth. In addition, India showed a remarkable growth in actives, and Malaysia in electromechanicals. DCs' share in assemblies grew as well – by 5%. This was caused by newcomers Costa Rica and the Philippines.

Regarding all intra EU imports, most probably part of these are re-exports, but the exact value is unknown, as Eurostat doesn't allow such detailed analysis.

Table 2.1 Leading suppliers of electronic components and electronic assemblies

per product group to the UK, 2005, Share in % of value

Product	2001		Leading suppliers	Share
	€ mln	€ mIn	(share in %)	(%)
Active	9,759	945	Intra EU : Germany (14), Netherlands (7), France (4)	33
components			Ext EU excl DC : USA (24), Japan (19), South Korea (5)	57
			DC : China (3), Malaysia (3), India (2), Thailand (1), Mexico (1), Philippines (0)	11
Electromechanical	1,382	1,172	Intra EU : Germany (23), France (8), Netherlands (7)	56
components			Ext EU excl DC : USA (13), Japan (7), Taiwan (2)	28
			DC : China (9), India (2), Malaysia (2), Mexico (1), Turkey (1), Tunisia (0)	16
Passive	2,089	733	Intra EU : Germany (11), Netherlands (5), France (4) Ext	30
components			EU excl DC : USA (16), Japan (11), Hong Kong (3)	40
			DC : China (11), Philippines (7), Malaysia (4), Thailand (4), India (1), Mexico (1)	30
Total electronic	13,230	2,850	Intra EU : Germany (17), Netherlands (6), France (5) Ext	41
components			EU excl DC : USA (17), Japan (12), Taiwan (3)	41
(excl. electronic assemblies)			DC : China (8), Malaysia (3), Philippines (2), India (2), Thailand (2), Mexico (1)	18
Electronic	7,243	4,746	Intra EU : Netherlands (13), Germany (9), Ireland (4)	36
assemblies	'	,	Ext EU excl DC : USA (16), Singapore (6), Taiwan (5)	36
			DC : China (9), Costa Rica (7), Malaysia (7), Philippines (3), Mexico (1), Thailand (1)	28

Source: Eurostat (2006)



Exports

The total export value of the UK declined fast in recent years: over 75% in the period 2001-2005, totalling € 3.2 billion in 2005. This is in line with the European trend. In total export value, the UK – still one of the large exporters in Europe – ranked third in Europe after France in 2005, but ahead of The Netherlands and Italy. In the period 2001-2005, electronic assemblies exports also decreased – but less steeply – by 25%. While in 2001 actives took almost 75% of all exports, in 2005 shares of the three product groups were equally divided: actives with 38%, passives with 29% and electromechanicals with 33%.

Opportunities and threats

- + Considerable import shares for DCs in 2005, which were up 3% compared to 2004.
- Export value of components has been declining fast in recent years.
- Import value of components has been declining fast in recent years.

Useful sources

- EU Expanding Exports Helpdesk http://export-help.cec.eu.int. Go to: trade statistics.
- Eurostat official statistical office of the EU http://epp.eurostat.cec.eu.int. Go to: 'themes' on the left side of the home page - 'external trade' - 'data – full view' - 'external trade - detailed data'.

3. Trade structure

Trade channels

Please refer to the EU Market Survey "The Electronic Components market in the EU" for general information on trade structures in Europe. Additional information: the distributors' share in the UK increased from 18% in 1996 to 26.3% in 2005. One reason for this growth is that large distributors attracted major OEM customers who previously sourced directly from the component manufacturers. Furthermore, EMS providers also are also transferring their sourcing from the manufacturer to the distributor, though the rate at which this happens has slowed in recent years.

Among the major distribution groups in the UK are companies such as Anglia (http://www.anglia.com; the UK's largest privately owned electronic component distributor), Abacus Group (http://www.abacus.co.uk) and Farnell (http://wk.farnell.com). An example of an importer/distributor in the UK is Stortech (http://www.stortech.co.uk), while Clere (http://www.easby.co.uk) are examples of agent/distributors. The majority of UK distributors' customers are the more traditional small to medium sized businesses. These customers offer a substantial opportunity for growth for distributors that can offer not only the right portfolio of products, but also the support and services that are needed to help bring products to the market more quickly and efficiently. However, according to distribution specialists, for the SME sector many of the broad line distributors are too large to meet their needs effectively.

Further, the country is home to some retailers of electronic components such as Bowood (http://www.bowood-electronics.co.uk) and Maplin (http://www.maplin.co.uk), and several agents and sales offices.

Preferences UK buyers

Purchase preferences

The best trade channel for the DC manufacturer, according to the buyers interviewed, is the distributor, because this offers the best chance to have your products bought by UK producers. A good opportunity might be the several local distributors, some of which have specialized in products such as capacitors or power resistors.



Decision criteria

In general, important decision criteria are price, quality and certification standards. Once a business relationship has been established, a DC manufacturer may get the possibility to develop and deliver more sophisticated products.

Barriers

Barriers that prevent the UK buyers interviewed from doing business with DC companies, are language problems, uncertainty and too specific quality demands.

Trends

- UK EMS-providers source more and more in the countries where production takes place, and no longer in the UK.
- The trade structure is getting more and more complicated. Examples of this trend are the several large distributors that supply smaller distributors, and a UK manufacturer that trades its products globally via a Canadian distributor.
- Broad line distributors have tried to move to a position of low cost, but their enhancements
 have been replicated throughout the sector, leaving the distributors that compete primarily
 on cost and logistics facing intense pressure on margins.
- Distributors not only continue developing value added services but are also entering the
 arena of designing and producing electronic modules for particular market areas where
 conventional component suppliers would not be able to create the demand as little or no
 electronic design or manufacturing expertise exists.

Useful sources

 Association of Franchised Distributors of Electronic Components (AFDEC) http://www.afdec.org.uk

4. Prices and margins

Prices of electronic components and assemblies continue decreasing year after year. While electromechanicals and assemblies are down by 5-10% annually, semiconductors and most passive components decrease 10-30% annually. However, there are some, often temporary, exceptions. The factor material costs is the first variable in these. For example, in the early years of this decennium, prices of tantalum capacitors temporarily increased due to a shortage of tantalum. Another example concerns connectors with golden pins. The increasing gold price in 2005-2006 severely inflates the price of these components. Another factor is the combination of supply and demand, also with regard to individual products. For several products, such as D-ram and flash memory, both demand an supply can fluctuate much. As a result, prices of these products are very volatile.

Regarding the future, according to industry experts, the continuing rise in the cost of energy as well as the implementation of the Restriction on Hazardous Substances (RoHS) directive is driving up the manufacturing costs in the components industry. For example, between January and April 2006, crude oil prices rose over 21%. In addition, metal prices, such as that of gold, aluminium, nickel, tin and copper increased 18, 21, 37, 41, and 59%, respectively. As a result, industry analysts forecast rising prices of PCBs, as manufacturers are expected to pass on the costs to their customers.

Useful sources

- Refer to http://www.farnell.com to search for component prices.
- Another example is the site of Spoerle (http://www.spoerle.com), where prices can be found as well (click on the icon of the shopping cart).



5. Market access requirements

As a manufacturer in a developing country preparing to access the UK, you should be aware of the market access requirements of your trading partners and the UK government. Requirements are demanded through legislation and through labels, codes and management systems. These requirements are based on environmental, consumer health and safety and social concerns.

Legislative requirements

National legislation in EU countries is compulsory for all products traded within the country concerned. Therefore, as an exporter in a developing country you have to comply with the legislative requirements that are applicable to your products. For information on legislation for electronic components go to 'Search CBI database' at http://www.cbi.nl/marketinfo, select your market sector, and the EU country of your interest in the category search, click on the search button and click on legislative requirements for an overview of all documents on legislation in your country of interest.

Non-legislative requirements

Social, environmental and quality related market requirements are of growing importance in international trade and are often requested by European buyers through labels, codes of conduct and management systems. For information on non-legislative requirements applicable to electronic components, go to 'Search CBI database' at http://www.cbi.nl/marketinfo, select your market sector and the EU country of your interest in the category search, click on the search button and click on your subject of interest under non-legislative requirements for an overview of all documents on the subject concerned in your country of interest.

Packaging, marking and labelling

Special transport packaging is not necessary for most electronic components. Packaging is used to protect against mechanical damage, and for certain products additional antistatic protection is needed. The packaging has to satisfy conditions in the field of handling. Most electronic components are made of heavy copper cores, so the use of firm carton boxes is recommended in order to avoid breaking and/or shifting.

If an import duty -no matter the country of origin- applies to a component that enters the UK, the exporter should be able to show a certificate of origin. Furthermore, a Bill of Lading (B/L) and a commercial invoice are obligatory. If a 0% duty applies, the so called Eur 1 Form for ACP countries for customs tax exemption is common.

Tariffs and quota

Developing countries benefit from several trade preferences. The most important one is called 'Generalised System of Preferences' (GSP). Following this system, most import tariffs from developing countries of electronic components are zero. To determine import duties and/or quota for your own product(s) and from your specific country, consult the Taric database. Refer to the EU survey for more information. Another useful contact is the European Customs in the UK.

Useful sources

- European Customs in the UK http://www.hmrc.gov.uk
- Export Helpdesk for Developing Countries http://export-help.cec.eu.int
- Taric database http://ec.europa.eu/taxation_customs/dds/en/tarhome.htm: type the 4, 6 or 8 digit HS code (if known) or type the keyword of your product.
- In the UK, the VAT tariff is 17.5%. For more VAT tariffs, consult http://www.expatax.nl/vatrates.



6. Business practices

Selecting a suitable trading partner

According to the UK buyers interviewed, the best ways for exporters in developing countries to approach potential trading partners in the UK electronic components market are the internet and trade fairs. Furthermore, they also mentioned the industry associations in the developing country. In general, British companies prefer to do business with DC companies with an established track of contracts, quality certification, patents etc. There are three major ways to find prospects in the UK, which are the internet, sources in the developing country and sources in the UK:

Internet

There are some very useful websites that can be used to identify prospects (or competitors) in the UK. Some highlights follow below; these are:

- Company databases such as Europages http://www.europages.com, KellySearch http://www.kompass.com and Thomas Global Register http://www.trem.biz. Refer to the manual "Digging for Gold" for guidelines on searching with these databases.
- European Component Source Directory (http://www.componentssource.com) is a directory containing more than 5,000 addresses of manufacturers, distributors, brokers and importers of electronic components in Europe. Online access only costs € 49.
- Exhibitor database of Electronica 2006 http://www.global-electronics.net, click on "Unternehmensindex." The database of trade fair Electronica can be used to identify key manufacturers worldwide that are active in the electronic components industry, searchable by detailed product.

Also refer to CBI's Export Planner (http://www.cbi.nl), an export manual that provides information on the different steps to be taken during the export process to the EU market.

In the developing country

- The foreign-trade chamber of commerce of the UK. Find the relevant chamber of commerce at http://www.worldchambers.com.
- The Economic Affairs departments of the official representative (Embassy or Consulate) of the UK. Find the UK embassy in your country at http://www.embassyworld.com.

In the UK

- Association of Franchised Distributors of Electronic Components (AFDEC, <u>http://www.afdec.org.uk</u>). This website contains links to distributors of electronic components in the UK. Click on "search the afdec database" and click on "Find all the distributor members of afdec".
- Chamber of Commerce http://www.britishchambers.org.uk

Usually, agents are member of one of the three UK agents associations:

- British agents register http://www.agentsregister.com
- The Manufacturers' Agents' Association of Great Britain and Ireland http://www.themaa.co.uk
- The UK's National Sales Agent Register http://www.sales-agents.com

Reaching an agreement with your trade partner

Drawing up an offer

Trade interviews show that offers should include technical features, prices as well as other issues such as lead times, stock levels etc. In general, UK companies prefer quick and serious responses to offers, which means within a week.



Method of payment

The UK has a well-developed banking sector, and the infrastructure for financial transactions is readily available. Payment for exports to the UK can be on open account, payment in advance, letter of credit, documentary drafts, or consignment sale. Letter of credit payment is normal until a stable business relationship has been established, after which payment for exports are often done on open account. British buyers will typically ask for 30-60 days credit, while a 2% to 3% cash discount is commonly granted for payment received within ten or fourteen days.

Terms of delivery

According to industry specialists, deliveries are usually ex-works, but CIF and FOB conditions are no exceptions. In principle, customer wishes are decisive.

Sales promotion

One of the major critical success factors for exporters of electronic components and electronic assemblies to the UK is attention to customer requirements and the ability to maintain good relationships with their UK business partners. Sales promotion revolves around developing and expanding these customer relations and thereby maintaining and increasing sales volume. For more information also refer to CBI's Export Planner and Your Image Builder – http://www.cbi.nl.

Trade press

An interesting story on your company or new product introduction will boost the company's image and increase user awareness. In that respect, building up contacts with the trade press will be helpful and should be used whenever possible.

Some relevant magazines for the UK are:

- Components in Electronics (CIE) http://www.cieonline.co.uk
- Electronics Weekly http://www.electronicsweekly.co.uk
- Electronics World & Wireless World http://www.electronicsweekly.co.uk
- EM&T Online (PCBs) http://www.emtonthenet.net
- Embedded Sytem Engineering http://www.esemagazine.com. (at the site you can download PDF versions of the magazine).

Trade fairs

Visiting and participating in a trade fair abroad can be an efficient tool to communicate with prospective customers. It provides more facilities for bringing across the message than any other trade promotional tool. It can also be an important source of information on market development, production techniques and interesting varieties. Beside the largest components trade fair in Europe (Electronica - http://www.global-electronics.net - held in Germany every other year), other relevant trade fairs in the UK are:

- Electrex (electrics and electronics) http://www.emap.com
- Embedded Systems Show (ESS: exhibition and forum for embedded systems engineers and software developers) http://www.edaexhibitions.com/ess
- Nepcon Electronics http://www.nepcon.co.uk
- Photonex (this fair plays a major role in the photonics industry in the UK. It brings photonics users, technology developers and suppliers together) http://www.photonex.org.

This survey was compiled for CBI by Facts Figures Future in collaboration with Mr. G. Fandrich.

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