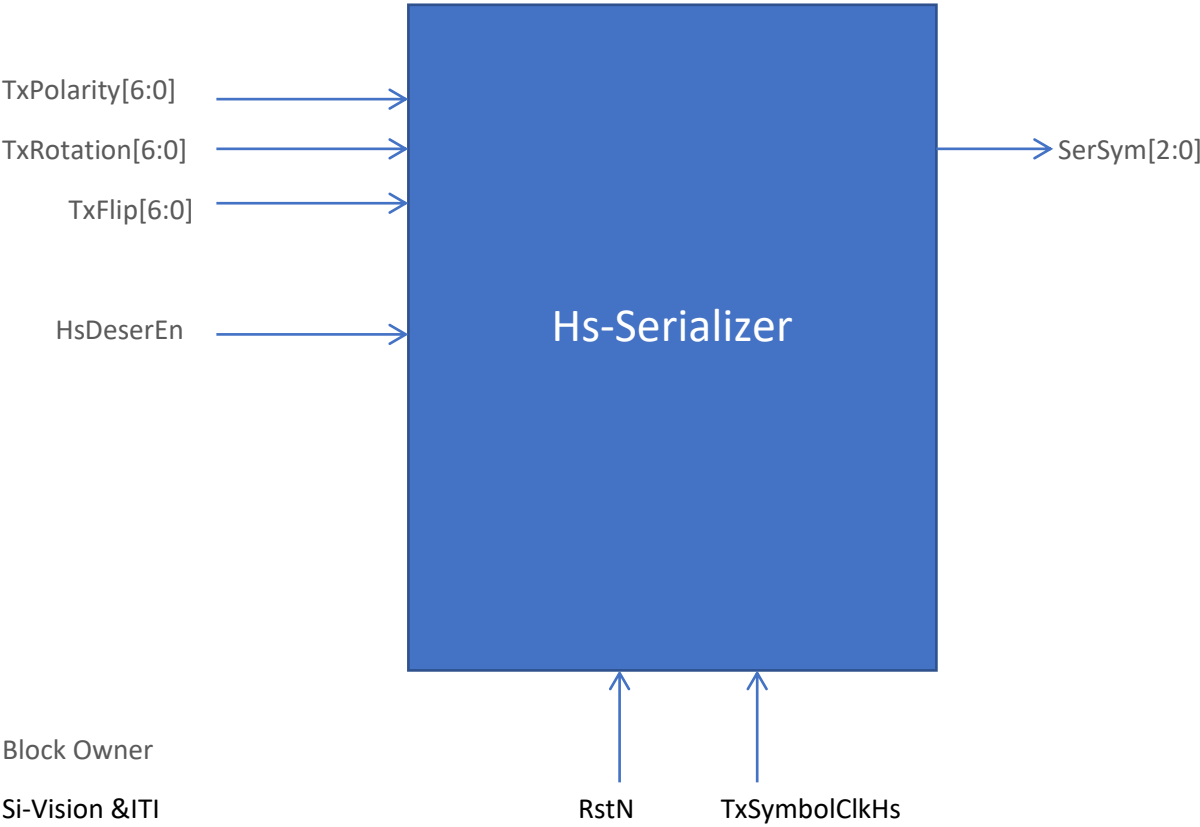


Hs-Serializer

Induction Training

Version 1.0



Block Owner

Si-Vision &ITI

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2 Overview

3 Operation and Description

3.1 Digital Interface

3.1.1 Parameters Names

Parameter Name	Default	Description
None		

3.1.2 Ports Names

Port Name	Port Width	Port Type	Description
TxPolarity	7	Input	7-bit parallel input data representing the polarity component
TxRotation	7	Input	7-bit parallel input data representing the rotation component
TxFlip	7	Input	7-bit parallel input data representing the flip component of the
HsDeserEn	1	Input	Enable signal
RstN	1	Input	Negative reset
TxSymbolClkHs	1	Input	Clock
SerSym	3	output	3-bit serialized symbol output, formed by concatenating the TxRotation, and TxPolarity at the current counter

3.2 Functional Description

The `HS_Serializer` module is a high-speed serializer that converts three sets of 7-bit parallel data inputs—`TxPolarity`, `TxRotation`, and `TxFlip`—into a stream of 3-bit symbols (`SerSym`). The module operates on the **negative edge** of the `TxSymbolClkHs` clock and is controlled by the `HsSerializerEn` enable signal.

4.1 Timing diagram

