

Alfamation provides Test Support for Inova APIX[®]3

December 21st, 2021 – INOVA Semiconductors, inventor of the APIX[®]3 standard for real-time gigabit links for automotive applications and Alfamation, supplier of hardware and software test products and turn-key test and measurement solutions for automotive infotainment systems, have announced a close cooperation to speed up the integration of APIX[®]3 technology into automotive applications.

In sophisticated infotainment and driver assistance systems, APIX technology is used to connect displays and cameras with head units. This way, uncompressed HD video, audio and control data can be transmitted between displays of different resolutions and head units. Moreover, APIX facilitates the implementation of two 100 Mbps Ethernet links over the same cable which can further reduce cabling costs, weight, and space requirements.



The third generation of APIX (APIX[®]3) is targeted to address the enhanced requirements for Infotainment and Cockpit architectures in vehicles. Those architectures support multiple automotive UHD resolutions in car displays based on the most recent and future generations of high performance SoC.

The new APIX[®]3 technology supports transmissions of up to 6 Gbps over one shielded twisted pair (STP) cable and up to 12 Gbps over a quad twisted pair (QTP) connection. This is four times the speed of the previous APIX2 generation. APIX[®]3 supports video with HD and Ultra HD displays.

To integrate this technology, automotive customers require the related test capabilities. Targeted for applications where high fault coverage and high-speed processing are required, Alfamation Flexmedia XM APIX3TD1 and APIX3RD1 for APIX[®]3



enable accurate and high-performance testing of transmitter and receiver devices and get reliable video quality check in a fraction of a second. They provide full-functional support for INOVA APIX[®]3 INAP592T serializer and INAP592R deserializer, including dual or single link support up to 6Gb/s per link, HDCP™ support, bidirectional sideband communication support, 10/100BASE-T Ethernet communication. The modules operate on a Gigabit POE Ethernet control interface, and are provided with Command Line Interface, Graphical User Interface (GUI) and software APIs e.g. C#/C++ SDK, NI LabVIEW and Supernova/NI TestStand Step Types. Applications include 24/7 manufacturing test as well as R&D, V&V and Service of automotive infotainment head-units, instrument panel clusters and multi-camera driver assistance systems.

To test the high-speed digital multimedia link, [Flexmedia XM APIX3TD1](#), based on INOVA INAP592T chipset, offers a video stream generator that includes pixel perfect reference pattern generator, programmable frame size, synchs & porches, customizable video frame content from image files, still frame and circular buffer movie modes. It features real time adjustable overlays and 24 bits video pixel depth; the module supports bidirectional sideband communication.



[Flexmedia XM APIX3RD1](#), based on INOVA INAP592R chipset, offers a frame grabber and real-time video stream analyzer for dual independent video stream analysis, performing BER/PER/PSN analysis. It provides a region-of-interest (ROI) multiple & simultaneous analysis with video timing detection and burst capable video frame grabbing. As for the generator, the analyzer as well supports bidirectional sideband communication.

Flexmedia XM instrumentation modules recently won the Productronica Innovation Award 2021 in the Inspection and Quality cluster, and they were selected because of their capability to lower total cost of testing in a production environment, where electronics is more complex and faster than typical test scenarios. Furthermore, their compact size makes it easier to place them closer to the DUT, thus guaranteeing signal integrity, and ensuring higher performance. To learn more about Productronica Innovation Award, click [here](#).

About INOVA Semiconductors

Founded in 1999, Inova Semiconductors GmbH is a fabless semiconductor manufacturer headquartered in Munich, Germany. It specializes in the development of state-of-the-art products for Gigabit/s serial data communication and are named as APIX (Automotive Pixel). The APIX link has not only proven to be the ideal solution for video and network applications in cars, it has also aroused much interest in other market segments such as security and surveillance, as well as medical applications, and consumer camera systems. With over 150 million APIX chips on road as of 2021, company is eyeing for greater heights with its technical competences.



For more information about Inova Semiconductors, visit <https://inova-semiconductors.de/>