

1.32 Gbit/s Serial Link Transmitter and Receiver

The GigaSTaR (**G**igabit/s **S**erial **T**ransmitter and **R**eceiver) is a universal high-speed point-to-point communication link. It consists of two devices, the Transmitter INGT165B and the Receiver INGR165B.

The INGT165B Transmitter converts parallel data up to 36-bit to a serial bit-stream. The differential CML (Current Mode Logic) outputs can directly drive Shielded-Twisted-Pair (STP) cables for distances up to 50 meters and can directly interface to inputs of fiber optic modules to span longer distances.

The INGR165B Receiver converts the serial bit-stream to the original parallel data format, fully transparent and without protocol overhead.

Link-synchronization, bit-stream coding/decoding, clock-/frame-recovery and parity-check are managed by internal high-speed resources.

GigaSTaR links can be operated in parallel, scaling the bandwidth in multiples of 1.188 Gbit/s (payload data rate).

GigaSTAR[®]
INGT165B
INGR165B



12x12 mm, 196 PBGA packages

FEATURES

- 36-bit 33 MHz parallel data interface (3.3V CMOS)
- Variable payload data transfer rate up to 1.188 Gbit/s
- Internal RF clock-generation and clock-recovery (PLL)
- Integrated DC-balanced coding for AC coupling
- Integrated cable equalizer (INGR165B)
- Built in parity check
- Low latency of 40 ns per device (typ.)
- Differential, low swing CML-signals for the serial link
- High signal robustness, EMI and noise immunity
- Direct interfacing to 50/100 Ohm cables and fiber optic modules
- Single +3.3V DC supply
- Low power dissipation of 1 W per device (typ.)
- Ambient operating temperature – 40°C to +85° C

APPLICATIONS

- High-speed scanning / printing (photo, exposure- and security systems)
- Mass storage connections
- High-speed and multi-channel imaging
- Telecommunication switches
- High-speed sensors / actuators
- Industrial Control
- High-resolution panel links
- Data broadcast (Video Server)

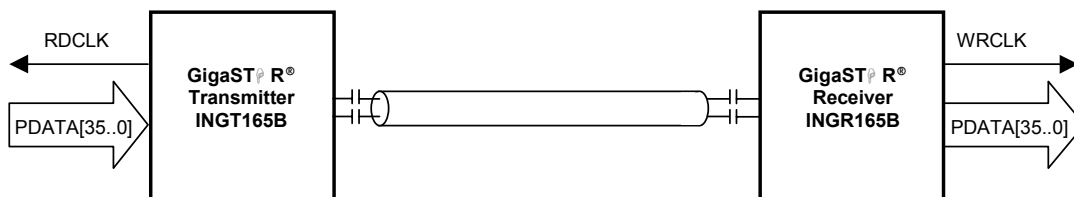


Figure 1: GigaSTaR Link

1.1 ORDERING CODE AND PRODUCTION STATUS INFORMATION

Ordering Code	Delivery package, minimum packing quantity	Production Status
INGT165B	Tray (in sealed dry pack), MPQ = 189 units	Released to full production
INGR165B	Tray (in sealed dry pack), MPQ = 189 units	Released to full production
INGSK	Sample Kit (in sealed dry pack), containing 2 INGT165B and 2 INGR165B devices	Released to full production

Table 17: Product Availability

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