Prodigy ΤΕ C Η Ν Ο V Α ΤΙ Ο Ν

MOBILE INTERFACE

SOLUTIONS

Your Solutions Partner

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Mobile Interface Solutions



Sensor Interface

We have had interfaces like I2C and SPI in the past which met the needs of the times. With the number of sensors in a mobile today increasing exponentially, the need for a new interface with bus topology was needed resulting in the improved I2C interface also known as I3C interface.



Memory Interface

Memory interfaces have evolved from SD-SDIO-eMMC to UFS to meet the speed and capacity needs of end users. The transition from parallel interface (eMMC) to serial interface (UFS) ensured higher data rate capacity was achieved.

RF Front End Interface

Mobile designs today have many RF interfaces to handle communications needs and this has resulted in a new bus architecture called RFFE interface, which ensured better handling of multiple RF front end devices.

Power Management Interface

Modern Mobile designs need better power management needs and hence a new bus architecture in the form of System Power Management Interface (SPMI) has evolved. This enabled designers

innangement meet generation of the second all a second a

to manage low power design needs effectively.

Mobile Interface Solutions

The dramatic changes we are seeing in the mobile architecture makes it important to have new interface designs which can handle the higher speed, lower latency and larger payload handling capability while maintaining better power efficiency.

A sample mobile design curtsey MIPI alliance gives an insight to the numerous interfaces that are there in today's smart phone architecture.

We can broadly classify these interfaces as : Sensor interfaces, Memory interfaces, Power management interfaces, RF interfaces and Display interfaces.



Mobile Interface Solutions - Sensor Interfaces

We have had interfaces like I2C and SPI in the past which met the needs of the times. With the number of sensors in a mobile today having gone up exponentially it was the need of the hour to introduce an interface which can meet the current design needs.



I2C/SPI/I3C interfaces

I3C is that new interface which improved upon the legacy I2C and SPI. Design teams will need to have designs with I2C and SPI while adding the new I3C in their designs.

They need the exercisers and protocol analysers apart from oscilloscope based decode software to test and validate their sensor interfaces. Particularly needed is the support of legacy interfaces for testing backward compatibility.



Prodigy Technovations' I3C exerciser and analyser and I2C-SPI exerciser and analyser enables designers to design, validate, test and also perform inhouse pre-compliance testing effectively.



Mobile Interface Solutions - Memory Interface

Mobile design teams have ensured the adaptation of different memory interfaces like SD/ SDIO/eMMC in the past and now adopting the latest UFS interface to handle larger memory needs while ensuring faster read/write speeds.



UFS Interface

Design teams in the past have leveraged SD/SDIO/eMMC memory devices which met the needs of the times. But with the end users demanding new applications in 5G where the

need for handling large payloads at a faster read/write duration made design teams adopt UFS as the memory interface of choice. The current generation smart phones have already started adopting UFS memory devices. The challenge design teams are facing particularly is in the Gear 4B speeds and also need insights during boot-up sequence.

Prodigy Technovations' SSM (SD/SDIO/eMMC) analyser and UFS analyser enables designers to design, validate, test designs effectively providing insights to boot-up sequence details while addressing the gear 4B decoding needs.













Mobile Interface Solutions - RF Interface

The need for better management of RF front end devices (LNA's, switches, PA etc) has ushered in the new interface RFFE- RF Front End Interface . RFFE is a MIPI standard and has evolved from its 1.0 version to the latest 3.0 version to meet the demands of 5G RF devices.



Prodigy Technovations' RFFE exerciser and Protocol analyser enables designers to design, validate, test and also perform inhouse pre-compliance testing effectively.

> P.C. MOVETIONS • • •



RFFE EX - PD

Mobile Interface Solutions - Power Management Interface

The need for better and smarter power management in mobile devices is a given in the current times as users want their mobile phones to have longer battery life. MIPI introduced a standard interface SPMI- System Power Management interface to address these needs.



SPMI Interface

Prodigy Technovations' SPMI exerciser and Protocol analyser enables designers to design, validate, test and also perform inhouse pre-compliance testing effectively.

Prodigy Technovations thus provides a comprehensive mobile test solution to enables design teams design, validate, Verify and test their mobile interfaces effectively. We also have Oscilloscope based software decoder and electrical validation software for Tektronix Oscilloscopes.



SPMIEX - PD

Mobile Interface Solutions - Oscilloscope Decode Softwares





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Prodigy Technovations' 100 Base - T1 automotive Ethernet Protocol decoder software for Tektronix oscilloscopes enables designers to design, validate and test their automotive designs.



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Prodigy Technovations' I2C electrical validation and Protocol decoder software for Tektronix oscilloscopes enables designers to design, validate and test their I2C designs.

Mobile Interface Solutions - Oscilloscope Decode Softwares

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Prodigy Technovations' I2S electrical validation and Protocol decoder software for Tektronix oscilloscopes enables designers to design, validate and test their I2S designs.

🚸 PGY-USB3.0 Protocol Analysis Software

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Prodigy Technovations' USB electrical validation and Protocol decoder software for Tektronix oscilloscopes enables designers to design, validate and test their USB designs.

Ordering Information

- PGY-I3C-EX-PD *
- * PGY-I2C-SPI-EX-PD
- **PGY-UFS-PA** *



- **PGY-RFFE-EX-PD** *
- **PGY-SPMI-EX-PD** *
- Oscilloscope based protocol decode software *
 - * PGY 100Base T1 * PGY - 12C * PGY - 12S * PGY - USB











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