DC05: 4-9 Bit Binary Decoder With Top Output

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Features

- Can be expanded to up to 9 bits of input.
- Outputs can be taken from the top. (Observe rail state for output)
- 11 gt latency and 8 gt throughput.

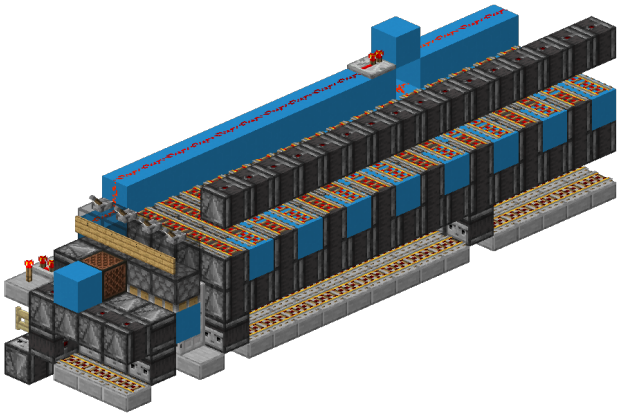

Figure 1: 4 Bit Binary Decoder With Top Output

Applications

- Decoding binary signals for use in encoded systems

General Description

The DC05 decoder takes 4 bits and outputs a pulse at one of 16 slices corresponding to the code. The device can be expanded to 9 bits of input. The output can be taken from the top of the device.

Device Specifications

Table 1: Inputs

Name	Range	Description
Bits 1-4	0-1	Binary input
Clock	Pulse	Clock signal of device.

Table 2: Outputs

Name	Range	Description
Mapped signal	Pulse	Outputs to one of 16 slices corresponding to input code.

Table 3: Device Specifications

Parameter	Min.	Typ.	Max.	Unit	Conditions
Throughput	8	-	-	gt	Normal Usage
Latency	11	11	11	gt	From input to output observer activation.
MC Version	1.13	1.19.3	-	MCV	Latest version at time of writing: 1.21.4
Dimensions		5 x 6 x 20		Blocks	

Testing Data

Table 4: Executed Tests

Test	Result
Throughput test	Device was able to function with 8gt clocked input.

Download Information

Table 5: Download Information

Identifier	MC	File	Description
DC05	1.19.3	DC05_4-9_Bit_Binary_Decoder_With_Top_Output.litematic	Schematic of device.