STAR-PAN, connecting the warfighter

Soldier Mod talks to Andrew Murdoch, Business Development Manager: Tactical Interconnect products, at Glenair

Q: So, STAR-PAN – What is it?
A: Great question, I'm conscious there are varying levels of knowledge and exposure to our product so I will give a brief overview of what STAR-PAN is and how it can and is helping soldiers on the battlefield.

STAR-PAN is a soldier-worn system encompassing both power and data HUBs and cables enabling the user to connect their existing equipment in order to simultaneously utilize power more efficiently, while accessing the data of this equipment. The emergence of smartphones, tablets and other computer systems on the frontline tactical space has allowed far greater use of digital information. Battle Management Systems (BMS) have created the ability to display this information in a simple and effective way – The key part, and where STAR-PAN comes into play, is the ability to take multiple sources of data (Radio, GPS Coordinates, LASER Range Finder information and Full Motion Video) and direct it to the EUD via its often single connector. The STAR-PAN series of HUBs are all based off a USB 2.0 high speed protocol. The protocol allows STAR-PAN to deal with data rates up to 480Mbps and carry that data distances in excess of 3 meters from source without the need for repeaters, making it a very flexible protocol.

STAR-PAN is designed to connect up the different devices soldiers need to carry. The issue is, these devices were designed in isolation and were not built to be part of a synchronized soldier system; as such, they can use different protocols from USB2.0, RS232, Ethernet, USB3.0 and USBC. What STAR-PAN does to solve this issue is convert the protocol to USB 2.0 via specially-designed inline cable converters. In addition to data distribution, STAR-PAN also manages power for the soldier. Bespoke cables and connectors can be used to access existing, in-field batteries (combat radio batteries) as well as conformable and newer batteries and distribute the power already available to the soldier, redirecting it to other devices. The 'so what' of this is STAR-PAN can reduce the weight carried by the soldier and help to dramatically increase the use of accessible data increasing his/her Situational Awareness (SA).

Connectorized STAR-PAN II PN 808-194

Q: So STAR-PAN is all about interconnecting and interoperability?
A: Absolutely. The great thing about STAR-PAN is it is designed to connect to existing and newly, in-service equipment that soldiers are already carrying. This really makes STAR-PAN a force multiplier without burdening the soldier with extra weight and equipment. The NATO standard interface of STAR-PAN allows it to connect to pretty much anything. In addition to this we are always adding to our fleet of cables and adaptors as new equipment comes on the market. An example of this is our cable and power solution for the Harris PRC163 radio.

Q: COVID-19 has obviously disrupted events and customer interaction during 2020. How have you managed to adapt and evolve to meet this challenge?
A: It certainly has been a unique and challenging year. Glenair is structured to be a very flexible and agile company that allows it to meet the new challenges presented by COVID-19 head on. Our manufacturing capacity has increased during 2020 with facility footprint enlarged to ensure our employees are protected. We have tried to ensure constant virtual interaction with customers and host regular webinar sessions to communicate the latest and greatest Glenair has to offer. You can find our list of webinar sessions by clicking on this **https://www.glenair.com/webinar/index.htm** or visiting **www.glenair.com** and clicking on **GoTowebinar Seminars**. As well as virtual events we have also managed to show the

power of interoperability during live events such as the recent Robotic and Autonomous System (RAS) in Italy.

Q: What did you manage to achieve during the RAS event?
A: The RAS event was all about interoperability and interconnection, both in terms of physical hardware and collaboration with other companies. STAR-PANs strength lies in its ability to harness data and power that Soldiers/Marines/Airmen wish to exploit. In this scenario a number of companies worked together to create a full mission profile, bringing together the varying elements of modern warfare being used on the battlefield today. This included Mobile Adhoc NETwork (MANET) radios from SILVUS TECHNOLOGIES, Unmanned Aerial Vehicle (UAV) technology from THREOD and FLIR, Unmanned Ground Vehicles (UGV) from MILREM and Helmet cameras from MOHOC. All of these devices were linked together by STAR-PAN in a number of real-time configurations creating an unparalleled level of Situational Awareness for the users on a common operating picture (COP), in this case Civ-TAK 4.1. We demonstrated that STAR-PAN not only supports the integration of C4ISR equipment and power distribution on the soldier, but that it can bring the same capability to unmanned platforms.

On current and future battlefields human force elements will be increasingly augmented and supported by autonomous machine elements. The ability to integrate their sensor- and position data into a common operating network is key to provide effective command and control and support the Manned-Unmanned Teaming (MUM-T) concept. STAR-PAN's common interconnect interface facilitates this as demonstrated during this event. Furthermore STAR-PAN MISSION MANAGER, a small form factor computing device that acts as a full-time host brokering data between many peripherals and EUDs, demonstrated the capability to bridge data between networks. In this case, the video and metadata coming in on the FLIR Black Hornet nano-UAV's bespoke network was sent to the operational MANET. Allowing other soldiers than just the UAV operator as well as the Tactical Operations Center (TOC) to exploit the video and metadata on their EUDs.

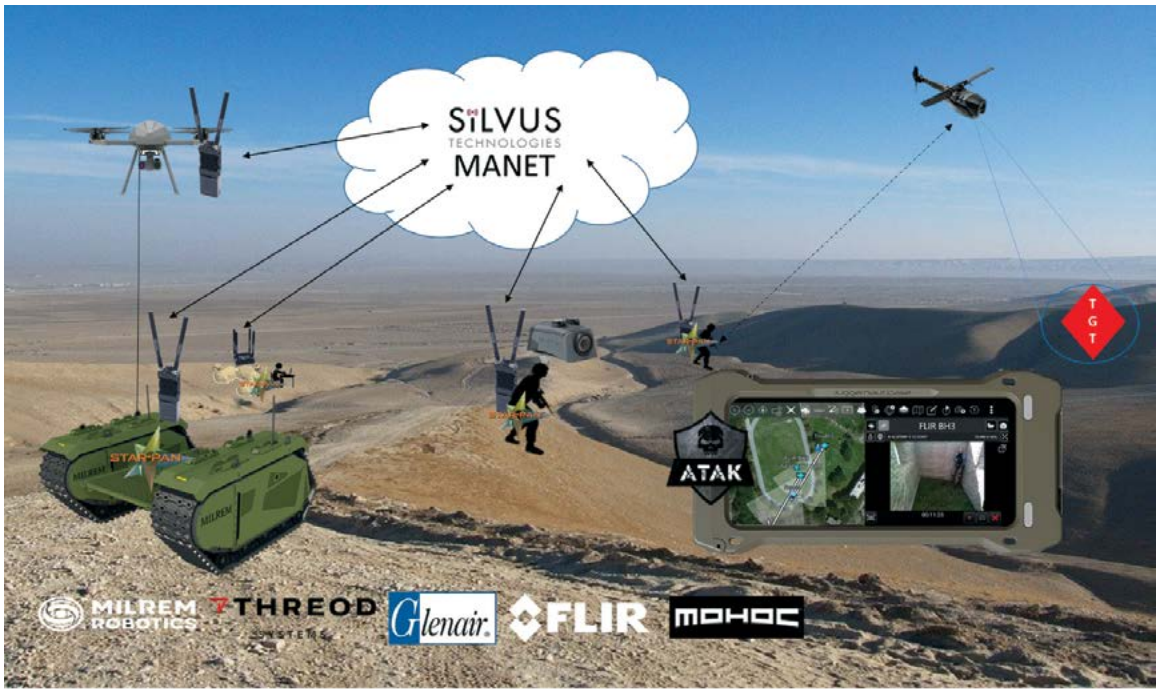
STAR-PAN is currently being fielded by military units within NATO and NATO friendly nations. If you are interested in finding out more on Glenair and/or STAR-PAN you can visit the Glenair website at **www.glenair.com** or reach out to any of the contacts below. ■

Andrew Murdoch
Business Development Manager – USA, CAN, NZ, AUS, Asia
Cell: +1 818 254 6120
amurdoch@glenair.com

Ringo Smits
Business Development Manager – Europe
Cell: +49 151 6281 0152
rsmits@glenair.de

Simon Coverdale
Market Development – Europe, ME, Africa
Cell: +33 (0) 7 89 24 68 19
scoverdale@glenair.fr

Grant Guy MC
Business Development – United Kingdom
Cell: +44 07464 486993
gguy@glenair.co.uk



An overview of the full mission profile architecture