

TEMU

GRLIB APBUART Device Model Manual

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Table 1. Record of Changes

| Rev | Date | Author | Note |
|-----|------------|--------|------------------|
| 1.2 | 2017-01-06 | MH | Cleanup. |
| 1.1 | 2016-05-12 | MH | Auto gen tables. |
| 1.0 | 2015-03-01 | MH | Initial version. |

1. Introduction

The APBUART is part of the GRLIB device library from Gaisler. The ApbUart model supports both infinite speed UARTs (where bytes are sent when the register is written) and the emulation of FIFOs and send times based on the scaler.

2. Attributes

2.1. Properties

| Name | Type | Description |
|--------------------------|------------------|--|
| config.clockDivider | uint32_t | |
| config.fifoSize | uint8_t | |
| config.infiniteUartSpeed | uint8_t | |
| config.interrupt | uint8_t | |
| control | uint32_t | |
| data | uint32_t | |
| fifo_debug | uint32_t | |
| irqCtrl | iref / <unknown> | |
| object.timeSource | object | Time source object (a cpu or machine object) |
| pnp.bar | uint32_t | |
| pnp.config | uint32_t | |
| rxFifo.data | [32 x uint8_t] | |
| rxFifo.size | uint8_t | |
| rxFifo.start | uint8_t | |
| rxFifo.usage | uint8_t | |
| scaler | uint32_t | |
| status | uint32_t | |
| tx | iref / <unknown> | |

| Name | Type | Description |
|--------------|----------------|-------------|
| txFifo.data | [32 x uint8_t] | |
| txFifo.size | uint8_t | |
| txFifo.start | uint8_t | |
| txFifo.usage | uint8_t | |
| txShift | uint8_t | |

2.2. Interfaces

| Name | Type | Description |
|----------------|----------------|-------------|
| ApbIface | ApbIface | |
| DeviceIface | DeviceIface | |
| MemAccessIface | MemAccessIface | |
| ResetIface | ResetIface | |
| UartIface | SerialIface | |

2.3. Ports

| Prop | Iface | Description |
|------|-----------|-------------|
| tx | UartIface | serial port |

3. Limitations

- Loop back mode is not presently supported.
- Control flow (cts) is not supported