

## T-EMU: GPIO Bus Model Manual



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## Record of Changes

Author	Description	Rev	Date
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## Table of Contents

1. Introduction .....	2
2. Configuration .....	2
3. Attributes .....	2
3.1. Properties .....	2
3.2. Interfaces .....	3
3.3. Ports .....	3
4. Limitations .....	3

# 1. Introduction

The GPIO bus model is one of the standard bus models available in T-EMU. The bus model maintains the values of 64 GPIO pins, and a notification list where pin updates can be forwarded to an arbitrary number of models when pin values have changed.

This does place a limitation, in that a model must know which pin it is connected to, which may not be ideal. The recommended approach is to ensure that the model maintains its own user configurable mask for filtering out the relevant bits.

# 2. Configuration

The GpioBus model can be configured by connecting GPIO clients to the Clients property. No other configuration capabilities are provided.

# 3. Attributes

## 3.1. Properties

Name	Type	Description
Bits	uint64_t	
Clients	irefarray	
object.timeSource	object	Time source object (a cpu or machine object)



## 3.2. Interfaces

Name	Type	Description
GpioBusIface	GpioBusIface	

## 3.3. Ports

Prop	Iface	Description
-	-	-

## 4. Limitations

The primary limitation of the GPIO bus model is that pin updates using the GpioBusIface will be distributed to all GpioClients that have been connected to the GPIO bus. If requested the bus model can be augmented with direct distribution properties for forwarding individual pin changes to predetermined objects. This has not been implemented yet though, contact us if you need support for this.