

ADROIT 10 / MAPS 4 DATA/SPEC SHEET

Software requirements		Agent Server	SmartUI Server	Designer Client	Operator Client	PerformanceAnywhere Client
Operating system	Client editions	Windows 7 Professional or higher Windows 8 Pro or higher	Windows 7 Professional or higher Windows 8 Pro or higher	Windows 7 Professional or higher Windows 8 Pro or higher	Windows 7 Professional or higher Windows 8 Pro or higher	Android 4 or higher IOS 4 or higher
	Server editions	Windows 10 Pro or Enterprise Windows Server 2008 R2 Windows Server 2012 Windows Server 2012 R2 Windows Server 2016 (Server editions recommended)	Windows 10 Pro or Enterprise Windows Server 2008 R2 Windows Server 2012 Windows Server 2012 R2 Windows Server 2016 (Server editions recommended)	Windows 10 Pro or Enterprise (Can also run on Server editions, although not required)	Windows 10 Pro or Enterprise (Can also run on Server editions, although not required)	Windows Mobile (8,8.1,10) or other Windows Desktop OS (7,8,8.1,10) Linux (Kernel 3.2 or higher with X and browser support)
.NET Framework		4.5.2 or higher	4.5.2 or higher	4.5.2 or higher	4.5.2 or higher	
Browser support					Internet Explorer through ClickOnce	Safari 6.1.6 or higher Firefox 33.0 or higher Chrome 32.0 or higher Internet Explorer 10 or higher
Optional						
Web Server		IIS	IIS			
Databases supported		Microsoft SQL Server 2008 Microsoft SQL Server 2008 R2 Microsoft SQL Server 2012 Microsoft SQL Server 2014 Microsoft SQL Server 2016 Oracle 11g Release 1 Oracle 11g Release 2 Oracle 12c Release 1 PostgreSQL 9.2.1 or higher	Microsoft SQL Server 2008 Microsoft SQL Server 2008 R2 Microsoft SQL Server 2012 Microsoft SQL Server 2014 Oracle 11g Release 1 Oracle 11g Release 2 Oracle 12c Release 1 PostgreSQL 9.2.1 or higher			

Hardware requirements		Agent Server	SmartUI Server	Designer Client	Operator Client	PerformanceAnywhere Client
Minimum	CPU	i5 1.7 GHz 4 core	i5 1.7 GHz 4 core	i5 1.7 GHz 4 core	Atom N450 (User experience dependent on GPU and CPU clock)	
	RAM	4GB	4GB	4GB	1GB	
Recommended	HDD	6GB Free (Excluding datalog requirements)	6GB Free	3GB Free	250MB Free	
	Network	100 MB/s	100 MB/s	100 MB/s	64KB/s (design dependant)	64KB/s (design dependant)
Recommended	CPU	XEON 1.5 GHz 4 core or higher	XEON 1.5 GHz 4 core or higher	i7 1.7 GHz or higher	i7 1.7 GHz or higher	
	RAM	16GB	16GB	8GB	4GB	
	HDD	20GB Free	20GB Free	8GB Free	1GB Free	
	Network	1 GB/s	1 GB/s	1 GB/s	100 MB/s	1 MB/s

Extendability		Agent Server	SmartUI Server	Designer Client	Operator Client	PerformanceAnywhere Client
Scripting		VBScript, Jscript	C#, VB.NET	C#, VB.NET Know-how protection through form encryption/lock Debugging and Development Support via Visual Studio	C#, VB.NET Know-how protection through form encryption/lock Debugging and Development Support via Visual Studio	Javascript, Typescript

Third Party Integration		Agent Server	SmartUI Server	Designer Client	Operator Client	PerformanceAnywhere Client
Interfacing		ActiveX, COM	COM, .NET	COM, .NET	COM, .NET	Javascript, Typescript
Extendable through		Agent Development Kit (ADK) Driver Development Kit (DDK)	Datasource Development Kit	Support .NET Windows Controls and Custom Controls XAML Import from Visio	Support .NET Windows Controls and Custom Controls XAML Import from Visio	HTML

Configuration	Agent Server	SmartUI Server	Designer Client	Operator Client	PerformanceAnywhere Client

Bulk engineering	Agent Server	SmartUI Server	Designer Client	Operator Client	PerformanceAnywhere Client
	Large-scale bulk engineering tools available as Excel plugin				

Security		Agent Server	SmartUI Server	Designer Client	Operator Client	PerformanceAnywhere Client
Auditing		21 CFR 11	21 CFR 11			
Access control			Data level security Active Directory LDAP support User/Group ACLs	Form level security Form element security Profile security	Form level security Form element security Profile security	Profile security
Secure communication		Communication locked to SmartUI only (through 21 CFR 11)	Client/Server encryption RFC 2313	Client/Server encryption RFC 2313	Client/Server encryption RFC 2313	SSL 3.0 through TLS
Firewall			Firewall friendly - secure communication across single bidirectional port access	Firewall friendly - secure communication across single bidirectional port access	Firewall friendly - secure communication across single bidirectional port access	HTTP/HTTPS Firewall access supported

Communication protocols		Agent Server	SmartUI Server	Designer Client	Operator Client	PerformanceAnywhere Client
Device protocol support		Very large direct device driver library, including: OPC 1.0, 2.0, UA, Modbus, Mitsubishi, Allen Bradley, Beckhoff, Siemens, Schneider, Toshiba, Omron, Hitachi, DNP3, Omron SNMP (v1,v2,v3) ICMP [See separate Device Drivers document] Named Pipes via TCP/IP	On-demand scanning device driver support for: OPC UA BACNET FAG SMARTCHECK			
Server communication protocol support			TCP/IP HTTP, HTTPS	TCP/IP HTTP, HTTPS	TCP/IP HTTP, HTTPS	HTTP, HTTPS
Client communication protocol support						

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Large project configuration					
Rapid configuration for large projects		Achievable through the Excel Bulk Configuration Plugin			
Server side processing					
		Up to 10000 changes / second / server depending on hardware	Up to 10000 changes / second / server depending on hardware		
Client considerations					
			Up to 500 PerformanceAnywhere clients per Server depending on hardware		
Visual elements					
			<p>Max 2000 Graphic Elements per form recommended [see: http://adroitkb2.cloudapp.net/t/improving-performance-in-your-graphic-forms/42]</p> <p>Up to 10 000 Graphic Forms per project</p>		Max 50 Web Parts per page MAX 100 Pages
Database processing					
		Size of transactions across network dependent on network infrastructure and database performance	Size of transactions across network dependent on network infrastructure and database performance		
Communication considerations					
Driver communication		Scan rates of up to 20 ms is supported depending on PLC, network and processing power			
Inter-server communication		SmartUI Server to Agent Server communication require a fast network or to reside on same server	SmartUI Server to Agent Server communication require a fast network or to reside on same server		
Client communication			Depending on latency, designing over low bandwidth will result in a certain level of lag experienced	<p>Data instruction = 1510 bytes</p> <p>Data packet = 4 bytes</p> <p>Throughput need to match data requirements i.e. 10 primitive types transferred per second = 1510 + 10 x 5 / s</p> <p>[see: http://adroitkb2.cloudapp.net/t/improving-optimising-communication-performance-between-operator-client-and-server/44]</p>	Updates based on achievable poll rate

Historian capability		Agent Server	SmartUI Server	Designer Client	Operator Client	PerformanceAnywhere Client
Native support		Support up to 1000 000 data points per server depending on hardware support				
SQL support		Support up to 15 year historical data access depending on hardware support Support up to 1 ms burst log rates depending on hardware support Support logging of 1 data point per table or multiple points per table Up to 1 000 0000 tables per database depending on total number of objects for database Maximum database size of 200TB for SQL Server 2008 and higher Maximum database size of 10GB for SQL Server Express				
Alarming		Agent Server	SmartUI Server	Designer Client	Operator Client	PerformanceAnywhere Client
		Support IEC 62682				
Trending		Agent Server	SmartUI Server	Designer Client	Operator Client	PerformanceAnywhere Client
				Up to 128 pens/series per chart Automatic resolution adjustment during data retrieval based on sample period	Up to 128 pens/series per chart Automatic resolution adjustment during data retrieval based on sample period	
Reporting		Agent Server	SmartUI Server	Designer Client	Operator Client	PerformanceAnywhere Client
	Packaged report packs for Microsoft Reporting					
	Report Packs include: OEE/KPI, Alarm Management, Operator Performance, Plant Performance/Analysis					
Business Intelligence		Agent Server	SmartUI Server	Designer Client	Operator Client	PerformanceAnywhere Client
	Deep Insight provided through SCADA Intelligence					