



Secure Connector Solutions for Soldier Modernisation Programmes

Günter Rohr, Director of Strategic Markets at ODU, talks about the next connector generation for the soldier of the future

Small, light and rugged – this is a short summary of the requirements for the connection systems needed for the various “Soldier Modernisation” programmes. As in many other branches, this area represents a major challenge to connector manufacturers, because even these compact connectors must provide reliable power transmission, EMC protection and satisfy many additional requirements. Thanks to its many years of know-how in military technology; ODU offers several ingenious solutions for “Soldier Modernisation” programmes, whereby customers have access to standard solutions as well as application-specific developments. ODU offers connection systems that suit the specifications and the application.

Q: What's new at ODU?

A: The ODU AMC product line is "ready for market". There are many projects running where we have designed in the ODU AMC product line. However, ODU is still expanding the product line, and a "High Density Version" will be coming up soon. ODU will continue to develop the product line according to the trends and requirements of the military market.

Q: How do the soldier modernisation programmes benefit from your connector solutions?

A: ODU AMC is not just a connector, it is a connector family. So with ODU and the ODU AMC, the customer gets more than just a connector. We provide systems for the soldier modernisations programmes and all of their different requirements. ODU is also a competent partner for cabling systems, meaning that everything comes from one source. There are clear advantages to

having one complete connector solution, for the soldiers and the manufacturers. While the combatant can quickly familiarise himself with the basic principle of a single connection system, the system manufacturers are able to cover all their requirements with one solution, eliminating the current need to rely on four or five different connector series. Standard push-pull connectors have inherent limitations, so the flexible ODU AMC offers alternatives. We do have standard push-pull locking, but there are also break-away versions as well as screwed or bayonet locking. The ODU AMC is also much lighter than our standard push-pull systems, offering weight reductions of up to 60%, while excellent shielding characteristics (up to 360°) ensure that there is no interference to data and signal transmission, and optimised coding serves to eliminate the possibility of incorrect insertion. Independent contact inserts also make it possible to transmit different data rates, and the 'easy to clean' version offers further advantages in the field. Pressure contacts on the cable or the device allow quick and effective cleaning to take place in the field. The cylindrical connector family ODU AMC satisfies various technical requirements and also remains attractive in terms of cost. To serve the various soldier modernisation systems is only the start - ODU's target for the future is to connect all interfaces around the soldier such as weapons or vehicles using the ODU AMC family, so that customers can benefit from a connector family that meets all requirements in the future.

Q: How do you see the military industry developing in the next five years – what is this causing for upcoming products?

A: Budgets will be still limited but the defence industry continues to progress, and soldiers' equipment is becoming increasingly complex and connected. Ground

combat soldiers are set to be equipped with an integrated array of high-tech uniforms and applications – in the not-too-distant future. Rohr sees new challenges on the horizon. New technologies will be needed in all areas of the army. The trend is moving towards networking all troop units; this starts with the soldier and continues through to security and transport market segments, he concludes. Having the right information in the right place, at the right time, can mean the difference between life and death, and we're convinced that developments in this area will continue at full speed.

Q: What differentiates the service of ODU connectors from those of other connector manufacturers?

A: ODU AMC is a “standard” product family, so we offer good performance with regard to delivery times. We have the majority of parts in stock. Of course, product development will continue, and with our wide range of manufacturing capabilities and a highly motivated team of experts we are able to serve the needs of our customers and realize new concepts and developments faster than anybody else.

Q: What are the cable assembly options for your products?

A: ODU offers the connectors including or excluding cable assembly. All overmoulding tools are standard tools and ready for production. There will be no extra tooling costs for our customers. We are flexible enough to adapt the existing version to customer needs. The global presence of ODU's ultra-modern production facilities in Mühldorf (Germany), Shanghai (China), Sibiu (Romania) and Camarillo (USA) makes it possible to handle all projects, from small to large scale production, ▶

► swiftly and flexibly within the group, and above all with a consistent quality. For ODU, close collaboration with customers is top priority when developing and manufacturing system solutions. Consultation, problem analysis, project planning, development, prototype construction with initial sample test report, assembly, and technical documentation - in a nutshell: ODU takes on all jobs that arise in a system solution. Our outstanding supplier management system allows us to find the right cable for each customer - whether it's a standard line or a special cable. We support our customers in all aspects of task definition for cable assembly! ODU is expanding

its production facilities for complex and premium cable assemblies both at the headquarters in Mühlendorf and at its assembly subsidiaries.

Q: What programmes are you currently working with and what are you looking to do next? What are your goals with regards to new products?

A: We are working on various programs, all of them are well known. One particularly interesting segment concerns the interfaces around the soldier such as weapons, vehicles, non portable radios and so on. High density is one aspect that we are working on, but there are also

other ideas and projects in progress. Our goal is, to be well known in the market as an expert in a new generation of military circular connectors. Of course a close relationship based on trust with the customer is also very important to us, because that is the only way of allowing our customers and ourselves to successfully press ahead with the projects. ODU is continually working on new developments and innovative technologies for the soldier of the future in order to make the equipment even lighter and, what is even more important, safer. ■

THE ODU AMC PRODUCT SERIES VARIETY:



Group Voice and Data Radio
 • good shielding
 • good data transmission



**Ultra small
 Helmet Connection**



Night Vision / TFR Displays
 • version with pogo pins



Personal Computer
 • small
 • light
 • colour coding possible



Navigation Module
 • easy clean version



Vehicle Adaption
 • mating and demating under power



Soldier Control Unit
 • cable-to-cable connection



GPS Antenna
 • Coax Size 0
 • Push-Pull locking



Miniature cylindrical connector with screw locking. Very compact construction – only 24 mm long. Protection class IP 68 - Watertight to 2 m - Connects light-laser modules to weapon systems - tested in the field. Straight and right-angle models available.



IP68-key button for flashlights in military area and Law Enforcement. This key button replace extension cable and protective covers.

ODU AMC including cable assembly and overmoulding.

Reliability under even the harshest conditions!



ODU AMC – Advanced Military Connectors:
The next connector generation for the soldier of the future –
you can count on it.



- Push-Pull or Break-Away function
- Excellent 360° shielding properties
- More than 5,000 mating cycles
- Easy-Clean version available
- Light, robust and reliable

- Operating temperature from
–55° C to +125° C (–65° F to + 255° F)
- Watertight (IP 68)
- Individual contact configurations
available