

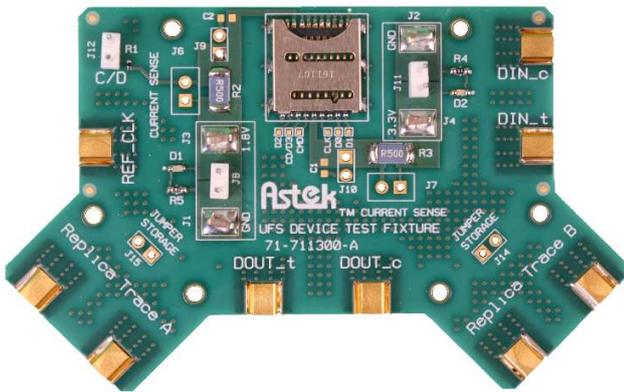
## A9-UFS 被 UFSA 协会认证的测试治具套件组

A9-UFS测试治具套件组让设计者可以验证UFS主控系统和UFS中装置端的组件是否符合JEDEC UFS测试规范。A9-UFS测试治具套件组提供了一个SMP接口让UFS组件以及分析仪可以对接。发射端和接收端的符合性测试以及Return loss的量测也可以使用此治具板套件组功能：

- UFS总线速度可以达 M-Phy Gear 3 (Gear 4 TBD).
- 提供SMP接口和测试点用来连接 REF\_CLK, C/D, DIN\_t/c 和 DOUT\_t/c差分信号
- “Replica trace”是用来校准和de-embedding测试治具板
- 可量测 1.8V 和 3.3V on UFS 装置和UFS 卡的功率消耗.
- 可量测 1.8V and 3.3V on UFS主控系统的功率传输能力.
- 典型的S参数档案包含了治具板中de-embedding效应

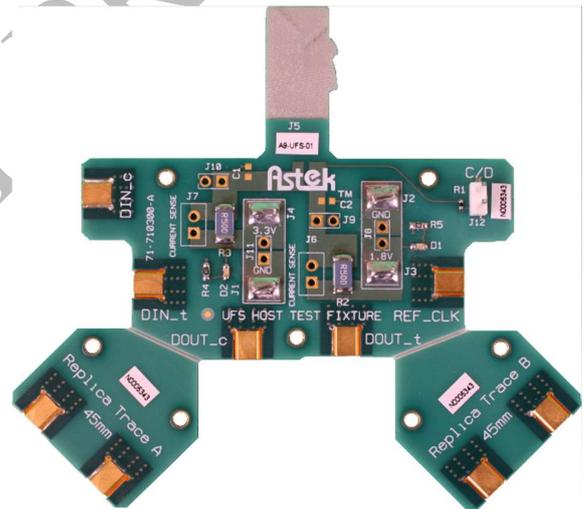
### UFS 装置端测试治具板

A9-UFS-02 装置端治具板,将 UFS 卡置入到插槽内做相关测试

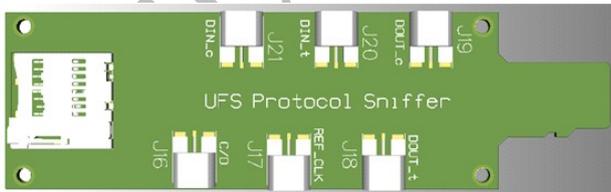


### UFS 主控端测试治具板

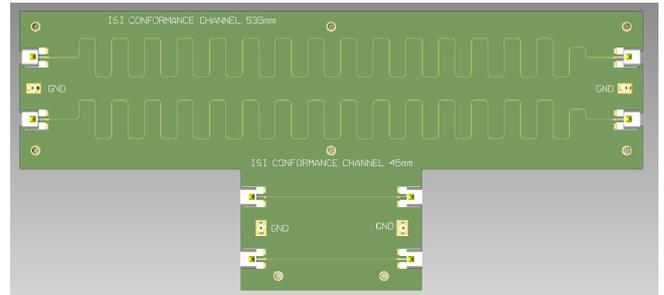
A9-UFS-01 主控端治具板置入到具UFS插槽的主控系统中做相关测试



### UFS Protocol Sniffer



### ISI Conformance Channel



## Technical Specifications (UFS Test Fixtures)

Bus Type	UFS		
Bus Speeds Supported	TBD (Gear 3 reqd, Gear 4 design goal)		
Fixture Bandwidth	5.8 GHz		
Impedance	95-ohm differential / 47.5 -ohm single-ended (tolerance +/- 5%, +/- 8% absolute limit) Insertion and return loss (constrained for MIPI fixtures)		
Replica trace loss and impedance	Matches fixture SMP to point where UFS connector pin contacts UFS device.		
Max Power Consumption Allowed (Device Fixture)	1.8V - 2A Power dist. Impedance (0.1 ohm max) – current consumption to calculate impedance. Remote power and Gnd sense at device is supported to eliminate effects of voltage drop across current sense resistor. 3.3V - 2A – Same current measurement and remote sense as for 1.8V supply.		
De-embedding support	2 & 4 port s-parameter files based on a typical test fixture.		
Agency Approval	EU RoHS Compliant (lead-free)		
	Device Test Fixture	Host Test Fixture	Protocol Sniffer
UFS Connections	UFS Socket	Per JEDEC UFS 1.0 Card spec	
Signal Connections	REF_CLK – SMP DIN_t/c – SMP DOU_t/c – SMP Cal Trace – SMP C/D – 2-pin header	REF_CLK – SMP DIN_t/c – SMP DOU_t/c – SMP Cal Trace – SMP C/D – 2-pin header	REF_CLK – SMP DIN_t/c – SMP DOU_t/c – SMP C/D – 2-pin header
Power Connections	2-pin header and test clip for 1.8V and 3.3V	2-pin header and test clip for 1.8V and 3.3V	
Power LEDs	1.8V and 3.3V	1.8V and 3.3V	
Current Monitoring	Supported. 2-pin headers for 1.8V and 3.3V current measurement.	Low impedance connection to external load for measuring host power supply capability.	
Power Conditioning	Decoupling as required by UFS specification.	N/A	
Environments	Storage	Operating	
Temperature	-40° to +85° C	0° to 55° C	
Relative Humidity	5 to 90% non-condensing	5 to 90% non-condensing	

## Technical Specifications (ISI Channel)

Bus Type	ISI Channel
Trace loss	5.5 dB at 1.5 GHz
Impedance	95-ohm differential / 47.5 -ohm single-ended (tolerance +/- 5%, +/- 8% absolute reject)

### WARRANTY

Astek products are assembled and tested in world-class facilities to ensure superior product performance and reliability. Astek's test fixture products carry a 6-month limited warranty.

### About Astek Corporation

Astek manufactures fixtures, probes, and test equipment for measuring signal quality and signal integrity of high-speed digital interfaces such as PCIe, USB, SAS, SATA, UHS-II, and DDR. Astek also provides storage products for embedded markets including medical, tele-communications and military applications. Astek is a registered ISO 9001:2008 company.

For more information please contact your sales representative or visit the Astek web site at:

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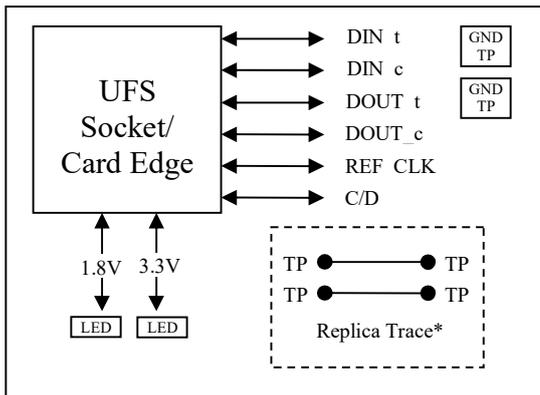
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## Block Diagram

A9-UFS-KIT

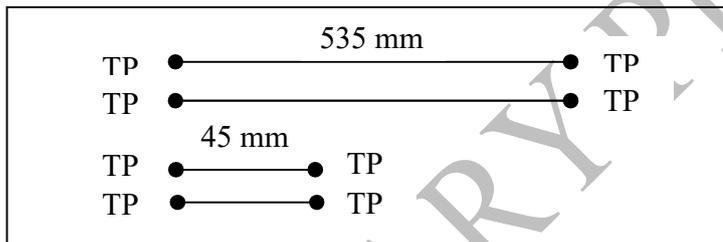
One set of fo

UFS Device and Host Test Fixture

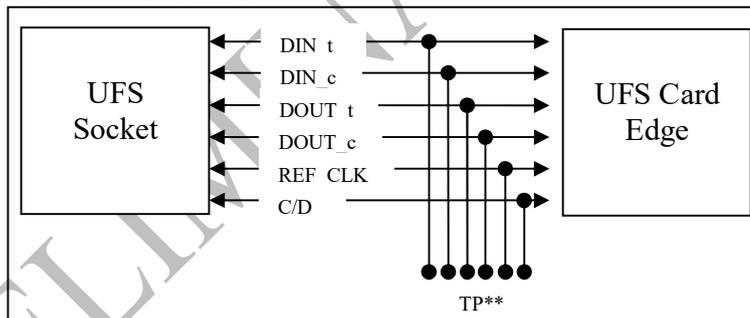


\* The Replica Trace is used to de-embed the test fixture

ISI Conformance Channel



UFS Protocol Sniffer



\*\* There is isolation circuitry for signal probing

## Ordering Information

Model Number	Product Description
A9-UFS-01	UFS Host Test Fixture
A9-UFS-02	UFS Device Test Fixture
A9-UFS-03	UFS Protocol Sniffer
A9-UFS-04	ISI Conformance Channel