

OpenCPI XML Attributes and Elements

Attribute Name	Data Type	Elements that can be top level in a file (bold), and any other files the element may appear in.						Elements not at the top level of a file					Elements for Workers Only			Elements for OAS/OHAD		
FileType and Element (bold is most common)		OPS, OCS, OWD Protocol	OPD Properties	OCS, OWD Component-Spec	OWD {RCC,HDL}-Worker, HDLDevice	OHAD HdIAssembly	OAS Application	OPS Operation	OPS Argument	OPS,OPD, OCS,OWD Member	OPD, OCS, OWD Property	OCS, OWD Port	OWD Spec-Property	HDL OWD Stream-Interface	HDL OWD Time-Interface	OAS, OHAD Instance	OAS, OHAD Connection	OAS, OHAD External
Name	string	o		o	o		o	o	r	r	r	r	r	r	o	o	o	
Property, Argument, and Member attributes, allowed in OCS and OWD for properties, and in OPS for arguments.																		
Type*	enum							o		o	o							
ArrayLength**	unsigned							o		o	o							
ArrayDimensions**	unsigned list							o		o	o							
SequenceLength**	unsigned							o		o	o							
Default	string									o (under Property)	o (under Property)							
Parameter	boolean									o (under Property)	o (under Property)							
Attributes for specific data types																		
StringLength**	unsigned							o		o	o							
Enums	string list							o		o	o							
Accessibility attributes for properties																		
Readable	boolean										o		o					
Volatile	boolean										o		o					
Initial	boolean										o		o					
Writable	boolean										o		o					
Padding	boolean										o (OWD)							
Worker Property Attributes																		
Readsync	boolean										o (OWD)		o					
Writesync	boolean										o (OWD)		o					
Readererror	boolean										o (OWD)		o					
Writererror	boolean										o (OWD)		o					
Protocol Summary Attributes that are used in the absence of, or to override, values implied by the operations of a protocol																		
NumberOfOpCodes	unsigned	o									o		o					
DataValueWidth	unsigned	o									o		o					
DataValueGranularity	unsigned	o									o		o					
ZeroLengthMessages	boolean	o									o		o					
MaxMessageValues	unsigned	o									o		o					
DiverseDataSizes	boolean	o									o		o					
Unbounded	boolean	o									o		o					
Port Attributes																		
Producer	boolean											o (OCS)						
Optional	boolean											o (OCS)						
MinBufferCount	unsigned											o (RCC)						
Protocol	string											o (OCS)						
Worker Attributes																		
ControlOperations	string list				o													
Endian****	enum				o													
Spec	string				o													
Language***	string				o													
Datawidth (HDL only)					o													
Stream Interface Attributes																		
precisebursts	boolean												o					
abortable	boolean												o					
clock	string												o					
myclock	boolean												o					
datawidth	unsigned												o					
Time Interface Attributes																		
SecondsWidth	unsigned													o				
FractionWidth	unsigned													o				
AllowUnavailable	boolean													o				

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Assembly Attributes in Various Elements in Assemblies																		
Package						o	o											
Done							o											
Component																	r (OAS)	
Worker																	r (OHAD)	
Value											o (OAS,OHAD)							
ValueFile											o (OAS)							
DumpFile											o (OAS)							
Connect																o		
From																o		
To																o		
Port																		o
Instance												o (OAS/OHAD)						o
Child Elements and Which Parent Elements They May Be Under																		
Protocol												o						
ComponentSpec					o													
Operation		o																
Argument								o										
Member (of struct)									o	o	o	o						
Property				o	o		o									o		
Port				o	o												o	
SpecProperty					o													
StreamInterface					o (HDL)													
TimeInterface					o (HDL)													
Clock					o (HDL)													
Instance						o	o				o (OAS,OHAD)							
Connection						o												
External						o	o										o	
Enumerations and Footnotes																		
*Type	Char, Uchar, Short, Ushort, Long, Ulong, LongLong, ULongLong, Float, Double, Boolean, String																	
**Expressions	These numerical values may also be expressions using parameters																	
***Language	C or C++ for RCC, VHDL or Verilog for HDL																	
****Endian	Neutral, Little, Big, Static, Dynamic																	