Rugged Defence mobility enables you to accurately track your assets both in peace time and when deployed on operations at a moment's notice.

The Defence community requires Notebooks, Convertible and Tablet devices that will work in extreme environmental and security conditions, where self-sustainability is vital. Getac's focus on reducing, Size, Weight and Power (SWaP) on all of its devices provides end users with a cost effective Commercial Off-The-Shelf (COTS) solution.

The fit for purpose (FFP) hardware can enable the stable running of Command, Control, Communication, Computer and Intelligence (C4I) and Technical Publication Documentation (Tech Pubs) applications in operational environments, where downtime can have an unacceptable impact on operational effectiveness. Getac understands that each operational user has their unique requirements and offers customization options for more bespoke projects.

# GMC
## Q&A

# Computing solutions for extreme environments ● ●

Getac has been providing rugged computing solutions for use in extreme environments since 1989. Today, the company offers an extensive rugged computing product line, including laptops, tablets, and handheld computers, serving a wide range of vertical markets such as military and defence, law enforcement, public safety, emergency services, and industrial manufacturing, among others. Amy Saunders spoke with Chris Bye, President of Getac, to find out more about the company's latest market developments, and how it is positioning itself to meet the needs of the future.

**GMC: Can you provide an overview of Getac's key milestones and development in the almost three decades it has been operating?**
**Chris Bye:** Getac was established in 1989 as a joint venture with GE Aerospace and MiTAC-Synnex Business Group, to supply defence electronic products and provided rugged computing devices for the US air force, which can still be seen in service today. Since then, Getac devices have proliferated across the defence sector and are now used in a number of roles to enable true mobility for the modern-day battlefield.

As Getac's success in the sector grew, it built on its knowledge and experience and developed military grade rugged mobile devices for a range of other sectors too, from utilities to public safety and automotive. Key to its success has been the development of Getac's own innovations, such as its industry-leading sunlight readable touch screens (Lumibond 2.0), hot swappable battery technology and thinner/lighter chassis.

During the last 28 years, Getac has launched a range of rugged mobile devices from laptops to tablets and handhelds to meet the needs of a range of vertical markets for workers who need performance and reliability in the most hazardous environments. This year, Getac launched its first rugged mobile device built specifically to address the mobile computing challenges faced by dismounted soldiers - the MX50.

**GMC: What can you tell us about your key markets, and how have they developed over the years?**
**Chris Bye:** Each vertical is impacted by different trends, which means they have different computing requirements. For example, longer working hours mean longer lasting battery power, paperless office initiatives and cloud computing, thus storage and connectivity become more important. Emergency services and field

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workers have been earlier adopters of video functionality within their rugged devices to better record emergency situations or engineering problems. For defence, more technological advances such as GPS and connectivity have meant troops are better managed and protected. Cybersecurity is a key consideration that is impacting all vertical markets globally, so Getac has signed a number of software partners to deliver the highest levels of data and device security available today.

More recently, one trend that appears across all sectors is the demand for smaller, lighter, more powerful and more cost-effective computing devices, which has been driven by the introduction of consumer tablets, slates and hybrids. Getac has worked closely with its customers in the defence space to ensure it is delivering technology that can support the digitalization of all platforms, including the dismounted soldier. As expectation of mobile computing has evolved, Getac has continued to adapt its product portfolio in line with the ever-changing requirements. The MX50 body worn tablet device for the dismounted soldier is testament to this.

**GMC: Getac is well-known for designing rugged products that stand the test of time. How do rugged devices compare to ruggedized devices in terms of performance and cost, and how big a difference do you believe the end user experiences?**

**Chris Bye:** Getac not only designs, but also manufactures its devices and has strong R&D capabilities, which provides a number of benefits for end users. Getac uses rugged components in its devices to ensure the customer computing experience is as good after a five-year period as it was on day one, meaning there is no performance degradation in Getac devices. This is particularly important for defence organisations looking to deploy a fleet of equipment where reliability and access to critical information is a key requirement, and where budgets will not stretch to replacing kit every year or two. It also means that Getac can deliver a lower cost of ownership over the entire product life cycle, which is also supported by a warranty (called bumper to bumper), which will replace or repair a device within that five-year period.

The other benefit to Getac developing and manufacturing its own products, is that it can work closely with its customers to provide a high level of customization and all-aspect hardware-software integration. This means Getac can deliver a bespoke combination specific connectors, software or ports or accessories as required by a specific vertical or organisation.

**GMC: In March 2017, Getac launched its first rugged mobile device designed specifically for the defence sector. How does the MX50 meet the needs of end users, and what advantages will be gained compared to other products currently used for the same applications?**

**Chris Bye:** The newly launched MX50 rugged tablet device provides the dismounted soldier with an intuitive, consumer-like device with all the rugged features expected from a Getac product. In addition, Getac has worked with a number of industry leading partners to ensure the device can meet the highest levels of security and is fully interoperable with all in service military radios. For example, the MX50 meets the Common Criteria ISO/IEC 15408 computer security certification, and the NSA's Commercial Solutions of Classified (CSfC) platform and file encryption data at rest guidelines, which enables commercial components to be used in layered solutions to protect classified national security systems information. It is compatible with a large number of IEEE communication protocols, making it interoperable with a range of external hardware and drivers, such as the Glenair connector to provide USB 2.0 and power to the device.

Smartphones are currently being used by dismounted soldiers for some applications, but they are proving to be unreliable in field conditions due to breakages. Getac rugged devices undergo rigorous testing, and in the case of the MX50, it is certified to Military Standards 810G and 461G, meeting current, legacy and future GSA standards. It can withstand drops and other impacts, operate seamlessly in extreme weather conditions - from -21 to +60 degrees Celsius - and EMC environments, and has an Ingress Protection (IP) rating of 67.

**GMC: Getac also recently partnered with Trivalent to provide next-generation data protection for the first time in rugged computing devices. What are the main challenges in securing customer data on rugged devices, and how will this partnership help meet end user demands?**

**Chris Bye:** Defence teams depend upon rugged mobile devices to convey mission critical, covert communications and data collection in hostile military operating environments. Although field operators may have limited or no network connectivity, it is imperative it does not impact secure storage of, and access to, sensitive data on devices. This is why commercially available traditional endpoint security is insufficient and data protection has to meet rigorous security requirements to minimise exposure.

Getac has partnered with Trivalent, a provider of next generation data protection services, to deliver seamless and robust next-generation data protection, for the first time on rugged devices. This includes Trivalent's unique Data Alchemy™solution, which renders data completely unusable by unauthorised parties. Trivalent Protect is the only NSA Commercial Solutions for Classified (CSfC) certified data-at-rest (DaR) solution. It is developed exclusively with the warfighter in mind to securely handle Top Secret and below data. The integration of Trivalent's software security into Getac's line of laptops and tablets, delivers seamless, robust data protection for the first time on rugged computing devices.

**GMC: May 2017 saw Getac launch a fully rugged tablet for mobile field professionals. How have the needs of mobile transportation and field service professionals changed, and how will the ZX70 meet those needs?**

**Chris Bye:** Field services have the expectation of working efficiently and accurately, meaning they need to rely on a device that can withstand various weather conditions, offer constant connectivity and have enough battery to last a full shift. Getac's new ZX70 is a 7" fully rugged Android tablet, is ideal for field based operatives because it is thin and lightweight, offers the power and reliability and a and has a hot-swappable battery so



Getac MX50

it can last an entire shift or more. It also includes Getac's LumiBond screen technology, meaning it has advanced touch modes including touch/rain, glove and pen. It is MIL-STD 810G and IP67 certified, meaning it is rugged and robust.

**GMC: We're seeing that the battlefield is becoming increasingly digitalized, but what does this mean for the soldier in the field? What key trends are you observing, and how will Getac respond?**

**Chris Bye:** Modernisation of defence is firmly on the agenda with much focus on Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR). The demand for C4ISR systems is being driven by the need to achieve modernisation, a rise in asymmetric warfare and the growing requirement for flexible interoperability and integration of systems and networks to support military and dismounted operations.

An important goal of C4ISR is for each soldier's capability to be enhanced and for technology to be a force multiplier. One of the most important technologies for the dismounted soldier is their End User Device (EUD), as it enables rapid access to, and manipulation of data in real time, collaboration and integration of applications. Yet, traditionally specialist mobile devices have been power hungry, heavy and cumbersome.

Now devices have become smaller and more powerful in the consumer realm, and defence are eager to adopt this capability in the battlefield. And it's easy to see why when considering the benefits of consumer mobile devices; they are small, lightweight and fast, easy to use, intuitive, and have interoperable operating systems, loaded with apps. But consumer devices will quickly fail in military environments - especially in the deployed space.

This is the dichotomy between trends and what is functional in computing for defence. Getac is responding to this by developing cutting edge devices that offer the consumer-like experience - lightweight, intuitive interface and longer battery life, with rugged devices that will stand the test of the battlefield, all while providing the necessary security, interoperability and performance needed.

To effectively meet military C4ISR operational and modernisation goals, defence procurement must look to harness new COTS hardware and software, and even Internet of Things (IoT) applications. And for mobile computing, a new breed of 'consumer rugged' COT devices can provide the right balance, of being lightweight, easy to use, powerful, as well as meeting the stringent data and security standards.

**GMC: What do you expect Getac to achieve in the rest of 2017 and beyond?**

**Chris Bye:** In the coming years, new innovations such as artificial intelligence, voice, wearables and internet of things will continue to shape the way mobile and remote workers operate. Getac's R&D facility and global development teams are continuing to develop new products and Getac has an exciting roadmap for new releases in the coming months and well into 2018 and beyond.                                                                    **GMC**



*Getac MX50*