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Vital Solutions for Situational Awareness

ASELSAN IFF Mode 5/S Systems

In a combat environment where so many ground, naval and airborne platforms of friendly and hostile units may take place, it is vital to know which of them are friendly units to ask for their support or to avoid fratricide. ASELSAN Identification Friend or Foe (IFF) Mode 5/S systems have been designed with the implementation of advanced engineering techniques to fill this gap.

ASELSAN has been able to design and provide IFF Mode 5/S Systems since 2006 for the clients that need to increase their situational awareness by identifying the friendly units in combat environments. Currently, ASELSAN is one of the few companies in the world that can develop IFF Mode 5/S solutions, which is the only encrypted mode defined by NATO at the moment, according to the most recent standards, NATO STANAG 4193 Edition-3. For IFF Mode 5/S Systems, ASELSAN has signed contracts for more than 1.000 transponders and more than 500 interrogators for the use of clients in Türkiye and in more than 15 countries. Those devices have been or will be installed in near future to various platforms such as ground radars, air defense systems, frigates, corvettes, OPVs, submarines, transport aircrafts, fighter aircrafts, helicopters and UAVs. As it can be seen from these references, ASELSAN's focus regarding IFF solutions have been on the military use scenarios so far. On the other hand, it should be noted that it is also possible to use these solutions for civilian air traffic control purposes.

"IFF Mode 5/S Transponder", "IFF Mode 5/S Short-Medium Range Interrogator", "IFF Mode 5/S Long Range Interrogator" and "IFF Mode 5/S Combined Interrogator/Transponder" constitute the current IFF Mode 5/S Systems product portfolio of ASELSAN. Thanks to the knowledge, experience and trust gained from the clients regarding the current portfolio, it is possible for ASELSAN to enrich this portfolio by designing new devices that will meet the new requirements stemming from constantly changing combat scenarios that use continuously evolving technologies.

ASELSAN also started to design new solutions and their mass production will run in the following months. Reverse IFF air-to-ground interrogator will be a software upgradable solution running on the hardware of the existing Mode 5/S capable IFF transponder to reverse the interrogation and reply frequencies. It has been started to be designed according to STANAG 4722 for the "air-to-ground" identification scenario.

For Reverse IFF scenario (from air-to-ground), another unit should be added to the ground platform to be able to send reply messages to the air-to-ground reverse IFF interrogations sent

by airborne platforms. Reverse IFF ground responder has been started to be developed for this purpose.

IFF Mode 5 Man Portable Air Defense Interrogator will be used with man portable air defense missile systems such as Stinger missile launchers. Even though the operation logic is the same as other interrogator types, its new design will meet the different requirements stemming from its portable usage such as ruggedized antenna system, long-life battery, lightweight structure. It will also be possible to use this solution in vehicles.

About ASELSAN:

As a global technology leader, we have established an organization that delivers new experiences to our users all across the world. By investing into our highly diversified human asset, we keep growing in a sustainable and inspiring fashion.

A journey began with a radio communication device today took us to more than 500 various products and solutions that changed “status quo ante” in defense and security arena. Our ambitious global expansion strategy made us embracing investment opportunities in promising markets.

With the inspiration of our clients in more than 80 countries, we start every new day with new ideas and dreams that encourages us to challenge technology boundaries. Striving for a better planet is our endless motivation.

Note: For more information regarding the product, please visit our booth at the IDEF 2023.

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