

# 8b/10b High-speed Serial Interface IP (ION 8b10b)

High-speed serial interface (8 Gbps maximum) achieved using a lightweight protocol

## Overview

ION 8b10b is a high-speed serial interface targeting applications with inter-chip and inter-board connections.

Lightweight link layer protocol provides one-to-one data movement via one or more high-speed serial lanes.

## Features

- 8-Gbps maximum transmission rate per lane (however, depends on the FPGA used)
- Supports up to 16 lanes
- Supports CRC function
- Supports Scrambler function
- Supports asymmetrical link

## Specifications

Function	Description
Maximum Number of Lanes	16
Transfer Rate (Effective Transfer Rate)	8Gbps (6.4Gbps)
Encoding	8B/10B
Data Width Per Lane	16 bit, 32 bit

## Supported Devices

- Cyclone V
- Arria 10

(\* Please contact Macnica sales department for information about other devices.)

## Deliverables

- Encrypted RTL (Verilog HDL)
- Reference design
- Simulation environment (For ModelSim)
- User's manual, Reference manual