


EETIMES ONLINE **deutschland**
 Weltweiter Industrie-Nachrichtendienst für Elektronikingenieure und technisches Management • Deutschland, Österreich, Schweiz

[APPLY NOW FOR A FREE SUBSCRIPTION](#)


Bei Mess- und Steuerungsanwendungen gilt, analog is everywhere

[Mehr Infos](#) 

[Home](#) | [About](#) | [Contact](#) | [Feedback](#) | [RSS](#) | [Newsletter](#) | [Media Kit](#) | [Calendar of Events](#)

Regional Editions: [Germany](#) [France](#) [UK](#) [Scandinavia](#) [Israel](#) [Eastern Europe](#) [Russia](#) [Renew Here](#)

[EE Times Europe](#) » [Germany](#)

NEWS BY TOPIC

- [Automotive](#)
- [Communications](#)
- [Consumer](#)
- [Design & IP](#)
- [Embedded](#)
- [Environment](#)
- [Industrial](#)
- [Power](#)
- [Production](#)
- [Research](#)
- [Semiconductor](#)
- [Test & Measurement](#)
- [Wireless](#)

Inova, Fujitsu, BMW team for automotive multimedia bus

[Christoph Hammerschmidt](#)

[EE Times Europe](#)

09/04/2007 5:10 PM

MUNICH, Germany — Fabless chip vendor Inova Semiconductors and Fujitsu Microelectronics Europe have joined forces to establish Inova's APIX serial communications technology as a standard for graphics display interconnects. Car maker BMW has already indicated it is interested in the technology.

Inova developed APIX to transfer video, graphics and other data from a central host to a peripheral display unit. It also can be used to directly couple CCD/CMOS video cameras to a microprocessor board.

The technology is characterized by a low EMI profile and a high bandwidth of 1-Gbit/s upstream plus 2 by 9-Mbit/s for bidirectional control signals, using sideband modulation.

Turkey Beyond 2008

Annual Investment Conference
October 16, 2007
 New York Palace Hotel



PRODUCTS

POWERED BY **EEX**PRESS

- [Analog ICs](#)
- [Boards/Buses](#)
- [DSP](#)
- [Displays](#)
- [Electromechanical](#)
- [Embedded Tools](#)
- [Interconnect](#)
- [Logic & Interface](#)


Neuer TMS320DM355 Digital Media-Prozessor

Doppelte Batterielebensdauer



The physical layer provides self-adjustable drive current and pre-emphasis as well as dynamic scrambling in order to minimize EMI radiation, explained Roland Neumann, Inova technical director. Another feature is that APIX requires only two wire pairs for the communication, while competing technology DVI needs seven to eight pairs.

CAREER CENTER

Overworked and under-appreciated?

[Open](#) | [Close](#)

TOP 5 GERMANY STORIES

- [Qimonda gründet mit Sony Speichertochter](#)
- [Qimonda peilt Industriekunden mit eigener Produktlinie an](#)
- [Siemens bribery scandal grows again](#)
- [Texas Instruments will mit FRAM in den Markt für Smartcard-Chips](#)
- [Nokia Siemens divests R&D workers to IBM](#)

RELATED ARTICLES

- [Global IC socket demand to grow at 8.5% CAGR](#)
- [Infineon liefert ADSL2-Chip an chinesischen Modem-Hersteller](#)
- [EU corporate R&D investments grew in 2006, says study](#)
- [E-reader startup raises \\$8.5 million](#)
- [Nokia assumes control](#)

Around EE Times Europe



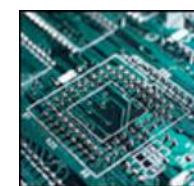
Aktuelle Printausgabe von EE Times Europe

Hier finden Sie eine Auswahl der topaktuellen Artikel in unserer jüngsten Printausgabe vom 17. September.



Externer SerDes killt Störsignale

Im großen FPGAs mit zahlreichen I/Os können SSO-Störungen ('Ground Bounce') erhebliche Designproblemen verursachen. Dagegen ist ein Kraut gewachsen.



FlexRay - die Grenzen des Physical Layers

Kommende Autogenerationen werden sich in wichtigen Sicherheitsfunktionen auf den FlexRay-Datenbus verlassen. Um solche Systeme zu

konstruieren, ist es notwendig, seine physikalischen Grenzen zu kennen.

- [Logic & Interface](#)
- [Memory](#)
- [MPUs/MCUs](#)
- [Passives/Sensors](#)
- [PLDs/FPGAs](#)
- [Power Components](#)
- [Power Sources](#)
- [RF/Microwave](#)
- [Test/Measurement](#)

Technical Papers

[UML for C](#)
[All White Papers »](#)

POLL

For those of you involved in embedded systems development; which of the following types of operating system are you planning to use in your next project:

- In-house developed OS
- Commercial proprietary OS
- Linux
- My project doesn't need an OS

[Visit The Poll Archives](#)

It also offers advantages over Ethernet as a fast and cheap communication standard. APIX, in contrast to Ethernet, does not require a complex protocol stack and offers a higher bandwidth, according to Neumann. In addition, APIX is optimized for streaming video, he said.

The sum of these properties makes APIX 'ideally suited' for the distribution of multimedia and graphics content in vehicles.

While APIX has been around for more than a year, the Munich-based startup now has joined forces with Fujitsu Microelectronics Europe (FME). Fujitsu has agreed to integrate the APIX into graphic controller and microcontroller products.

Page 2: [Inova, Fujitsu, BMW team for automotive multimedia bus](#)

Page 1 [2](#)

Related Links:

- [Digital CMOS camera helps BMW combat accidents](#)
- [MOST bus to be opened for consumer devices](#)
- [Can wireless tame the Hydra of in-car entertainment?](#)

PRINT THIS STORY

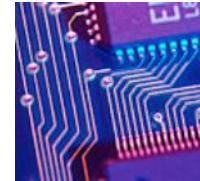
SEND AS EMAIL

REPRINTS



[A/D-Wandler für hohe Zwischenfrequenzen](#)

Schnelle A/D-Wandler eröffnen neue Perspektiven in der Signalverarbeitung. Die Entwicklung geht Richtung direkte Digitalisierung des HF-Eingangssignals. Die Realität ist allerdings noch nicht ganz so weit.



[Power Management - kleiner, besser, einfacher](#)

Wie lässt sich ein Abwärtswandler für Stromversorgungen hinsichtlich Ausregelzeit und Baugröße optimieren? Unser Artikel

erläutert es am Beispiel des Controllers TPS6420x von TI.



[Ganzheitlicher Ansatz für Design und Verifikation](#)

Nur mit ganzheitlichen, übergreifenden Ansätzen bleibt die Komplexität elektronischer Designs beherrschbar. Einen solchen Ansatz bietet die transaktionsbasierende Systemverifikation.

[HOME](#) | [ABOUT](#) | [CONTACT](#) | [FEEDBACK](#) | [RSS](#) | [NEWSLETTER](#) | [MEDIA KIT](#) | [CALENDAR OF EVENTS](#) | [SUBSCRIPTIONS](#) | [ORIGINAL NEWS](#)

NETWORK WEBSITES

[CommsDesign](#) | [DeepChip.com](#) | [Design & Reuse](#) | [Embedded.com](#) | [Embedded Edge Magazine](#) | [Embedded Computing Solutions](#) | [Planet Analog](#) | [eeProductCenter](#) | [Electronics Supply & Manufacturing](#) | [Inside \[DSP\]](#) | [Automotive DesignLine](#) | [Power Management DesignLine](#) | [Wireless Net DesignLine](#) | [Video/Imaging DesignLine](#) | [Industrial Control DesignLine](#) | [Digital TV DesignLine](#) | [Programmable Logic DesignLine](#) | [Audio DesignLine](#) | [Mobile Handset DesignLine](#) | [TechOnLine](#) | [DSP DesignLine](#) | [EDA DesignLine](#) | [RF DesignLine](#)

INTERNATIONAL

[EE Times](#) | [EE Times JAPAN](#) | [EE Times Asia](#) | [EE Times CHINA](#) | [EE Times FRANCE](#) | [EE Times GERMANY](#) | [EE Times Korea](#) | [EE Times Taiwan](#) | [EE Times UK](#)
[Electronics Express](#) | [Elektronik i Norden](#) | [Electronics Supply & Manufacturing - China](#) | [Microwave Engineering Europe](#)

NETWORK FEATURES



[Career Center](#) | [Conference/Events](#) | [Custom Magazines](#) | [EE Times Info/Reader Service](#) | [GlobalSpec](#)
[NetSeminar Services](#) | [Sponsor Products](#) | [Subscribe to Print](#) | [Global Supply Chain Summit](#) | [Product Shopper](#) | [ProductCasts](#) | [Reprints](#) | [EDA Tech Forum](#)

For all your electronic component needs

www.digikey.com/europe

All material on this site [Copyright © 2006 CMP Media LLC](#) , [EETimes EU Copyright](#) . All rights reserved.
[Privacy Statement](#) | [Terms of Service](#)


EE TIMES deutschland
 ONLINE
 Weltweiter Industrie-Nachrichtendienst für Elektronikingenieure und technisches Management • Deutschland, Österreich, Schweiz
 APPLY NOW FOR A FREE SUBSCRIPTION


Neuer TMS320DM355 Digital Media-Prozessor
 VI


[Home](#) | [About](#) | [Contact](#) | [Feedback](#) | [RSS](#) | [Newsletter](#) | [Media Kit](#) | [Calendar of Events](#)

Regional Editions: [Germany](#) [France](#) [UK](#) [Scandinavia](#) [Israel](#) [Eastern Europe](#) [Russia](#)

[Renew Here](#)

[EE Times Europe](#) » [Germany](#)

NEWS BY TOPIC

- [Automotive](#)
- [Communications](#)
- [Consumer](#)
- [Design & IP](#)
- [Embedded](#)
- [Environment](#)
- [Industrial](#)
- [Power](#)
- [Production](#)
- [Research](#)
- [Semiconductor](#)
- [Test & Measurement](#)
- [Wireless](#)

Inova, Fujitsu, BMW team for automotive multimedia bus

[Christoph Hammerschmidt](#)

[EE Times Europe](#)

09/04/2007 5:10 PM

The companies want to establish APIX as a standard in automotive environments for multimedia distribution, including the signals of intelligent sensors used for driver assistance systems such as lane departure warning or backward-looking cameras.

"We do not develop some customer-specific solution", explained Brendan McKearny, vice president of sales at FME. "We want mass production."

To establish APIX as a standard, Inova plans to license the technology to other chip vendors. In addition, the analog IP contained in the PHY layer has been divided into several interoperable IP blocks to create more transparency, explained Neumann. In addition, the company intends to offer a flexible licensing model to enable second sourcing, which is an important criterion in the automotive market.



Learn how **Blackfin** connects people with true-to-life audio and video.

click

ANALOG DEVICES

The Inova/FME team has found an ally in the automotive market: Car maker BMW plans to implement the technology in future display solutions including head-up displays. "For us, it is important to discuss these matters

CAREER CENTER

Bonus? Hah! More like rounding error.
[Open](#) | [Close](#)

TOP 5 GERMANY STORIES

- [Qimonda gründet mit Sony Speichertochter](#)
- [Qimonda peilt Industriekunden mit eigener Produktlinie an](#)
- [Siemens bribery scandal grows again](#)
- [Texas Instruments will mit FRAM in den Markt für Smartcard-Chips](#)
- [Nokia Siemens divests R&D workers to IBM](#)

RELATED ARTICLES

- [Global IC socket demand to grow at 8.5% CAGR](#)
- [Infineon liefert ADSL2-Chip an chinesischen Modem-Hersteller](#)
- [EU corporate R&D investments grew in 2006, says study](#)
- [E-reader startup raises \\$8.5 million](#)
- [Nokia assumes control](#)

Turkey Beyond 2008

Annual Investment Conference
October 16, 2007
 New York Palace Hotel

Qualcomm 65nm

[Design](#)
 Free report - Reverse engineer analysis of latest Qualcomm devices
www.semiconductor.com

PRODUCTS

POWERED BY **EEX** EXPRESS

- [Analog ICs](#)
- [Boards/Buses](#)
- [DSP](#)
- [Displays](#)
- [Electromechanical](#)
- [Embedded Tools](#)
- [Interconnect](#)

Around EE Times Europe



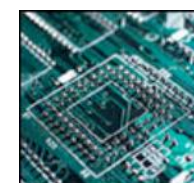
Aktuelle Printausgabe von EE Times Europe

Hier finden Sie eine Auswahl der topaktuellen Artikel in unserer jüngsten Printausgabe vom 17. September.



Externer SerDes killt Störsignale

Im großen FPGAs mit zahlreichen I/Os können SSO-Störungen ('Ground Bounce') erhebliche Designproblemen verursachen. Dagegen ist ein Kraut gewachsen.



FlexRay - die Grenzen des Physical Layers

Kommende Autogenerationen werden sich in wichtigen Sicherheitsfunktionen auf den FlexRay-Datenbus verlassen. Um solche Systeme zu

konstruieren, ist es notwendig, seine physikalischen Grenzen zu kennen.

- [Logic & Interface](#)
- [Memory](#)
- [MPUs/MCUs](#)
- [Passives/Sensors](#)
- [PLDs/FPGAs](#)
- [Power Components](#)
- [Power Sources](#)
- [RF/Microwave](#)
- [Test/Measurement](#)

Technical Papers

[UML for C](#)
[All White Papers >>](#)

POLL

For those of you involved in embedded systems development; which of the following types of operating system are you planning to use in your next project:

- In-house developed OS
- Commercial proprietary OS
- Linux
- My project doesn't need an OS

[Visit The Poll Archives](#)

in a very early phase with chip manufacturers," said Robert Isele, director of driver information systems, display technology at BMW. "Thus, we can achieve more stability in the development process."

For BMW it was important that any solution should not interfere with radio reception. "We have to make sure all commercial radio bands can be received without interference. This is really a challenge," Isele said.

Another important criterion for BMW was the wiring. With the cable loom being the second-heaviest component of a modern car, every single wire that can be omitted is a step forward, Isele explained. A third important aspect for the car manufacturer was integration with other bus standards such as CAN or MOST. "Interoperability is a precondition", said Isele, with the interoperability to be managed by the controller chip.

BMW plans to have cars with APIX on the road before 2013. In the meantime, however, Inova will already have rolled out the next APIX generation which will support transfer rates of 2-Gbit/s, enabling the display of 1080 line progressive scan graphics in the car; plus the transmission of USB data over the same wire.

Page 1: [Inova, Fujitsu, BMW team for automotive multimedia bus](#)

Page [1](#) [2](#)

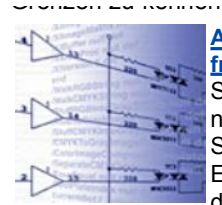
Related Links:

- [Digital CMOS camera helps BMW combat accidents](#)
- [MOST bus to be opened for consumer devices](#)
- [Can wireless tame the Hydra of in-car entertainment?](#)

 [PRINT THIS STORY](#)

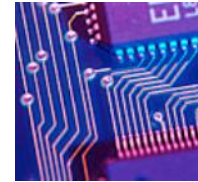
 [SEND AS EMAIL](#)

 [REPRINTS](#)



[A/D-Wandler für hohe Zwischenfrequenzen](#)

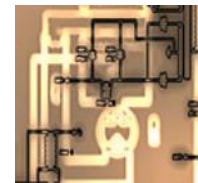
Schnelle A/D-Wandler eröffnen neue Perspektiven in der Signalverarbeitung. Die Entwicklung geht Richtung direkte Digitalisierung des HF-Eingangssignals. Die Realität ist allerdings noch nicht ganz so weit.



[Power Management - kleiner, besser, einfacher](#)

Wie lässt sich ein Abwärtswandler für Stromversorgungen hinsichtlich Ausregelzeit und Baugröße optimieren? Unser Artikel

erläutert es am Beispiel des Controllers TPS6420x von TI.



[Ganzheitlicher Ansatz für Design und Verifikation](#)

Nur mit ganzheitlichen, übergreifenden Ansätzen bleibt die Komplexität elektronischer Designs beherrschbar. Einen solchen Ansatz bietet die transaktionsbasierende Systemverifikation.

[HOME](#) | [ABOUT](#) | [CONTACT](#) | [FEEDBACK](#) | [RSS](#) | [NEWSLETTER](#) | [MEDIA KIT](#) | [CALENDAR OF EVENTS](#) | [SUBSCRIPTIONS](#) | [ORIGINAL NEWS](#)

NETWORK WEBSITES

[CommsDesign](#) | [DeepChip.com](#) | [Design & Reuse](#) | [Embedded.com](#) | [Embedded Edge Magazine](#) | [Embedded Computing Solutions](#) | [Planet Analog](#) | [eeProductCenter](#) | [Electronics Supply & Manufacturing](#) | [Inside iDSP](#) | [Automotive DesignLine](#) | [Power Management DesignLine](#) | [Wireless Net DesignLine](#) | [Video/Imaging DesignLine](#) | [Industrial Control DesignLine](#) | [Digital TV DesignLine](#) | [Programmable Logic DesignLine](#) | [Audio DesignLine](#) | [Mobile Handset DesignLine](#) | [TechOnLine](#) | [DSP DesignLine](#) | [EDA DesignLine](#) | [RF DesignLine](#)

INTERNATIONAL

[EE Times](#) | [EE Times JAPAN](#) | [EE Times Asia](#) | [EE Times CHINA](#) | [EE Times FRANCE](#) | [EE Times GERMANY](#) | [EE Times Korea](#) | [EE Times Taiwan](#) | [EE Times UK](#)

[Electronics Express](#) | [Elektronik i Norden](#) | [Electronics Supply & Manufacturing - China](#) | [Microwave Engineering Europe](#)

NETWORK FEATURES

[Career Center](#) | [Conference/Events](#) | [Custom Magazines](#) | [EE Times Info/Reader Service](#) | [GlobalSpec](#) | [NetSeminar Services](#) | [Sponsor Products](#) | [Subscribe to Print](#) | [Global Supply Chain Summit](#) | [Product Shopper](#) | [ProductCasts](#) | [Reprints](#) | [EDA Tech Forum](#)



For all your electronic component needs

www.digikey.com/europe



All material on this site [Copyright © 2006 CMP Media LLC](#) , [EETimes EU Copyright](#) . All rights reserved.
[Privacy Statement](#) | [Terms of Service](#)