TERMA

TEMU
GRLIB GRGPIO Device Model Manual

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Version 1.0, 2017-01-06

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Table 1. Record of Changes

Rev	Date	Author	Note
1.0	2016-01-06	MH	Initial version.

1. Introduction

The GRGPIO device is part of the GRLIB device library from Gaisler. The GrGPIO model simulates a 16 pin GPIO device by providing input and output via the SignalIface.

2. Usage

The device can be connected to and from via the signal interface it implements. It implements 16 usable signals (signal 0 through 15). Signal 0 cannot raise interrupts.

You can connect the signal interface as follows:

Listing 1. Connecting via Command Line

```
# Connect GPIO device signal 0 to device model
connect a=gpio.outSignals[0] b=mydevice:SignalIface

# Connect a device signal interface ref to GPIO device
connect a=mydevice.signal b=gpio:SignalIface[1]
```

Listing 2. Connecting via API

```
// Connect GPIO device signal 0 to device model
temu_connect(gpio, "outSignals[0]", mydevice, "SignalIface");

// Connect a device signal interface ref to GPIO device
temu_connect(mydevice, "signal", gpio, "SignalIface[1]");
```

3. Attributes

3.1. Properties

Name	Type	Description
data	uint32_t	
direction	uint32_t	
edge	uint32_t	
irqCtrl	iref / <unknown>	

Name	Type	Description
mask	uint32_t	
object.timeSource	object	Time source object (a cpu or machine object)
outSignals	[32 x iref / SignalIface]	
output	uint32_t	
pnp.bar	uint32_t	
pnp.config	uint32_t	
polarity	uint32_t	

3.2. Interfaces

Name	Type	Description
ApbIface	ApbIface	
DeviceIface	DeviceIface	
MemAccessIface	MemAccessIface	
ResetIface	ResetIface	
SignalIface	SignalIface	Incomming signals

3.3. Ports

Prop	Iface	Description
-	-	-

4. Limitations

- Only the UT700 based configuration is supported at the moment. That means that the bypass and capabilities registers are missing. Further the IRQ map registers are not available.