

AXILite I2C Master v1.0

IP User Guide (Alpha Release)



January 26, 2023

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IP Summary

Introduction

I2C (Inter-Integrated Circuit) is a communication protocol that allows multiple devices to communicate with a single master device using only two wires: a clock wire (SCL) and a data wire (SDA). The master device controls the clock and initiates communication with slave devices on the bus. Each slave device has a unique address, allowing the master to communicate with specific slaves. I2C is commonly used in embedded systems, such as microcontrollers, to communicate with sensors, displays, and other peripherals. This I2C IP acts as a Master to which multiple slave devices can be connected via the AXILite interface making it compatible with other AXI based systems. A macro block diagram for the top level of this AXILite I2C Master is shown in Figure 1.

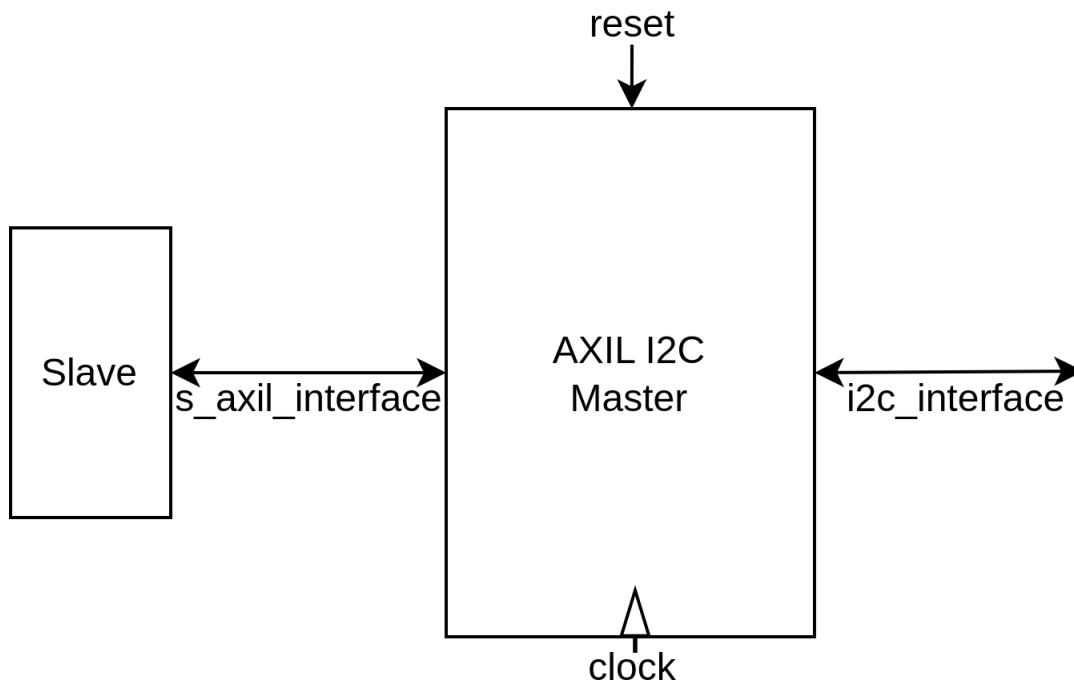


Figure 1. AXILite I2C Master Block Diagram

Revision History

Date	Version	Revisions
January 26, 2023	0.01	Initial version AXILite I2C Master User Guide Document