



EMEA Distribution Centre

INVESTING IN YOUR FUTURE



Introducing the EMEA Future Electronics'

There are many ways to describe Future Electronics' new EMEA Distribution Centre in Leipzig, Germany: a highly sophisticated electronics component warehouse; a €40m investment by Future Electronics, the leading global electronics distributor; a huge vote of confidence in the future of European manufacturing.

Most important, however, is what it brings to Future Electronics' customers:

EMEA DC key facts

- 15,000m² building
- Handles >6,000 customer shipments/day
- Temperature- and humidity-controlled environment
- Fail-safe operation – redundant power, road and data systems available
- Full ISO9001/14001, AS9120, ANSI ESD 20.20 DIN EN 61340-5, AEO, BS 9000 and C-TPAT certifications



Distribution Centre

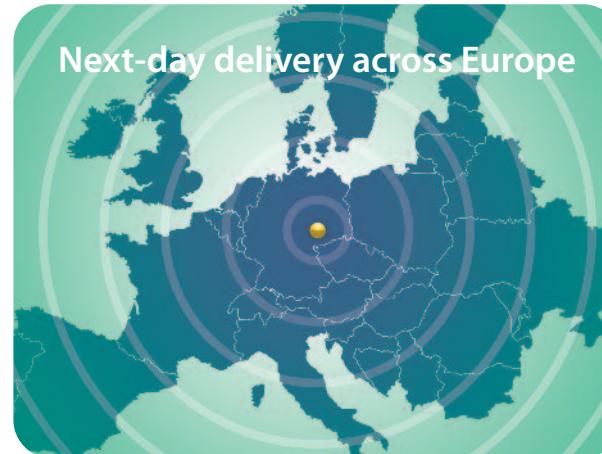
new hub at the heart of Europe

- more choice of components than ever
- faster delivery to more locations
- virtually eliminates shipment errors and defects
- the most robust, dependable logistics service in Europe

Conceived and built from scratch to deliver the world's best distribution service, the vast new EMEA DC is now yours to discover.

Located at the heart of the continent it serves, Future Electronics' new EMEA DC is a testament to the speed, efficiency and quality of the latest warehouse automation equipment and systems.

The EMEA DC is built on a vast scale: occupying a total footprint of 15,000m², the building is divided into two large halls. The engine room of the centre is the 'dark warehouse', a completely automated array of 18m-high cranes that can pick any one of more than 100,000 separate line items from racks that typically stock close to \$200m of electronic components.



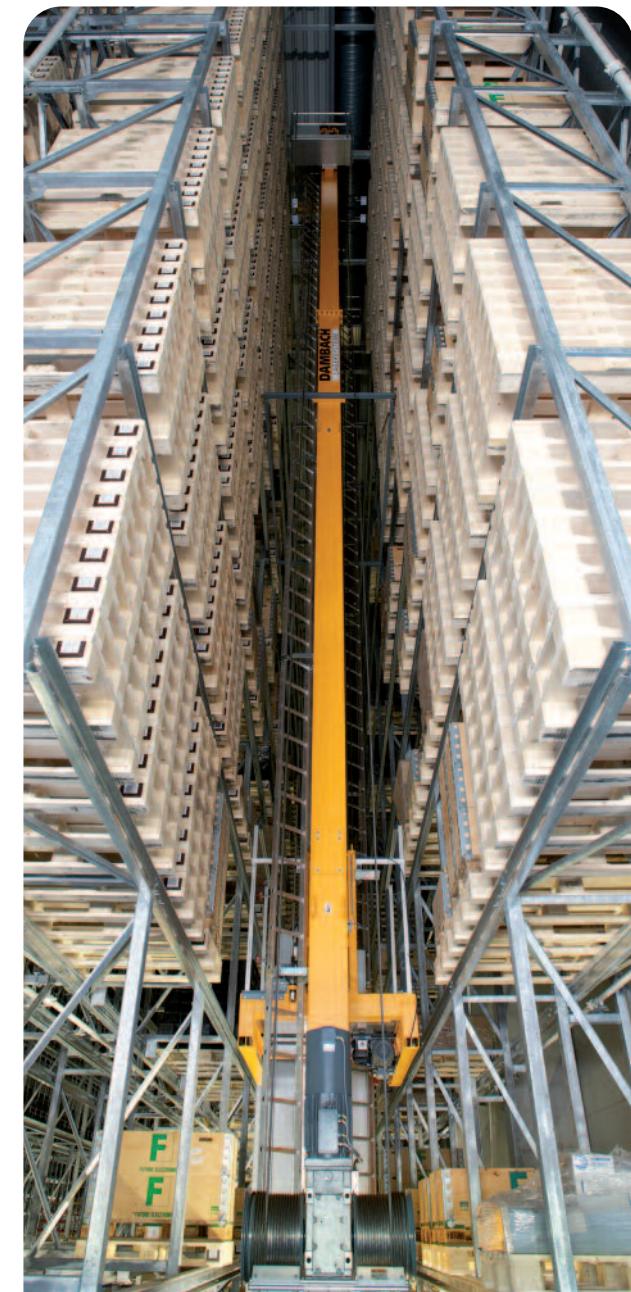
Leipzig, the site of DHL's main European hub, is no more than 3 hours' flight from any cargo airport in Europe, and no more than 13 hours by road from any European capital city. Orders placed as late as midnight can be fulfilled for next-day delivery to European factories.

No human intervention at all is required in normal operation, which is why the warehouse is dark. Inside, the vast machines tirelessly patrol the 100m-long racks, retrieving and stowing components at 285,000 tote bays.

The front half of the building is where parts arrive and leave. Here, skilled operators perform functions such as verification of inbound shipments, quality control and data logging.

Behind all the activity lies an integrated control system which binds the EMEA DC to its sister sites, the Memphis Area DC serving North America, and the Asia Pacific DC in Singapore. Together, they make up a global inventory and logistics system that provides the scale, choice and service capabilities required by Europe's – and the world's – leading manufacturers.

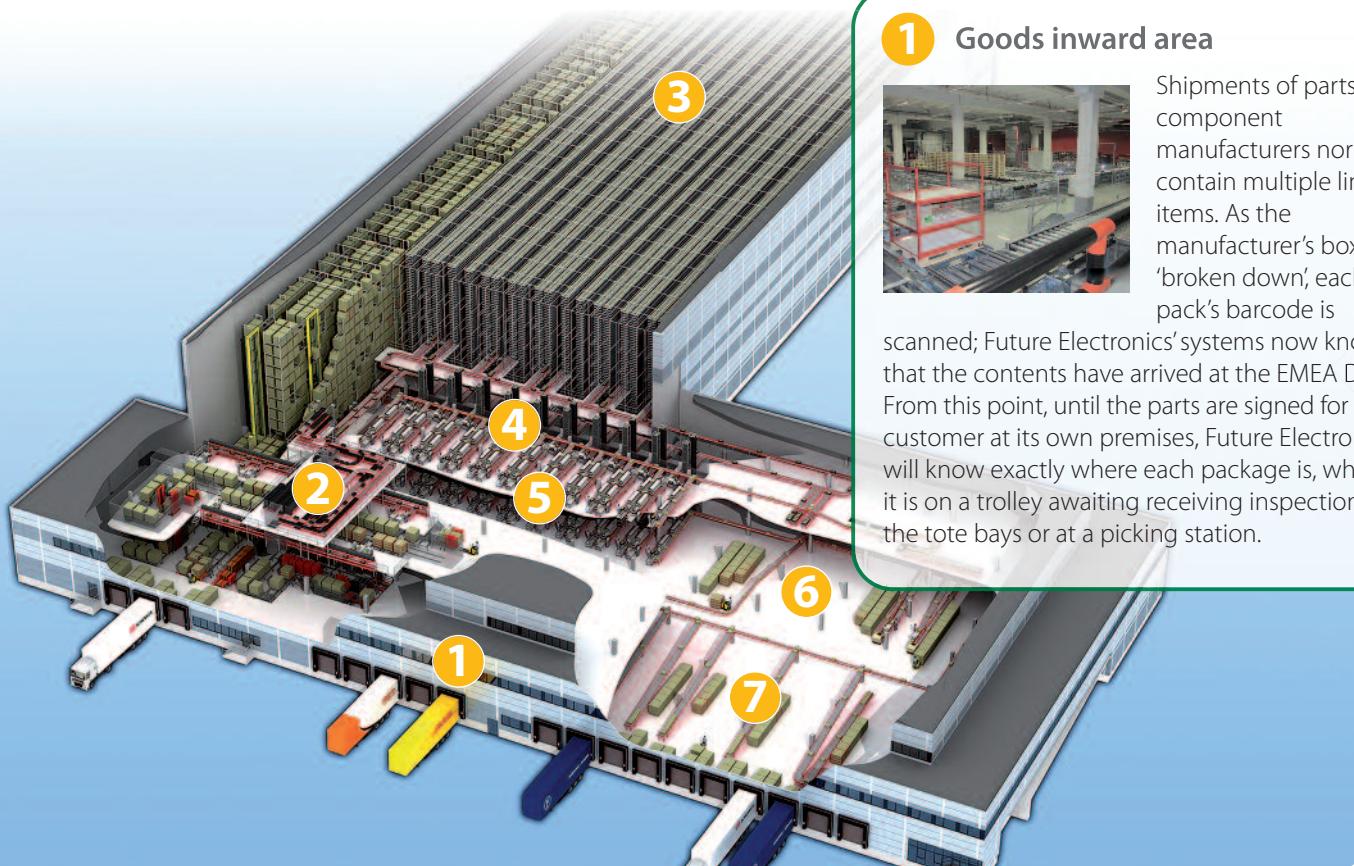
Future Electronics: a better choice for European manufacturers



Secure, protected and constantly tracked: the secret life of a component in the EMEA DC

Within 30 minutes of a customer placing an order, units from any one of more than 100,000 line items from some 200 franchise suppliers stocked at the EMEA DC can be packed, consigned for shipment and in transit to one of Leipzig's array of air, road or rail freight terminals.

An astonishingly complex and sophisticated set of systems and processes are required to make this possible. So what happens as a component passes through the EMEA DC?



1 Goods inward area



Shipments of parts from component manufacturers normally contain multiple line items. As the manufacturer's box is 'broken down', each pack's barcode is scanned; Future Electronics' systems now know that the contents have arrived at the EMEA DC. From this point, until the parts are signed for by the customer at its own premises, Future Electronics will know exactly where each package is, whether it is on a trolley awaiting receiving inspection, in the tote bays or at a picking station.

2 Receiving inspection area



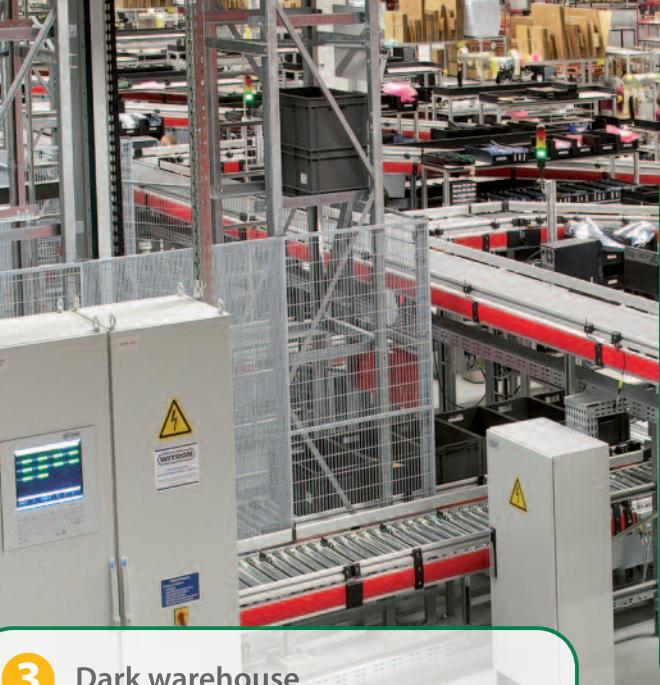
Each manufacturer's pack is carefully verified by a trained materials handler at one of 16 receiving inspection stations. Future Electronics applies rigorous product traceability procedures.

Parts from different countries of origin are separated into separate totes.

The materials handler checks that the manufacturer has shipped the correct quantity, and applies a special Future Electronics label to the pack. Each line item is stowed in its own tote, before the totes are conveyed automatically to the warehouse.

The parts in the tote are now 'available to sell'.





3 Dark warehouse



The dark warehouse is the heart of the EMEA DC; it operates automatically, without any human intervention. To reduce the EMEA DC's carbon footprint, the lights in the dark warehouse are normally off and only switched on when a maintenance engineer is in attendance.

The warehouse contains 12 vast sliding cranes which run between tote racks each measuring 18m high and 100m long.

In total, the cranes can reach 285,000 separate tote locations. Sophisticated computer control ensures the cranes pick ordered line items fast and with 100% accuracy.

5 Quality Control stations



Every picking station feeds two Quality Control (QC) stations. Materials pass more slowly through QC stations than picking stations, as each consignment is removed from its manufacturer's box and visually inspected for damage and missing parts. It is only when the operator is satisfied that the shipment is perfect, that it is boxed and an invoice is raised on the customer.

4 Picking station



As sales staff in Future Electronics' branches place customer orders, the cranes pick the required totes from the racks and convey the totes in sequence to one of 20 picking stations. Here, materials handlers follow step-by-step computer instructions to remove the required quantity of parts from the box, scan them, place them in a customer tote, and stow any remaining parts back in the warehouse tote for storage.

6 Shipping station



Customer shipments are conveyed from the QC stations to the shipping station, where the box is topped up with vibration-damping airbags and sealed. An automatic waybill printing machine weighs and measures each box, and then determines the optimal shipping method and carrier, based on the due date specified by the customer.

7 Goods outward area



More than 6,000 individual shipments per day can leave the EMEA DC via the goods outward bays. Via the local road network, trucks can reach international air, rail and road freight terminals in less than 15 minutes.

The world's most sophisticated electronics component distribution

Designed from the ground up for speed, quality and reliability of service to European manufacturing companies. A €40m investment, the EMEA DC features the best in systems, equipment and facilities.

Automated parts storage and picking



In conventional warehouse systems, human operators read the co-ordinates of an item of inventory and then fetch it manually from the specified rack. This introduces multiple sources of error: the operator could mistakenly go to the wrong location, disturb adjacent products (thus making their co-ordinates invalid), or mislay the box after picking it correctly from the rack.

The EMEA DC's cranes are controlled by software that was perfected during six months of painstaking on-site testing before the system went live: they pick the right product, every time without fail.

For Future Electronics' customers, this has one simple benefit: when an order is placed, large or small, they can expect to receive exactly what was ordered, with no mistakes.

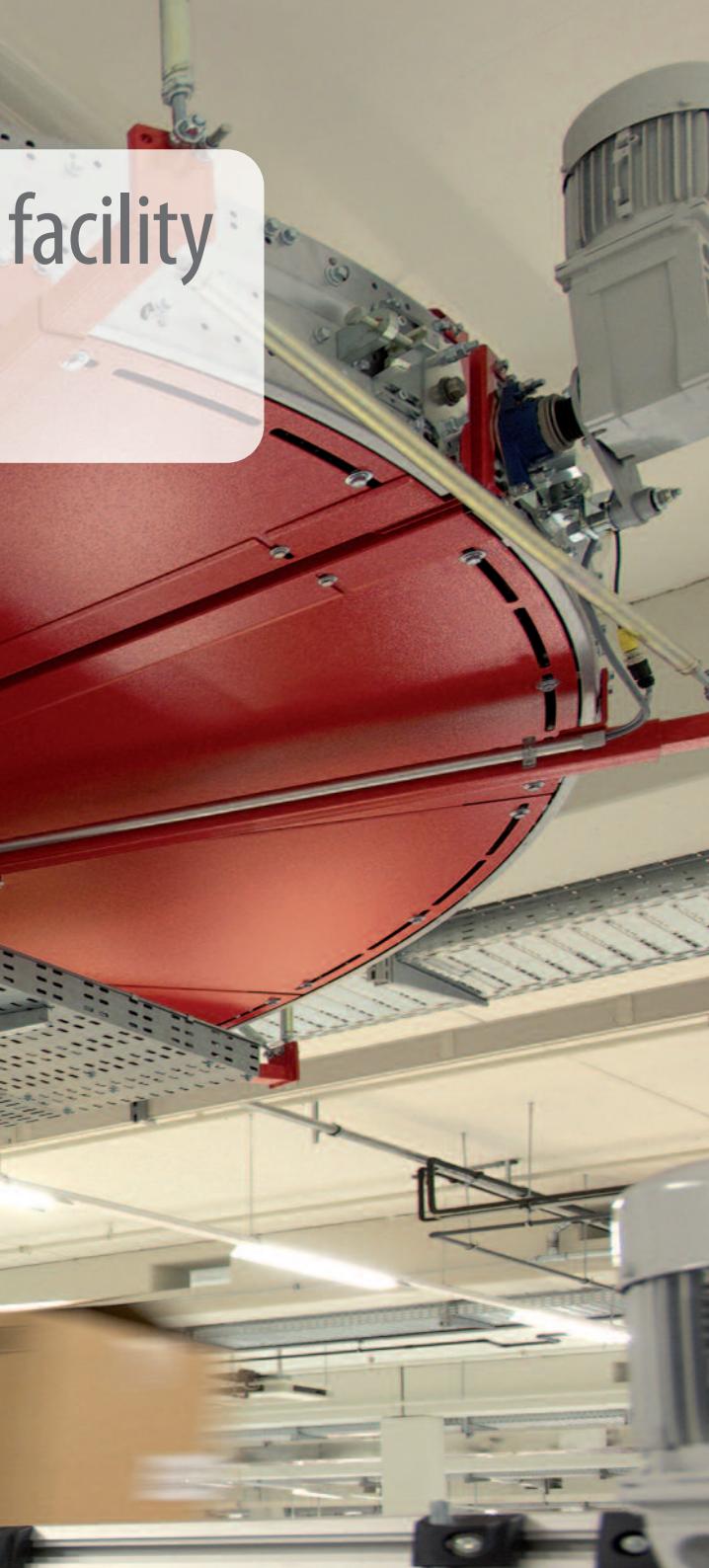
Highly configurable order fulfilment

If a customer places more than one order for delivery on the same day, the EMEA DC's automated picking system can consolidate the orders into a single package. This offers benefits in terms of cost-saving, the environment and efficient handling of materials.

The intelligent control system also recognises customer instructions for special barcoding and other non-standard shipping requirements.



facility



Zero-defect stock

The EMEA DC is a temperature- and humidity-controlled environment. Throughout the 15,000m² facility, the temperature is kept at a stable 20°C to 23°C. Humidity in the building is maintained at between 40% and 70%. Anti-static measures are applied rigorously and the floor, racks, clothing and packing stations are all grounded. The EMEA DC complies with the ANSI ESD 20.20 standard.

These perfect conditions for storing sensitive electronic components have been endorsed by the leading electronics component manufacturers.

A second line of defence against product defects is provided by the Quality Control procedure applied to every shipment, including detailed visual inspections of the manufacturer's component packaging.

These measures help to ensure that every part arrives at the customer in the same condition as it left the manufacturer's original factory.

Zero downtime

In line with stringent national building regulations, the EMEA DC has exceptional levels of passive and active fire protection and control. In case of a grid blackout, the facility has its own power generator on site. Fully redundant data cabling ensures the EMEA DC will stay connected to Future Electronics' worldwide computer systems even if its primary access gateway is compromised.

The failsafe precautions even extend to the wider Leipzig area: the local road network is fully redundant, offering two separate routes from the EMEA DC to Germany's 'autobahn' (highway) system. And Leipzig is a tri-modal hub – Future Electronics can choose to route shipments to customers by ground via rail or road, or by air.



Buy from Future Electronics for the best in engineering support and logistics service

Design-in support

- Experienced Field Applications Engineers at every branch in Europe offer expertise in circuit design and system architecting
- Future Electronics' Future-Blox range of stackable proof-of-concept development boards get you quickly from design idea to working prototype. Available free, exclusively to Future Electronics customers – register at www.my-boardclub.com
- The EMEA System Design Centre, near London, UK, can provide intensive engineering support and helps customers implement Future-Blox based designs
- Future Electronics' Board Club also provides registered members free manufacturer evaluation and development boards through www.my-boardclub.com
- FTM, Europe's leading technology magazine for Future Electronics customers, keeps engineers up to date with the latest advances in components and technology

Materials supply

- Account managers in 47 branches around Europe provide sales contacts who are close to hand
- Huge component choice – more than 200 franchised suppliers covering every requirement, from semiconductors and passives to connectors and power supplies
- Future Electronics permanently maintains a large inventory – as much as \$200m at the EMEA DC alone – in order to be able to fulfil orders and minimize allocation problems
- The EMEA DC is linked to Future Electronics' North America and Asia Pacific DCs, giving customers access to a vast global inventory of components

Logistics service

- Future Electronics' renowned logistics services include the holding of 'bonded inventory' – three months or more of stock that is reserved for registered customers and which is not included in Future Electronics' large available to sell inventory.
- Future Electronics' supply-chain services can eliminate lead-time and allocation issues for many customers.
- Future Electronics' sophisticated quality and labelling systems offer industry-leading traceability capabilities. The EMEA DC complies fully with C-TPAT requirements.

Components stocked at EMEA DC

Analogue	Microprocessors
Discreets	Wireless/RF solutions
Display solutions	Signal/Interface
Lighting solutions	Electromechanical
Logic	Interconnect
Memory	Passives
Optoelectronics	Production products
Microcontrollers	Development tools

Future Electronics worldwide branch locations

E-mail: info-eur-future@futureelectronics.com
www.futureelectronics.com

Africa

South Africa

Asia

China

Hong Kong

India

Japan

Korea

Malaysia

Philippines

Singapore

Taiwan

Thailand

Europe

Austria

Belgium

Bulgaria

Czech Republic

Denmark

Estonia

Finland

France

Germany

Hungary

Ireland

Israel

Italy

Lithuania

Netherlands

Norway

Poland

Romania

Slovenia

Spain

Sweden

Switzerland

Turkey

United

Kingdom

N. America

Canada

Mexico

Puerto Rico

USA

Oceania

Australia

New Zealand

S. America

Brazil