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## FARNBOROUGH

Let's create 4 something that changes everything.

## AIRSHOW 22-26 JULY 2024

4 EDITION

THE EUROPEAN MAGAZINE FOR A GLOBAL INDUSTRY

QPalantir





## Headlong into the future

As the old saying goes, we all get fifteen minutes of fame. That's one quarter hour or nine hundred seconds to grab an opportunity to show the world what you can offer.

Well, your stage awaits, and unless you've had your head in the clouds, the Farnborough International Airshow 2024 is almost upon us. It represents an unmissable opportunity for the global aerospace manufacturing supply chain to have its moment in the spotlight.

Above Farnborough, jet fighters will roar as the afterburner boom busts a rhythm on our ribcages whilst elsewhere, aerobatics displays will occasionally require us to pick our chins up off the floor.

But it's what's inside the trade halls that counts, and regardless of whether your company has a major or minor role, look around Farnborough's busy aisles this year and at its very heart you'll find a band of committed individuals and companies attending and exhibiting - for the sole purpose of meeting people, forming partnerships and doing business.

The Farnborough Airshow continues to promote success by way of the announcements for orders that take place throughout its halls - many of which will hopefully generate business for everyone connected with the industry. After all, where else in the world are the major aerospace players brought together for one week to perform for a captive audience under one roof?

This year's Airshow will hopefully showcase the latest wave of innovations

sweeping the industry. There will always be new aircraft launches, but the rate at which technology is rushing headlong into the future means it won't be too long before the next wave wipes them away.

Farnborough provides the aerospace manufacturing industry with a world stage, and what takes place within its bustling trade halls will be the play. Your 15 minutes of fame starts here!

Mike Richardson. editor

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# AEROSP

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NEWS



## Partners join forces on Wingman Engine

Rolls-Royce Deutschland and ITP Aero have jointly announced that they have signed a Memorandum of Understanding (MoU) to explore a partnership to design, develop, manufacture and support a Wingman Engine, a state-of-the-art, powerful solution for large remote carriers.

As part of the MoU signature ceremony, a mock-up of a Wingman Engine concept was unveiled with the power and propulsion solution being presented to a wide audience at ILA Berlin Airshow. The MoU between Rolls-Royce Deutschland and ITP Aero will foster a German-Spanish approach, leveraging a long-lasting relationship between both companies that has spanned more than a decade.

The MoU was signed by Dirk Geisinger, chairman Rolls-Royce Deutschland, and Carlos Alzola, managing director ITP Aero at ILA Berlin Airshow. **www.rolls-royce.com** 

## AW159 fleet accrues over 100k flight hours

The multi-mission Leonardo AW159 helicopter fleet has passed more than 100,000 flight hours.

This achievement has been secured via the 72 AW159 helicopters currently in-service, operated by five operators, including the UK, Republic of South Korea (RoK) and the Philippines.

Furthermore, the British Army and the Royal Navy operate 34 and 28 aircraft respectively. The RoK Navy has eight AW159 helicopters and the Philippine Navy has two AW159 helicopters within its fleet. Additionally, there are several further potential operators around the globe, in Europe, the Middle East and Asia-Pacific.

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## High-Reliability, Solid-State Drop-In Replacements for Failing Electromechanical SCSI Drives

Many computer-based systems in use in the aerospace and defence industries today were designed more than 20 years ago and incorporate then state-of-the-art SCSI hard disk drives. With their moving parts these drives are failing. Like-for-like replacements are not available, and the host system's software/drivers cannot be altered. The solution:

## SCSIFlash-Fast™

### **Benefits**

Restored confidence Your operations no longer at risk No need to modify host system Higher security Lower power draw Quieter



### Features

Industrial grade memory 2GB to 1TB Write speeds up to 80MB/s SASI, SCSI-1, SCSI-2 & Ultra3 SE / LVD supported Optional Ethernet port

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What is the difference between a distributor and a value-added reseller, and just what is the nature of that value? **James Hilken**, sales director with Solid State Disks Limited, provides an overview.

→ Any of the links in the supply chain (including the demand) can break for any number of reasons (below) he electronics supply chain is renowned for its complexities, not the least of which is the famine or feast situation that arises when there are components shortages and

surpluses, respectively. Before exploring these and other issues, it is worth justifying what qualifies Solid State Disks Limited (SSDL) to speak with authority on the subject of supply chains. SSDL is both an OEM of products (solid-state replacements for legacy data storage devices, for use in aerospace and defence applications, for example) and a value-added reseller (VAR) of components (memory cards and modules, cameras other peripherals). This makes the company extremely empathetic to the needs of those drawing from and feeding into the supply chain. So, let's start.

Shortages impact the buyer as components will be priced at a premium and/or most likely unavailable within the desired timeframe. They result largely from unanticipated high demand or supply chain disruptions. The latter includes things like geopolitical tension or natural disasters in the countries in which the components are made or from which raw materials are sourced. Also, shipping might be disrupted by accident (the Suez Canal being blocked in 2021, for example) or piracy.

Component surpluses on the other hand impact sellers and arise from overestimating demand or missing the window of opportunity for volume sales. The latter is not surprising considering the rate at which technological changes are taking place in the electronics industry.

Understandably, demand comes from the end of the supply chain (the end application) and drives activities at the start (see Figure 1). Note: fear of having surplus stock in the market caused many manufacturers to cut their production rates for 2024, resulting in longer lead times and higher prices. In essence, fear of surpluses can lead to shortages, and vice versa.

The fundamental famine or feast nature of the electronic component supply chain was experienced during, and for a year or so, after the Covid-19 pandemic. The lesson learnt: the supply chain needs to be more agile and resilient.

The electronics industry as a whole is having to comply with a variety of environmental regulations. For example, the use of mercury in components is now banned in many countries because it is a bioaccumulative, toxic pollutant that can enter the food chain.

Also, the use of lead-tin solder is, under RoHS European Law (as of 2026), banned in most of the electronics industry, though the aerospace and defence sectors are still allowed to use it because it contains less tin; where the metal can, over time, result in the growth of tin whiskers that can cause short circuits. In addition, component materials must be sourced responsibly as metals such as tungsten, tantalum, tin and gold are considered 'conflict resources' because they are mined in regions where war has been raging for years.

Lastly, counterfeiting is rife within the electronics industry and, for example, costs the US-based semiconductor companies more than \$7.5 billion per year according to the Semiconductor Industry



#### **TECHNOLOGY FEATURE: AVIONICS**



Association. It is more than the loss of sales experienced by those making the genuine parts though as, once counterfeit components are used, there is the cost of repair/rectification when the discovery is made, plus there is the cost of mitigating against the counterfeit components being used. More importantly, if used in a safety critical application, counterfeit components put lives at risk.

In addition to the above there is the backdrop of fluctuating inflation and exchange rates and skills shortages. Also, most aerospace/defence programmes require significant upfront and ongoing investments in order to make systems that are highly reliable, and which must provide decades of service.

#### It's a people business

While in the ideal world it would be great to always get the highest quality components as quickly as possible and for a low price that is not possible in practice. Also, for aerospace and defence applications, long-term availability needs to be part of the mix too.

Here, technology is helping in the form of big data, the cloud and digital twins. Parts can be designed-in not only based on their availability but will influence (help guarantee) their availability. Also, according to multinational strategy and management consulting firm McKinsley & Company, the effective use of AI in inventory control can achieve up to a 20% reduction in inventory carrying costs and a 50% decrease in stockouts.

However, while AI is helping improve efficiency within the supply chain, striking deals and building long-term partnerships are things only humans can do; and it is here that we must distinguish between a distributor and a VAR. A distributor will simply sell what they have in stock and the onus is on the customer to make sure they are ordering the most suitable components for their design and in the right quantities for production.

A VAR on the other hand provides far more support to design engineers and those in manufacturing. For instance, a VAR will seek out the most appropriate components. Granted, this typically means having an NDA in place to understand the customer's application and design, but a VAR's involvement early in the design process generally derisks the project.

A VAR will also negotiate the

best price and formulate a delivery schedule; as the production schedule might be best served through (say) monthly deliveries. Also, there may need to be flexibility around the quantities delivered each month.

In this respect, a VAR does much more than a distributor. Indeed, it is the practice of distribution that is becoming increasingly automated and enhanced by AI. However, the role of the VAR cannot be automated, as building trust and forming long-term partnerships is not something AI can do.

In aerospace, the customer at the end of the supply chain wants systems that will (once certified) not change in their design or construction. That means locking down bills of materials. In turn, unless someone in the supply chain is prepared to buy enough components for the product's entire lifecycle (including repairs), the component manufactures will need to lock down the construction of their products. This is effectively asking them not to take advantage of fabrication process improvements taking place in the semiconductor industry. That's a big ask, but something a trustworthy VAR will do. It is one of the many ways in which they add value. www.solidstatedisks.com

→ While technologies such as big data and AI are making considerable improvements the nature of the aerospace supply chain is such that trust and loyalty will always be essential (above)

→ James Hilken, sales director with Solid State Disks Limited (below)



Scan here for more Solid State Disks articles