MILITARY

Traceability tightens up the electronics supply chain

The supply chain is being tightened for component suppliers in military and aerospace markets, writes *Debbie Rowland*, sales manager at Charcroft Electronics

The growth of contract manufacturing within the defence and aerospace industries means that OEMs of all sizes are stipulating rigorous control over component traceability.

The paper trail that defines the traceability of components starts with the original component manufacturer and ends as the product rolls off the contract electronic manufacturer's production line.

Along the way, the trail can pass through franchised or authorised distributors, independent brokers, grey market suppliers and even the excess inventory of other OEMs.

While OEMs are not imposing a limit to the number of links in the supply chain, they are demanding that each link be identifiable and traceable.

Simply supplying a copy of the original component manufacturer's paperwork is not enough to guarantee that the products are genuine and that they have been stored and handled correctly throughout their lifetime.

Component manufacturers do not automatically include a certificate of conformity when components are shipped. If the certificate is not ordered at the time of purchase, then the distributor and contract electronic manufacturer can find that it is virtually impossible to recover the audit trail.

Component manufacturers are often unable or unwilling to issue a certificate of conformity for components which have already left their premises.

Asking for a back-issue of a certificate effectively means asking the component manufacturer to guarantee a component which has left their area of control and responsibility.

Repeat this scenario for every company within the supply chain and the complexity of providing full traceability becomes apparent.

Rigorous ordering systems, a solid understanding of the specialist procurement procedures for hi-rel parts and good relationships between supply chain partners are also useful.

These make it less likely for errors to occur and make it easier to resolve anomalies in the paper trail which must accompany every component throughout its journey along the supply chain.

Charcroft Electronics
www.charcroft.com

AUDIO

Better bass tones for phones

Audio firm Knowles has introduced a phone loudspeaker claimed to have improved bass response. Loudspeakers in phones can be built like conventional sealed loudspeakers – a drive unit backed by a sealed volume of air. The bigger the air volume, the more the driver can overcome the sealed air 'spring' effect.

Dubbed N'Bass, Knowles' design approach to making the rear volume bigger virtually, without increasing it physically, is to fill the sealed cavity or cavities with beads of a specially-developed material similar to a sponge, which adsorbs the air in the speaker box. "In this way, it virtually increases the available back volume for the loudspeaker. In addition, the material is non-conductive and has no negative influence on antenna performance," said the firm.

FLEXIBLE DISPLAYS

Flexible LCD display maker brings plastic to market

Ohio-based flexible LCD maker Kent Displays is installing a second roll-to-roll production line, tripling its capacity, writes *Steve Bush*.

For almost two decades, the firm has stood behind cholesteric LCD technology, which offers reflective bistable operation and, unlike most LCD types, tolerance of cell thickness allowing plastic construction.

However, it does not match the contrast of the E Ink electrophoretic displays used in e-readers, and is sensitive to pressure on the screen.

Turning this last attribute into an advantage, the firm introduced simple writing slates where the pressure of the stylus changes the state (colour) of the LCD allowing lines to be drawn.

Initial models of the product, called 'Boogie Board eWriter', had no save function and where therefore little more than portable white boards.

This changed with the Boogie Board Rip last year, which allows handwriting and sketches to be saved, and sent via a USB port.

You can write and draw on Boogie Board Rip, then store and transmit the content. A cholesteric LCD is the key technology.

"Following the installation of our first roll-to-roll line, Kent Displays experienced a remarkably quick transition from a company focused primarily on research and development to a consumer products company," said Kent Displays chief financial officer, Joel Domino.

"Our original line, the first of its kind in the world, streamlined production of Boogie Board eWriters. We recently shipped the one millionth Boogie Board eWriter since the original model launched in 2010."

Boogie Boards are sold through Kent subsidiary Improv Electronics.

Kent Displays
www.kentdisplays.com