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HARTING Integrated Solutions “Going Global by Staying Local”

HIS unravels this conundrum by explaining its principal operating model – “Uniform Global Footprint”

The world is shrinking is the cry often heralded in today’s modern business environment. Global sales, globally-acting companies and increasing mobility are leading to changes in corporate thinking and associated manufacturing strategies. This is justifiable, but nevertheless, HARTING Integrated Solutions (HIS) has adopted a “regional based” manufacturing infrastructure approach, to support the Group’s backplane and integrated solutions assembly activities.

HARTING has built up its manufacturing sites in three continents: America, Asia and Europe. The goal is to serve the respective markets with localised manufacturing and with HARTING personnel familiar with the local conditions – and thereby be close to the customer.

This is backed up by a clear focus on “customer specific solutions” and the ability to offer technology-based solutions across a range of industries. This “customer proximity” philosophy is only possible with efficient production.

VIRTUAL PRIVATE NETWORK

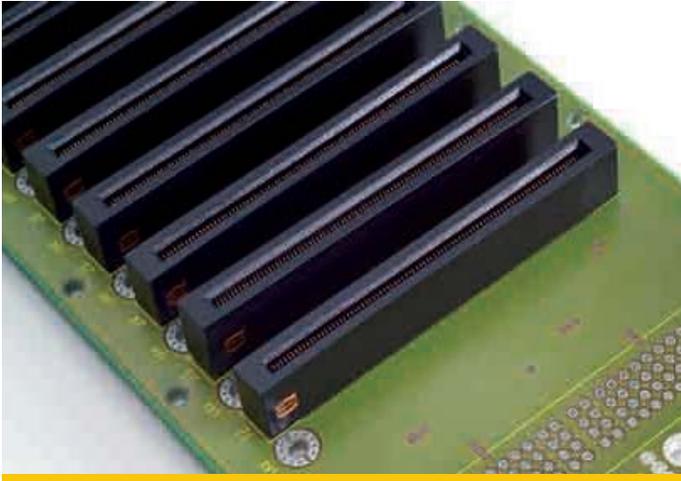
With production locations in Elgin USA, Northampton UK, and Zhuhai, in the industrial area of South China, HARTING has achieved, through common investment activities, its unique “Uniform Global Footprint” by ensuring the same capital equipment is used within all three manufacturing sites.



Moreover, linking this equipment over VPN (virtual private network) together plays a crucial role. This dovetailing, results in the ability to file-share, to assist in fault diagnosis and to access remote round-the-clock programming capabilities for each of the critical manufacturing processes.

Additional to this, and fully included in the model, are the associated manufacturing principals, processes, operating procedures and workmanship standards which define the principal of a single harmonised manufacturing methodology – “Uniform Global Footprint”.

One example of these principals in action is that identified by a major international customer who requires a certain product, delivered to different locations. HARTING is able to provide the same product, using the same part number, built to the same standards, using identical methods and capital equipment – from three separate manufacturing operations. Therefore meeting the needs of “one common build standard” across the globe.



Micro TCA backplane: designed, tested for signal integrity and assembled by HIS.

TECHNOLOGY POOL

Supporting this three-site infrastructure, HARTING uses elements from within the HARTING Group technology pool, from connector design, backplane design and signal integrity testing all the way through to the varied assembly techniques and complex test solutions required.

The range of processing technologies offered by the manufacturing locations includes HARTING's own CPM range of automatic and semi-automatic press-fit machines, full surface mount placement line – including vapour phase reflow, pin-in-hole intrusive reflow capabilities, as well as ATE (Automatic Test Equipment) – including distributed test systems and robotic backplane test capabilities. All of the manufacturing disciplines are compliant with the internationally recognised workmanship standard, IPC610.

HIGH SPEED BACKPLANES

High speed backplanes are no longer a designer's dream – through the so-called widening of the "copper envelope", serial data transmission rates of up to 12.5 Gbit/s become a reality. This requires meeting specific design rules, such as specialised PCB materials, controlled layer stack-up, differential pair signal routing and matched impedances.

The backplane architecture has to be multi-functional – providing both the path for data transmission between the active circuitry of the daughter boards, as well as being the medium for all of the associated power and ground plane distributions. In today's technology driven environment, backplanes have to be designed and built to meet industry requirements of faster speeds and enhanced signal integrity, as well as satisfying the needs of higher power consumption and associated power distribution. Assemblies with a higher layer count, larger surfaces, dense and complex pin fields require manufacturing disciplines using a large number of processing technologies. HARTING uses the Group core competency of interconnection to design and develop backplane solutions to meet these customer driven challenges.

SUPPORT STRUCTURES

Not only signal speeds are of significant importance. The time-to-market factor is often crucial for a successful product introduction. To achieve this goal in real-time/real-life situations, HARTING uses localised support and stresses flexibility for meeting changes in product designs, volume demands and associated processes.

A global, dovetailed purchasing department provides the customer with the optimal price-performance ratio. This concept harmonises the purchasing activities from the three locations – driven via the strategic philosophy of total cost of ownership.

The concept of supporting local markets globally is fundamental to the HARTING "one-face-to-the customer" philosophy, and now HARTING has extended this principle to include the localised manufacturing of backplane systems.

Is the world of industry shrinking? Possibly, but technology keeps developing and innovative solutions have to be found.



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