

USB 3.1 Gen 1 – GSB31X & GSB32X Series

COMPLIANT TO USB 3.0 SPECIFICATION; IDEAL FOR CONSUMER & SERVER APPLICATIONS

SuperSpeed USB will deliver 10x the data transfer rate of Hi-Speed USB, as well as improved power efficiency. With 5Gb/s signally rate, SuperSpeed USB 3.1 has a Sync-N-Go technology that minimizes user wait time. No device polling and lower active and idle power requirements are other significant features of these connectors. SuperSpeed USB is backwards compatible with USB 2.0.

- Over 10 times performance increase over USB 2.0
- Backwards compatible with USB 2.0
- High-speed 5Gb/s transmission
- Optimized power efficiency
- Fast Sync-N-Go technology



TARGET MARKETS



FEATURES

- Available in different height options
- Optional terminal DIP length
- High reliable terminal design
- SuperSpeed up to 5Gb/s transmission
- Optimized shell structure design
- Rugged gold-plated leaf contact for reliability needs
- Halogen-free material

BENEFITS

- Customer design flexibility
- Suitable for different PCB thickness
- Superior electrical performance for low contact resistance
- High performance in Signal Integrity (SI)
- Full metal shielding for Electromagnetic Interference (EMI) / Radio-Frequency interference (RFI) / Electromagnetic Discharge (ESD) protection
- Improves contact resistance and prevents corrosion
- Meets environmental, health and safety requirements

TECHNICAL INFORMATION

MATERIAL

- Housing: High Temperature Thermoplastic, complies with UL 94V-0, Optional Colour
- Contact: Copper alloy, Selective gold plated on contact area, 100u" min. matte tin plated on soldering tail, 50u" min. nickel under-plated overall
- Shell: Stainless Steel, Nickel plating overall

MECHANICAL PERFORMANCE

- Insertion Force: 35N (3.57 Kgf) max.
- Withdrawal Force:
 - 10N (1.02 Kgf) min.
 - After test: 8N (0.81Kgf)
- Durability: 5000 mating/unmating cycles
- Vibration: No disturbance greater than 1μs
- Mechanical Shock: No disturbance greater than 1μs

ELECTRICAL PERFORMANCE

- Low Level Contact Resistance:
 - Initial: 30mΩ max. for VBUS and GND contacts
 - 50mΩ max. for all other contacts
 - Δ R: 10mΩ max.
- Insulation: 100mΩ min.
- Voltage Rating: 30 V DC
- Current Rating: 1.8A max.
- Mated Connection Impedance: 90Ω ± 15Ω (85Ω~105Ω)

PACKAGING

- Tape and Reel
- Tray

SPECIFICATION

- Amphenol Product Specification: PS-7440/PS-7411/PS-7425

ENVIRONMENTAL

- Operating Temperature: 0°C to 60°C
- Shipping and Storage Temperature: -20°C to +85°C
- Thermal Shock: No physical damage
- Cyclic Temperature Humidity: No physical damage
- Temperature Life: No physical damage
- Solderability: 95% of immersed area must show no voids, pin holes
- Soldering Heat: No physical damage

TARGET MARKETS/APPLICATIONS



Test Card and Card Extenders
Telecommunication/Datacom
Equipment



Gaming
IP Phone
Set Top Box



High End Computers
HDD
Routers
Servers





Test and Measurement Equipment

PART NUMBERS

| Description | Orientation | Pins | Application | Tail Pin Length (mm) | Part Numbers |
|--------------------|---|------|-------------|-----------------------|------------------|
| Type A, Receptacle | Right Angle | 9 | DIP | 2.17 / 2.4 / 3 | GSB3111XXXHR |
| Type A, Receptacle | Right Angle | 9 | DIP | 2.1 | GSB3111XXX5H4HR |
| Type A, Receptacle | Right Angle, Sink | 9 | DIP | 1.7 / 3 | GSB3114XXFHR |
| Type A, Receptacle | Right Angle, Reverse | 9 | DIP | 2 | GSB311AX1EU |
| Type A, Receptacle | Right Angle, Reverse Sink | 9 | DIP | 1.8 / 3 | GSB311BXXXEU |
| Type A, Receptacle | Right Angle, Stacked | 9 | DIP | 2.4 / 3 | GSB31121XHR |
| Type A, Receptacle | Right Angle, Stacked | 18 | DIP | 2.17 / 2.67 | GSB3112XXX1HR |
| Type A, Receptacle | Right Angle, Stacked | 18 | DIP | 2.4 / 3 | GSB3112XXXHR |
| Type A, Receptacle | Right Angle, Stacked | 18 | DIP | 2.4 / 3 / 3.45 | GSB3112XXX2H5HR |
| Type A, Receptacle | Right Angle, Stacked | 18 | DIP | 2.4 / 3 / 3.45 | GSB3112XXX1H3EU |
| Type A, Receptacle | Right Angle, Stacked Sink, 9.91mm height | 18 | DIP | 2.4 | GSB3115XXFXHR |
| Type A, Receptacle | Right Angle, Stacked Sink, 9.91mm height | 18 | DIP | 2.4 / 3 / 3.3 | GSB3115XXXFHR |
| Type A, Receptacle | Right Angle, Stacked Sink, 11.42mm height | 18 | DIP | 3 / 3.3 | GSB3115XXXT1F3HR |
| Type A, Receptacle | Right Angle, Stacked Sink, 11.42mm height | 18 | DIP | 2.4 / 3 / 3.3 | GSB3115XXXTF3HR |
| Type A, Receptacle | Right Angle, Stacked Sink, 9.91mm height | 18 | DIP | 2.4 / 3 / 3.3 | GSB3115XXX1HR |
| Type A, Receptacle | Right Angle, Stacked Sink, 9.37mm height | 18 | DIP | 1.8 / 2.1 / 2.4 / 2.8 | GSB3115XXX5HR |
| Type A, Receptacle | Right Angle, Stacked Sink, 9.91mm height | 18 | DIP | 2.4 / 3 / 3.3 | GSB3115XXX6HR |
| Type A, Receptacle | Right Angle, Stacked Sink, 9.91mm height | 18 | DIP | 2.4 | GSB3115XXX9HR |
| Type A, Receptacle | Upright | 9 | DIP | 1.9 | GSB3116X75KAHR |
| Type A, Receptacle | Upright | 9 | DIP | 1.9 | GSB3116X75KHR |
| Type A, Receptacle | Upright | 9 | DIP | 1.9 / 2.4 / 4.4 | GSB31163XXHR |
| Type A, Receptacle | Upright | 9 | DIP | 2.4 / 3.5 | GSB31D1XXX1HHR |
| Type A, Receptacle | Upright | 9 | DIP | 3.8 | GSB31D1XXX1H2HR |
| Type A, Receptacle | Vertical | 9 | DIP | 2.3 / 3 / 3.2 | GSB3121XXXCHR |
| Type A, Receptacle | Right Angle, High Rise, 12mm Height | 9 | DIP | 2.4 | GSB311JXXX2EU |
| Type A, Receptacle | Right Angle, High Rise, 12mm Height | 9 | DIP | 2.4 | GSB311J310H1HR |
| Type A, Receptacle | Right Angle, Spring Contact | 9 | DIP | 4.2 | GSB311JXXX2H4EU |
| Type A, Receptacle | 9.73mm Height | 9 | DIP | 2.5 | GSB311JXX0H3HR |
| Type A, Plug | Right Angle, Offset 0.95mm | 9 | SMT | - | GSB3164X1CEU |
| Type A, Plug | Right Angle, Offset 0.3mm | 9 | SMT | - | GSB3164X5XHR |
| Type B, Receptacle | Right Angle | 9 | DIP | 2.8 | GSB3211XXXWEU |

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