AIRBUS DEVELOPING AUTOMATIC REFUELLING AND DATALINK RELAY TECH FOR THE A330 MRTT

News / Manufacturer



Australia has expressed interest in automatic refuelling and datalink relay technology Airbus Defence & Space is developing for the A330 Multi Role Tanker Transport.

The RAAF operates five MRTTs as the KC-30A (with two more on order) and is watching closely the development of the automatic refuelling technology in particular, Airbus DS head of engineering Miguel Angel Moreno told media on Monday.

“A lot of Air Forces are interested, the Australians are much more interested in this capability and other nations also are waiting for this to see … the results,” Moreno told journalists in Munich at Airbus DS’s annual Trade Media Briefing.

“But the Australians already are asking for this capability.”

Using the MRTT’s cameras, image processing software and the aircraft’s fly-by-wire Aerial Refuelling Boom System, the automatic refuelling technology is designed to reduce risk and to increase tanker productivity by increasing the number of refuellings possible per mission.

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“The process we follow is that the boomer [boom operator] flies it manually until a certain position, and then in a certain moment deactivates the automatic [mode]. Then the operator can choose if he wants to continue manually or pass to automatic mode,” Moreno explained.

“The contact is hands free operation.”

So far Airbus has completed an inflight operational evaluation of automatic refuelling without making contact with an F-16 receiver aircraft, while a flight test campaign making contacts with a receiver aircraft is planned for the end of 2016.

Adding the capability to the MRTT requires only software changes, but a future fully autonomous refuelling capability would require more extensive hardware changes and certification.

“The moment the boomer touches the stick, the automatic mode disappears. The boomer is in the loop, the next step for us is to remove the boomer,” Moreno said.

“In order to do it fully automatic without the boomer in the loop, then the architecture has to be revised and the safety case has to be revised. Today with the boomer … in case something happens he can take control.”

Australia has also shown interest in a datalink relay technology Airbus is developing for the MRTT, which would either use IP Satcom or UHF Demand Assigned Multiple Access (DAMA) radio technology to relay Link 16 targetting information.

“The Australians … are well interested in this application,” Moreno said.

Airbus has already performed Link 16 data exchanges in a lab environment using a simulated satellite network and a UAV ground station, and plans to soon test the technology in a French air force A330 MRTT.

The datalink relay technology fits into Airbus Defence and Space’s strategy of connecting its platforms.

“The MRTT is a unique platform where its main job today is to refuel aeroplanes. But you know what, it refuels aeroplanes with the rest of the cabin barren.

“So there’s so much space, so much volume that can be used intelligently, to put in capabilities, to put in sensors, to put in people in there to connect people in the battlefield,” Fernando Alonso, head of Airbus Military Aircraft, said later on Monday.

“We believe very much in systems interconnection, we have the skills to do that, and that’s where we are going to be focusing.”

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