2014 USB3.1, *SUPERSPEED* +, Solutions In Amphenol-Taiwan





Prepared by Max Chang

20140210

Amphenol TCS

Your global connection for innovative technologies

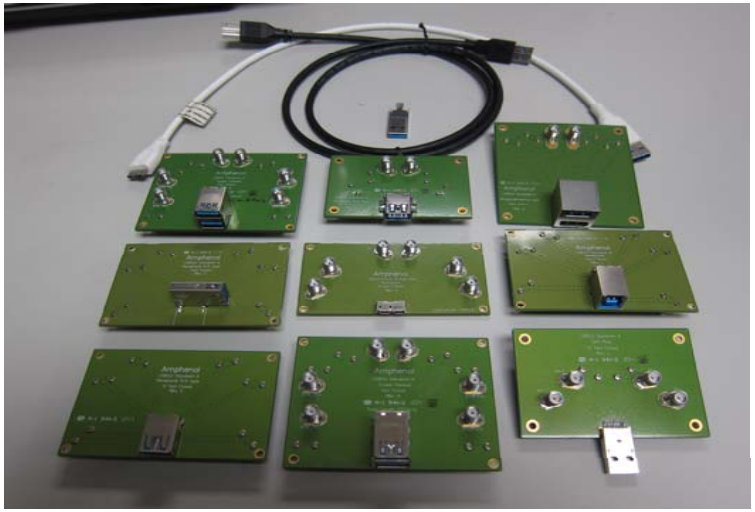
AMTA – USB *SUPERSPEED* + Solutions
USB 3.1 Product Overview

Delivers 10 Gbps USB data rate
* **2x SuperSpeed USB 5Gbps data rate**

Improved efficient data transfer and I/O power efficiency

Works and Backward compatible with existing USB 3.0 and USB2.0

Fast Sync-N-Go



Structures & Materials change can meet 10Gbps request.

Below models pass SI testing.

•DUT Samples:

Plug:
STD-A
STD-A SMT Type (Fixture Rev.C)

Receptacle:
STD-A R/A (Fixture Rev.C)
STD-A V/T -(R/A Fixture Rev.C)
STD-A Stacked (Fixture Rev.A)
STD-A Up Right (Fixture Rev.C)
STD-B (Fixture Rev.C)
Micro-B High Rise (Fixture Rev.B)

Amphenol-Taiwan higher-rate SuperSpeed Action:

➢Terminal design and Housing structure improvement and optimization.

➢Changing housing material and plating treatment to meet the factors of super high speed plastics requirements.

➢**USB3.1 parts in Amphenol Taiwan can pass 10 Gbps and respect to USB 3.1 Industrial Standard.**

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USB 3.1 – Markets Application / Products Outline

NAS



Mobile storage



Automotive /GPS &AV



Smart TV



Sever Storage



Telepresence Device



Tablet PC



Health care



Game Console



Mobile Phone



POS System



Portable media player



DSC

Set Top Boxes

Industrial PC







USB Products

Universal Serial Bus was developed to integrate a variety of existing PC I/O ports into a single interface with hot-plugging, automatic configuration capabilities and increased bandwidth to enhance serial I/O throughput for a wide range of peripherals.

Amphenol Provides the solutions including:

The standard 'A' and reverse Series of receptacles are available in right angle, Upright, Sink, single and stacked dual-port through hole versions. The range of standard Series 'B' connectors, includes both vertical and right angle and cable plug version receptacles

The range of micro USB 'B' connectors includes right angle SMT, shell through hole option, and High-rise(stand off) for customers' variable design.

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AMTA- USB 3.1 Product Overview

SUPERSPEED + A Receptacle Typical Types SI Verification

Features & Benefits

Halogen Free

RoHS Compliance

- **USB3.0 A type Compatible with USB3.0 & 2.0, and both**
- **Existing 5 Gbps USB3.0 and new 10 Gbps USB3.1 specification compliance.**
- **5 metal friction lock grounding fingers and Polarization plastic**
- **Design ensure plug retention.**
- **Rugged Gold-plated leaf contact withstand up to 5000 cycles.**
- **High temperature plastic for SMT process and Halogen Free solution.**
- **Full metal shielding for EMI / RFI / ESD protection.**

Standard A



GSB411131HR

A Up Right



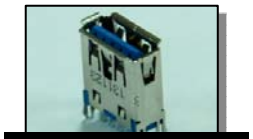
GSB4116311HR

A RVS Sink



GSB411B34EU

A Vertical



GSB412137CHR

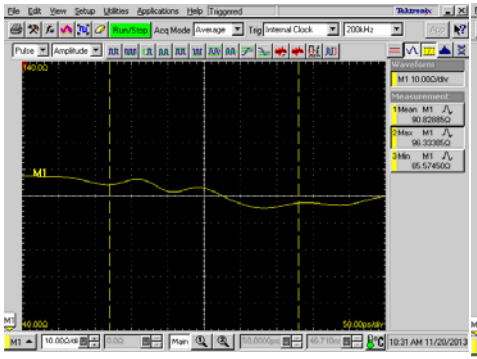
STACK A



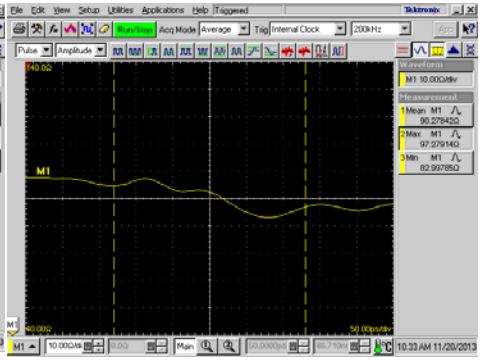
GSB411231HR

Receptacle A

SS TX - Passed

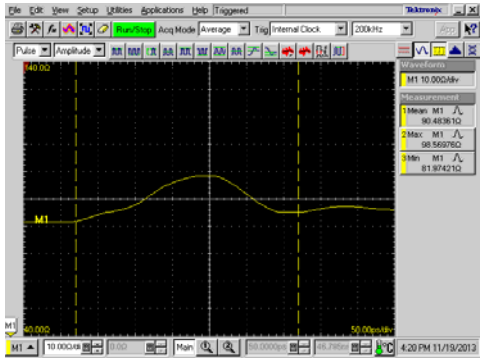


SS RX - Passed

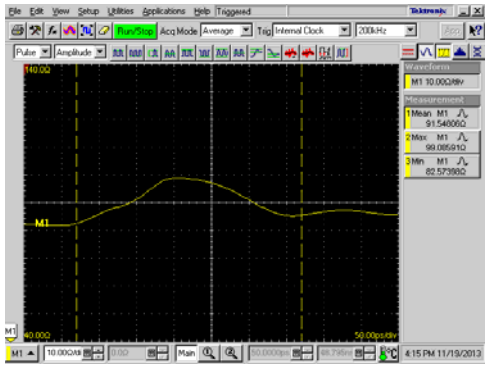


Receptacle A Stack

SS TX - Passed



SS RX - Passed



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AMTA- USB 3.1 Product Overview

USB SUPERSPEED PLUS A plug Typical Types SI Verification

Features & Benefits

Halogen Free

RoHS Compliance

- Fully compliant with USB2.0 & 3.0 specification
- Rugged Gold-plated leaf contact withstand up to 5000 cycles .
- process and Halogen Free solution.
- High temperature plastic for SMT process and Halogen Free solution.
- Full metal shielding for EMI / RFI / ESD protection.
- Application for Board to Board and wire to Board use

Plug A SMT



GSB416445CHR

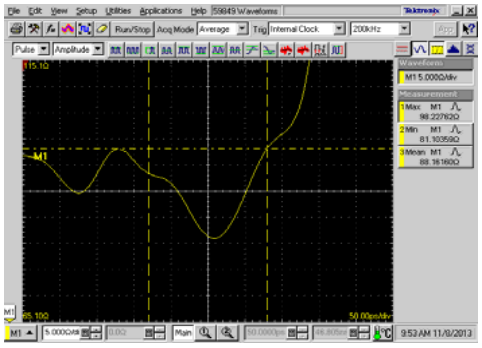
Plug A Cable



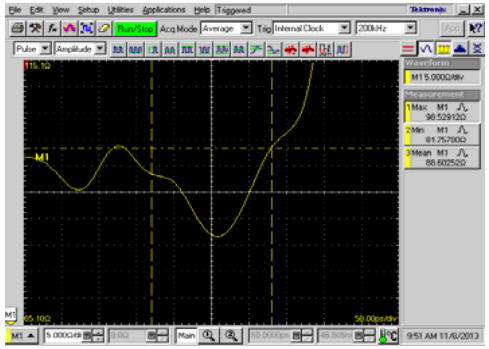
GSB417131HR

A Plug

SS TX - Passed

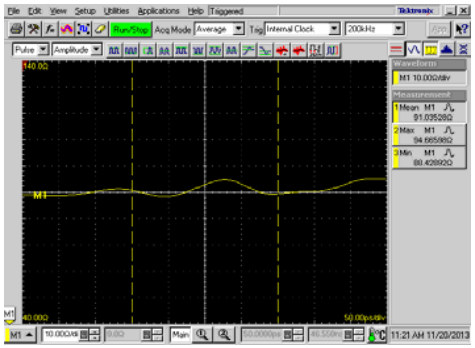


SS RX - Passed

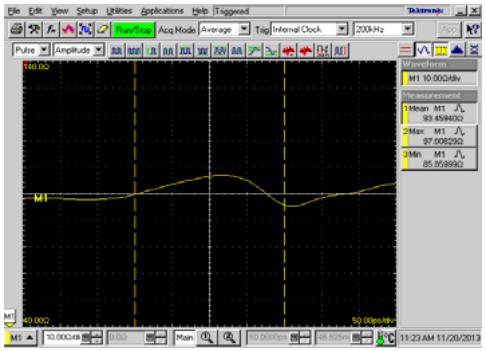


A Plug SMT

SS TX - Passed



SS RX - Passed



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AMTA- USB 3.1 Product Overview

SUPERSPEED + B Receptacle Typical Types SI Verification

Features & Benefits

Halogen Free

RoHS Compliance

- **USB3.0, B type Compatible with USB3.0 & 2.0, and both**
- **Existing 5 Gbps USB3.0 and new 10 Gbps USB3.1 specification compliance.**
- **5 metal friction lock grounding fingers and Polarization plastic**
- **Design ensure plug retention.**
- **Rugged Gold-plated leaf contact withstand up to 5000 cycles.**
- **High temperature plastic for SMT process and Halogen Free solution.**
- **Full metal shielding for EMI / RFI / ESD protection.**

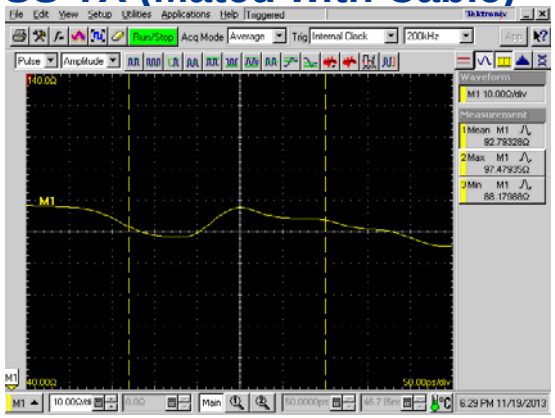
Standard B



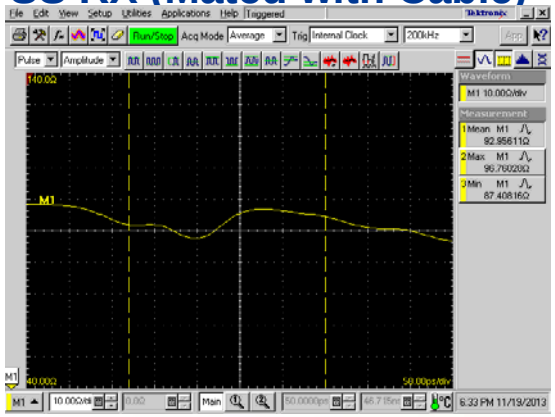
GSB4211311WEU

Receptacle B

SS TX (Mated with Cable) - Passed



SS RX (Mated with Cable) - Passed



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AMTA- USB 3.1 Product Overview

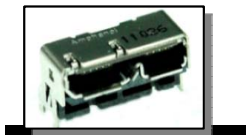
SUPERSPEED + microB Receptacle Typical Types SI Verification

Features & Benefits

Halogen Free

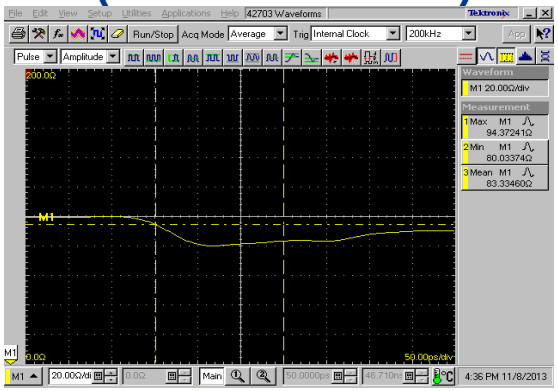
RoHS Compliance

- USB3.1 Micro B type- Up to 10 Gbps data rate with USB3.1 standard compliance. Compatible with USB3.0 & 2.0.
- Stable signal transmission.
- Materials use for lead-free reflow process, Halogen Free , and RoHS.
- 6 Soldered Pads at shell ensure No Damage when: Peel Strength 150N Min applied. Wrenching Strength 25N Max applied .
- Greater real estate space savings.
- Reliable Co-planarity within a 0.08mm.
- Full metal shielding for EMI / RFI / ESD protection.
- Rugged Gold-plated leaf contact withstand up to 10,000 cycles.

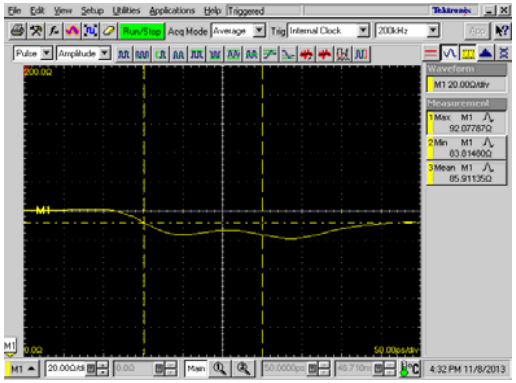
Micro B High Rise	Micro B type Shell SMT / DIP	
		
GSB443T33HR	GSB443133HR	GSB443K33XHR
Plug A SMT	Plug A Cable	Plug B Cable

Receptacle MicroB

SS TX (Mated with Cable) – Passed



SS RX (Mated with Cable) - Passed

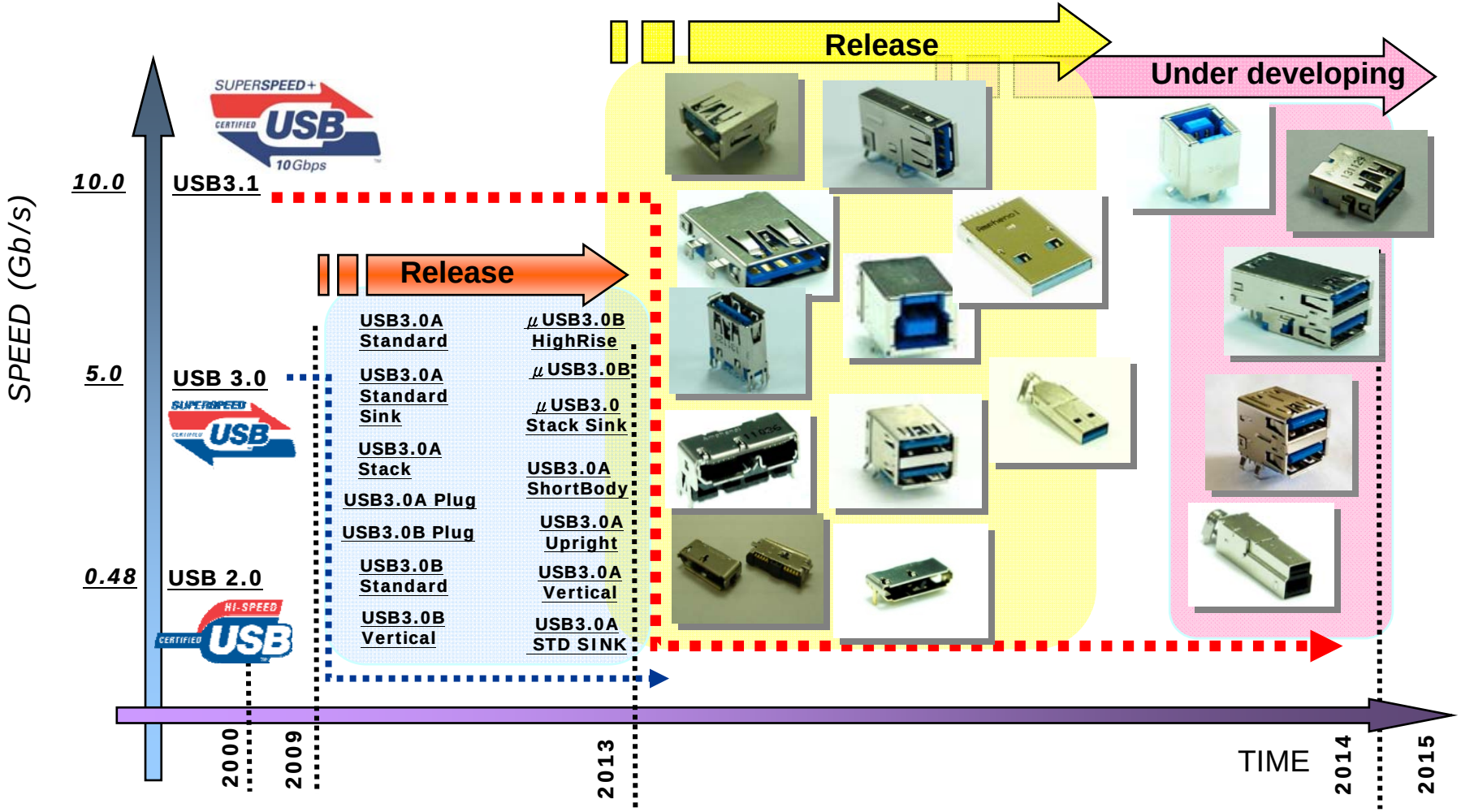


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USB3.1, *SUPERSPEED+*, Road Map
Part no: GSB4X Series

USB Certification milestone , and AMTA 2014 developing Plan.



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- *Подбор аналогов.*
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- *Тестирование поставляемой продукции.*
- *Поставку компонентов, требующих военную и космическую приемку.*
- *Входной контроль качества.*
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