

# TP01: Decimal Encoded Variable Instant Dropperline

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## Features

- Constant time insertion
- 10gt throughput
- Fired twice for overflow handling

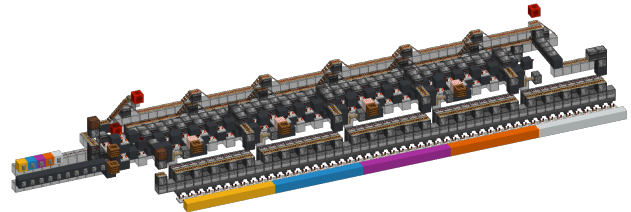


Figure 1: Decimal Encoded Variable Instant Dropperline

## Applications

- Item transportation for halls.

## General Description

Takes two comparator inputs (one decimal, one half-decimal) and deposits items in the decoded slice in constant time. The dropperline is fired twice per insertion to clear any potential overflow items. 10gt-able.

## Device Specifications

**Table 1: Inputs**

Name	Range	Description
HDigit 1	1-5	Half-digit indicates section
Digit 2	1-10	Digit indicates slice.
Item input	Item	Item to be moved.
Clock signal	Pulse	Executes order.

**Table 2: Outputs**

Name	Range	Description
Outputs	Item	Outputs item to one of fifty slices corresponding to code.
Overflow Output	Item	Outputs overflow items at end.

**Table 3: Device Specifications**

Parameter	Min.	Typ.	Max.	Unit	Conditions
Throughput	10	-	-	gt	Normal Usage
MC Version	1.16	1.17.1	-	MCV	Latest version at time of writing: 1.19.3
Dimensions	67 x 11 x 10			Blocks	

## Testing Data

Table 4: Executed Tests

Test	Result
Decoding test	Device was able to decode with 10gt clocked input.

## Download Information

Table 5: Download Information

Identifier	MC	File	Description
TP01	1.17.1	<a href="#">TP01_Decimal_Encoded_Variable_Instant_Dropperline.litematic</a>	Schematic of device.