

Moonstone Hardware I2C 3.0 PMBUS Test Report Results

R4028-M1015-01
Version: 1.0
May 7, 2024



CELESTICA CONFIDENTIAL PROPRIETARY INFORMATION

This document contains confidential information that is proprietary to Celestica or confidential information which Celestica has a legal duty to protect from disclosure. The information contained in this document may not be disclosed without the express written permission of Celestica.

Contents

1	I2C Results	3
1.1	Test1 Waveform characteristics	3
1.2	Test2 Waveform characteristics	4
1.3	Test3 Waveform characteristics	5

1 I2C Results


1.1 Test1 Waveform characteristics

Parameter	Specification	Measured Results	Status
Frequency	<100Khz	98.9967E+3Hz	Pass
Clock High	>4 μ s	4.9526E-6s	Pass
Clock Low	>4 μ s	5.1487E-6s	Pass
$V_{Clockmax}$	<3.57V	3.4400V	Pass
$V_{Clockmin}$	>-.5V	0.0E+0V	Pass
$V_{Clockih}$	2.31-3.6V	3.2800V	Pass
$V_{Clockil}$	-.5-.99V	80.0000E-3V	Pass
$V_{Datamax}$	<3.57V	3.4400V	Pass
$V_{Datamin}$	>-.5V	-160.0000E-3V	Pass
V_{Dataih}	2.31-3.6V	3.2800V	Pass
V_{Datail}	-.5-.99V	80.0000E-3V	Pass
Clock Rise Time	<1000ns	349.8730E-9s	Pass
Clock Fall Time	<300ns	82.0312E-9s	Pass
Data Rise Time	<1000ns	306.5365E-9s	Pass
Data Fall Time	<300ns	79.9902E-9s	Pass
Data Setup Time	>250ns	460.0415E-9s	Pass
Data Hold time	> 0ns	4.7482E-6s	Pass
Start Condition Hold Time	> 4 μ s	4.7018E-6s	Pass
Stop Condition Setup Time	> 4 μ s	5.4740E-6s	Pass

Test1/Test1.png

Figure 1: Waveform

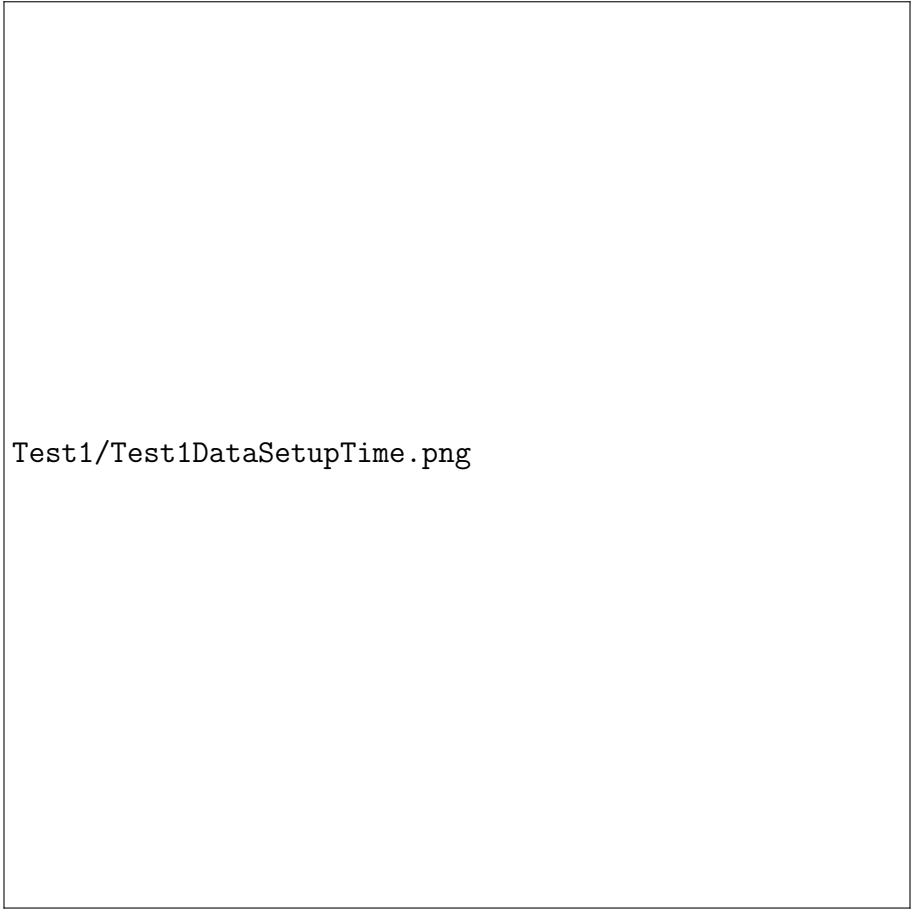
1.2 Test2 Waveform characteristics



Test1/Test1DataHoldTime.png

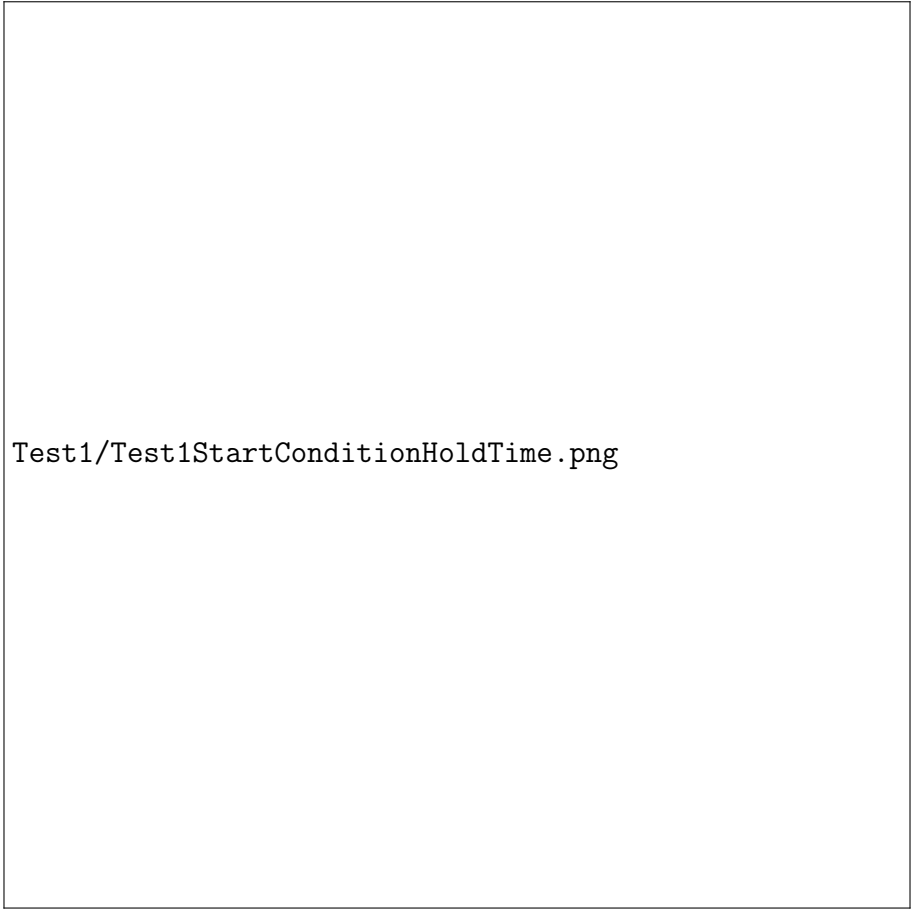
Figure 2: Data Hold Time

1.3 Test3 Waveform characteristics



Test1/Test1DataSetupTime.png

Figure 3: Data Setup Time



Test1/Test1StartConditionHoldTime.png

Figure 4: Start Condition

Parameter	Specification	Measured Results	Status
Frequency	<100Khz	98.9967E+3Hz	Pass
Clock High	>4 μ s	4.9526E-6s	Pass
Clock Low	>4 μ s	5.1487E-6s	Pass
$V_{Clockmax}$	<3.57V	3.4400V	Pass
$V_{Clockmin}$	>-.5V	0.0E+0V	Pass
$V_{Clockih}$	2.31-3.6V	3.2800V	Pass
$V_{Clockil}$	-.5-.99V	80.0000E-3V	Pass
$V_{Datamax}$	<3.57V	3.4400V	Pass
$V_{Datamin}$	>-.5V	-160.0000E-3V	Pass
V_{Dataih}	2.31-3.6V	3.2800V	Pass
V_{Datail}	-.5-.99V	80.0000E-3V	Pass
Clock Rise Time	<1000ns	349.8730E-9s	Pass
Clock Fall Time	<300ns	82.0312E-9s	Pass
Data Rise Time	<1000ns	306.5365E-9s	Pass
Data Fall Time	<300ns	79.9902E-9s	Pass
Data Setup Time	>250ns	460.0415E-9s	Pass
Data Hold time	> 0ns	4.7482E-6s	Pass
Start Condition Hold Time	> 4 μ s	4.7018E-6s	Pass
Stop Condition Setup Time	> 4 μ s	5.4740E-6s	Pass

Parameter	Specification	Measured Results	Status
Frequency	<100Khz	98.9967E+3Hz	Pass
Clock High	>4 μ s	4.9526E-6s	Pass
Clock Low	>4 μ s	5.1487E-6s	Pass
$V_{Clockmax}$	<3.57V	3.4400V	Pass
$V_{Clockmin}$	>-.5V	0.0E+0V	Pass
$V_{Clockih}$	2.31-3.6V	3.2800V	Pass
$V_{Clockil}$	-.5-.99V	80.0000E-3V	Pass
$V_{Datamax}$	<3.57V	3.4400V	Pass
$V_{Datamin}$	>-.5V	-160.0000E-3V	Pass
V_{Dataih}	2.31-3.6V	3.2800V	Pass
V_{Datail}	-.5-.99V	80.0000E-3V	Pass
Clock Rise Time	<1000ns	349.8730E-9s	Pass
Clock Fall Time	<300ns	82.0312E-9s	Pass
Data Rise Time	<1000ns	306.5365E-9s	Pass
Data Fall Time	<300ns	79.9902E-9s	Pass
Data Setup Time	>250ns	460.0415E-9s	Pass
Data Hold time	> 0ns	4.7482E-6s	Pass
Start Condition Hold Time	> 4 μ s	4.7018E-6s	Pass
Stop Condition Setup Time	> 4 μ s	5.4740E-6s	Pass

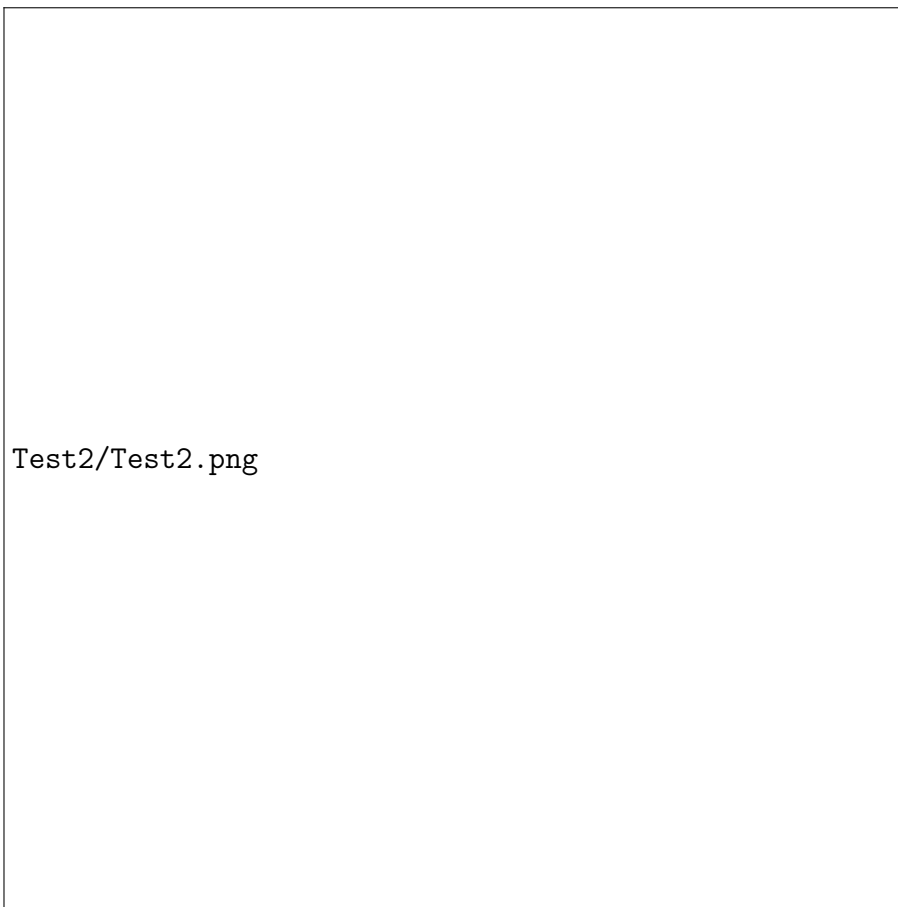
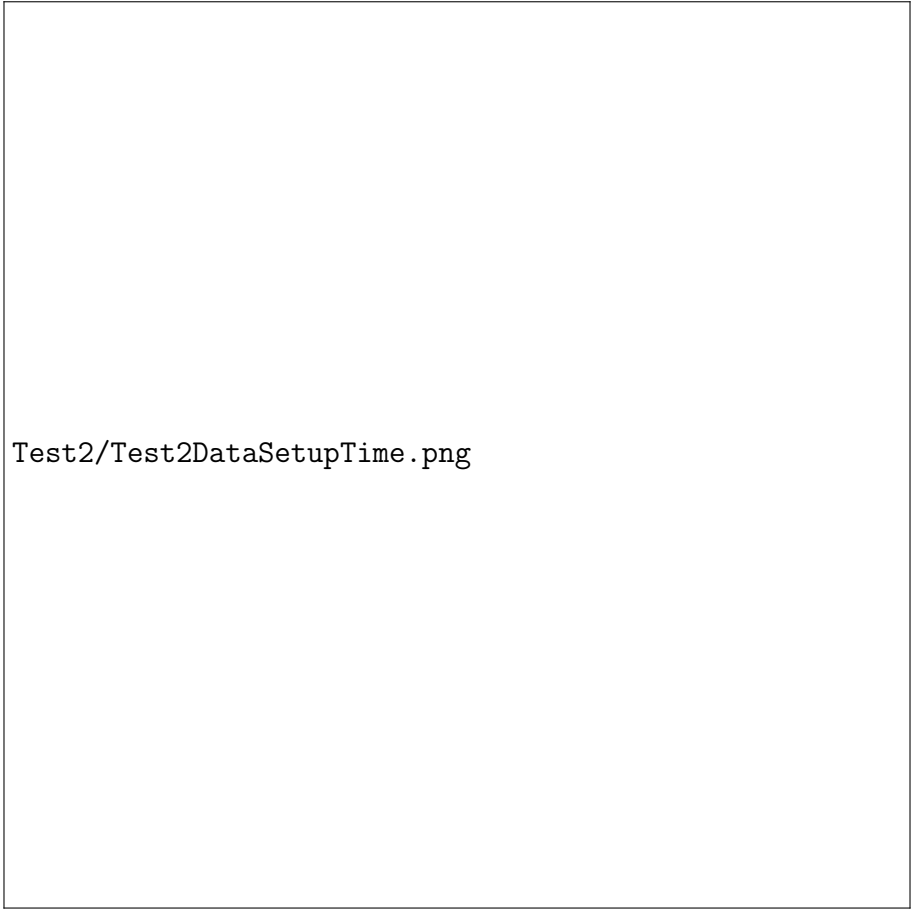


Figure 5: Waveform

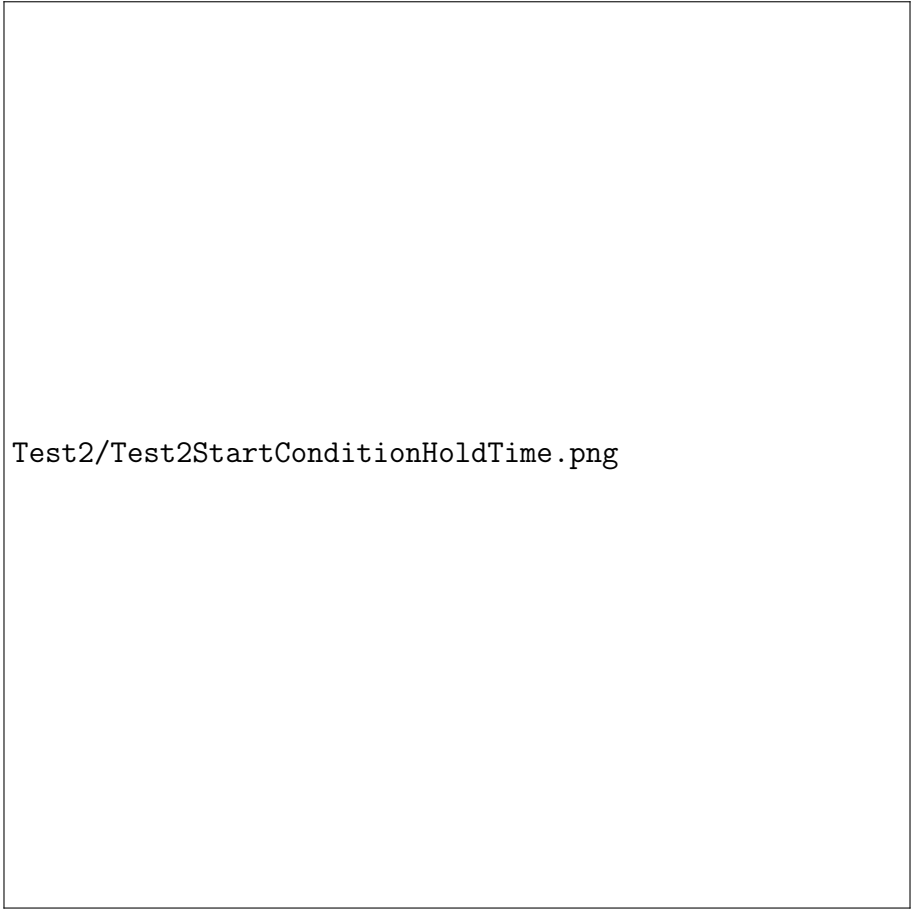


Figure 6: Data Hold Time



Test2/Test2DataSetupTime.png

Figure 7: Data Setup Time



Test2/Test2StartConditionHoldTime.png

Figure 8: Start Condition

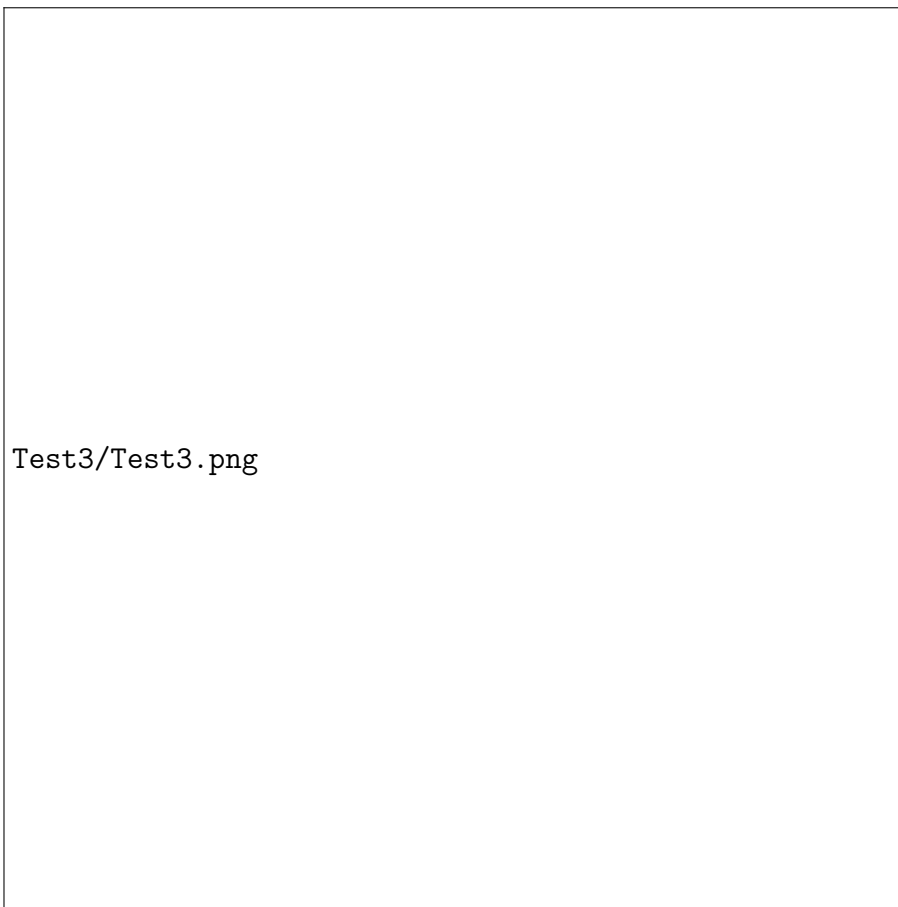


Figure 9: Waveform



Figure 10: Data Hold Time

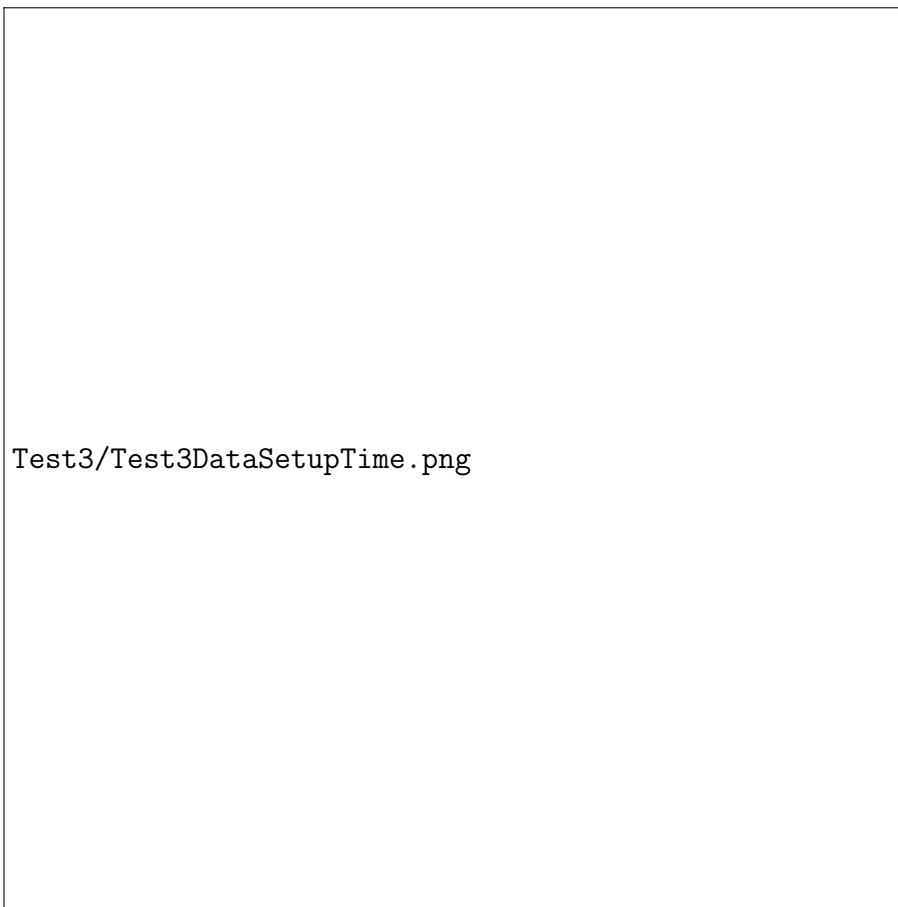


Figure 11: Data Setup Time



Figure 12: Start Condition