



AMS Optics

Technical Specifications

General		Remarks/Limitations	Version
Operating System	Connector/Core	Windows Server (2008R2 or newer) or 64-bit Desktop OS (7/8/8.1)	
	Storage (MongoDB)	Any Linux/Windows as per MongoDB support	
Objects	Unlimited	Any number of Connectors/Data Sources, any number of Core Servers, and any number of Storage Subsystems possible	
SmallScale (Trial)	All services on one host	Supported	
Timestamp	UTC (Posix)		
Timestamp Resolution	1 millisecond		
Data Categories	Real-time data (V[QT]*) Historical data (V[Q]T* series) Alarms and Events		1.1
Data Types	Single Values		
	Bool		
	32-bit Integer	Smaller ints are stored in a 32-bit int	
	64-bit Integer		
	Real (double prec.)	Currency and other special real number formats are converted to Double	
	Date/Time	POSIX (Milliseconds since UNIX epoch)	
	String	Single dimension	
Data Acquisition	Interfaces		
	TCP (listener sockets)	Any number per host computer (depending on OS support)	
	Files	Any number of Dropzones (monitored folders) per host (depending on OS support)	
	Cloud	Dropbox support	
	OPC DA (COM/DCOM)	2.0x, 3.0 Servers	
	OPC UA (TCP/binary)		
	OPC XML-DA (SOAP)		
	OPC A&E		1.1
	Modbus		1.1

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Data Protocols	Pre-defined text protocol for sockets and files Configurable Custom proto- col conversion (Lua script) for sockets and files OPC DA Standard OPC HDA Standard OPC A&E Standard	for CSV, XML, JSON data representation for CSV, XML, JSON data representation Branches, Leaves (Items) and Properties Raw and Aggregates	1.1
Acquisition Rates	Socket/Files OPC	Data-driven >= 100ms (depends on Server performance)	
Pre-Aggregation	Periods 1 min 10 min 15 min 1 h 1 d		

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Aggregates	Persistent Pre-Aggregation and adhoc-Aggregation for Trend Displays Interpolative	OPC UA Part 13 Rel. 1.02 Aug 2012 compliant	
	Average TimeAverage/TimeAverage2 Total/Total2 Minimum/Minimum2 Maximum/Maximum2 MinimumActualTime/ MinimumActualTime2 Range/Range2 AnnotationCount Count DurationInStateZero DurationInStateNonZero NumberOfTransitions Start End Delta StartBound EndBound DeltaBounds DurationGood DurationBad PercentGood PercentBad WorstQuality/WorstQuality2 StandardDeviationSample VarianceSample StandardDeviationPopulation VariancePopulation		

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Databases (MongoDB)	RawHistory	JSON (Micro)-documents	
	Aggregates	JSON documents	
	ProcessImage	JSON documents	
Typical Storage Rate (Raw)	Peak	100.000/sec	
	Sustained	50.000/sec	
Data Availability	Replica Set Support		
Managed Capacity	Unlimited (Shard Support)		
Hybrid Storage AutoCloud			1.2