

Case Study

Finding the Cause of Interference Affecting an LTE Physical Resource Block

With industry unique capability of 64 time-sync'd analysis ports, the Xgig® Secure System has made testing and debugging transmission problem easier and less time consuming.

Fibre Channel, as high speed communication protocol, is widely used in the avionics backbone such as the F-35 Joint Strike Fighter and the F-18 Hornet, providing communications between the integrated core processor and the sensors, com/nav/identification (CNI) system, and the displays. The supported topology includes point-to-point, switched fabric and arbitrated loop (FC-AL) topologies. Also Avionics Fibre Channel commonly uses both class 2 and class 3 services.

VIAVI Xgig Secure System, designed for secure environments, supports the common Avionics Fibre Channel protocols:

- FC-AE-ASM and FC-AE-RDMA support bidirectional communication in a constrained and carefully defined environment for Avionics command, control, instrumentation, simulation, signal processing, and sensor/video data distribution.
- FC-AE-1553 protocol allows Fibre Channel networks to pull information from 1553. Because the two communications systems can share data, customers can preserve their investment in legacy system software, legacy 1553 buses and boxes, while adding Fibre Channel networks with higher data rates and vastly increased data capacity.

Challenge

- Test and debug a large number of links on complicated Avionics SANs
- Security protection in classified test environments

Product

- The VIAVI Xgig Secure System Analysis and Generation Tools

Benefits

- 64 time-sync'd ports
- Removable storage with locking key
- Expert view facilitates troubleshooting complicated SAN architectures

With the advanced hardware synchronization technology, the VIAVI Xgig platform is able to time-sync as many as 64 ports with time resolution of only 5ns, allowing for analysis of complicated networking structures such as switched fabric and correlating data flow with ease. The Xgig Expert system provides a unique and robust debugging and analysis tool capable of automatically sorting through millions of events to quickly identify performance, upper layer protocol, logical layer, and physical layer issues.

Raytheon F/A-18 AESA project is using VIAVI Xgig time-sync ports system on their test benches to ensure the Fibre Channel data integrity and enhance their state-of-the-art radar products.

Develop and test with confidence using the power of the Xgig Secure System. Available with a full suite of protocol test tools, the Xgig Secure System accelerates development, testing and deployment of communication and control products.



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