

OpenCPI

IQstream to TimeIQ Component Data Sheet

OpenCPI Release: v2.4.6

Summary - IQstream to TimeIQ

Name	iqstream_to_timeiq
Worker Type	Application
OpenCPI Release	v2.4.6
Last Update	4/2019
Component Library	ocpi.assets.misc_comps
Workers	iqstream_to_timeiq.hdl
Tested Platforms	alst4, e3xx, isim, matchstiq_z1, ml605, modelsim, xsim, zed

Functionality

The IQstream to TimeIQ component adapts the iqstream protocol to the TimeStamped_IQ protocol.

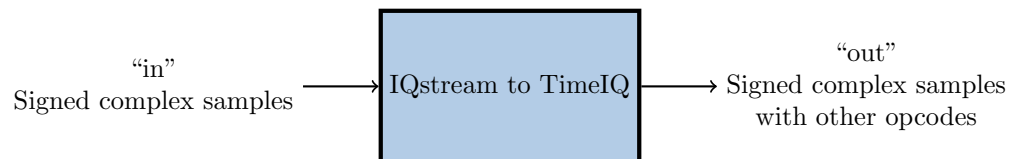
Worker Implementation Details

iqstream_to_timeiq.hdl

The TimeStamped_IQ protocol consists of multiple opcodes which include complex IQ samples, and the iqstream protocol consists only of complex IQ samples. The iqstream_to_timeiq worker forwards data from the input port to the output port and applies the samples opcode to it.

Block Diagrams

Top level



Source Dependencies

iqstream_to_timeiq.hdl

- bsp_picoflexor/components/iqstream_to_timeiq.hdl/iqstream_to_timeiq.vhd

Component Spec Properties

There are no component spec properties for this component

Worker Properties

There are no worker implementation-specific properties for this component

Component Ports

Name	Producer	Protocol	Optional	Advanced	Usage
in	false	iqstream_protocol	false	-	Signed complex samples
out	true	TimeStamped_IQ-prot	false	-	Signed complex samples plus other operations

Worker Interfaces

iqstream_to_timeiq.hdl

Type	Name	DataWidth	Advanced	Usage
StreamInterface	in	32	-	Signed complex samples
StreamInterface	out	32	-	Signed complex samples plus other operations

Control Timing and Signals

The `iqstream_to_timeiqworker` uses the clock from the Control Plane and standard Control Plane signals.

Worker Configuration Parameters

iqstream_to_timeiq.hdl

Performance and Resource Utilization

Test and Verification

The input file contains 5824 bytes of arbitrary data. It is the same input file used for the TimeIQ_to_IQstream unit test. The expected output waveform is identical to the input file.