Soontech Annals

LC02: Hopperspeed Hex to Binary

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Tags: logic-and-computation, converter

Features

- Hopperspeed throughput
- Stateless, uses quasi-based logic
- 14gt Latency

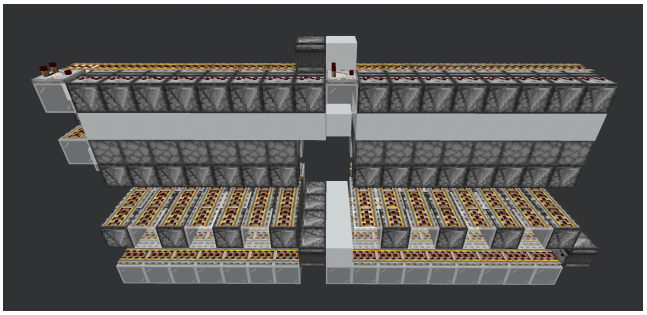

Figure 1: Hopperspeed Hex to Binary

Applications

- Converting hex coded signals to binary

General Description

The LC02 Hopperspeed Hex to Binary takes a hex coded signal and outputs a binary coded signal. It is hopperspeed, meaning it can be used to convert a hex coded signal to a binary coded signal every 8 game ticks.

Device Specifications

Table 1: Inputs

Name	Range	Description
Signal input	1-15	Pulsed analog signal.

Table 2: Outputs

Name	Range	Description
Output bit0	Pulse	First bit of converted signal
Output bit1	Pulse	Second bit of converted signal
Output bit2	Pulse	Third bit of converted signal
Output bit3	Pulse	Fourth bit of converted signal

Table 3: Device Specifications

Parameter	Min.	Typ.	Max.	Unit	Conditions
Throughput	8	-	-	gt	Normal Usage
Latency	14	-	-	gt	From input to output
MC Version	1.13	1.17.1	-	MCV	Latest version at time of writing: 1.19.3
Dimensions		19 x 9 x 4		Blocks	

Testing Data

Table 4: Executed Tests

Test	Result
Conversion test	Device was able to convert signals successfully at 10gt throughput.

Download Information

Table 5: Download Information

Identifier	MC	File	Description
LC02	1.17.1	LC02_hopperspeed_hex_to_bin.litematic	Schematic of device.