

## "Standard, Embedded, Micro, Nano 2017 UA Server Profile" 比較表

	グループ名	タイトル	standard	embedded	micro	nano	説明
			75	63	52	43	
1	Address Space Model (アドレス空間モデル)	Address Space Base	○	○	○	○	Support the NodeClasses with their Attributes and References as defined in Part 3. This includes for instance: Object, ObjectType, Variable, VariableType, References and DataType.
2		Address Space Atomicity	○	○	○	○	Support setting the NonatomicRead and NonatomicWrite flags in the AccessLevelEx Attribute for Variable Nodes to indicate whether Read or Write operations can be performed in atomic manner. If the flags are set to '1', atomicity cannot be assured.
3		Address Space Full Array Only	○	○	○	○	Support setting the WriteFullArrayOnly flag in the AccessLevelEx Attribute for Variable Nodes of non-scalar data types to indicate whether write operations for an array can be performed with an IndexRange.
4	Base Information (基本情報)	Base Info Core Structure	○	○	○	○	The Server supports the Server Object, ServerCapabilities and supports the OPC UA AddressSpace structure.
5		Base Info Server Capabilities	○	○	○	○	The Server supports publishing of the Server limitation in the ServerCapabilities, including MaxArrayLength, MaxStringLength, MaxNodePerRead, MaxNodesPerWrite, MaxNodesPerSubscription and MaxNodesPerBrowse.
6		Base Info Diagnostics	○	○	○	○	The Server supports the collection of diagnostic information. The EnabledFlag in the ServerDiagnostics Object can be set TRUE and in that case all static and dynamic Objects and Variables for diagnostic data as defined in UA Part 5 are supported.
7		Base Info Estimated Return Time	○	○	○	○	Server supports the EstimatedReturnTime Property. It indicates the time at which the Server is expected to have a ServerStatus.State of RUNNING_0. Clients can use this information to govern the reconnect logic.
8		Base Info GetMonitoredItems Method	○	○			The Server supports obtaining subscription information via GetMonitoredItems Method on the Server object.
9		Base Info ResendData Method	○	○			Support the standard Method ResendData (defined in UA Part 5) to get the latest value of the monitored items of a Subscription.
10		Base Info Type System	○	○			The Server exposes a Type System with DataTypes, ReferenceTypes, ObjectTypes and VariableTypes including all of the OPC UA (namespace 0) types that are used by the Server, as defined in Part 5. Items that are defined in Namespace 0 but are defined in other specification parts are tested as part of the other information models.
11		Base Info Custom Type System	○	○	○	○	The Server supports custom types (i.e. types that are derived from well-known ObjectTypes, VariableTypes, ReferenceTypes or DataTypes). Supporting this conformance unit requires that the custom types with their full inheritance tree are exposed in the AddressSpace.
12		Base Info Placeholder Modelling Rules	○	○	○	○	The Server supports defining custom Object or Variables that include the use of OptionalPlaceholder or MandatoryPlaceholder modelling rules.
13		Base Info OptionSet	○	○	○	○	The Server supports the VariableType OptionSet.
14		Base Info ValueAsText	○	○	○	○	The Server supports the Property ValueAsText for enumerated DataTypes.
15		Base Info Engineering Units	○	○			The Server supports defining Variables that include the Engineering Units Property. This property makes use of the EUInformation data structure. This structure by default represents the UN/CEFACT "Codes for Units of Measurement". If a different EU representation is required then the EUInformation.namespaceUri will indicate the alternate namespace.
16	Base Info Selection List	○	○	○	○	The Server supports Variables of the SelectionListType VariableType.	
17	Discovery Services (ディスカバリサービス)	Discovery Get Endpoints	○	○	○	○	Support the GetEndpoints Service to obtain all Endpoints of the Server. This includes filtering based on Profiles.
18		Discovery Find Servers Self	○	○	○	○	Support the FindServers Service only for itself.
19		Discovery Register	○				Call the RegisterServer Service to register itself (OPC UA Server) with an external Discovery Service via a secure channel with a SecurityMode other than NONE.

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20		Discovery Register2	○				Call the RegisterServer2 Service to register with an external Discovery Service via a Secure Channel with a SecurityMode other than "None". This includes passing a list of short capability identifiers. The identifiers and their use are specified in Part 12.
21	Session Services (セッションサービス)	Session General Service Behaviour	○	○	○	○	Implement basic Service behaviour. This includes in particular: – checking the authentication token – returning the requestHandle in responses – returning available diagnostic information as requested with the 'returnDiagnostics' parameter – respecting a timeoutHint
22		Session Base	○	○	○	○	Support the Session Service Set (CreateSession, ActivateSession, CloseSession) except the use of ActivateSession to change the Session user. This includes correct handling of all parameters that are provided. Note that for the CreateSession and ActivateSession services, if the SecurityMode = None then: 1) The Application Certificate and Nonce are optional. 2) The signatures are null/empty. The details of this are described in Part 4.
23		Session Change User	○				Support the use of ActivateSession to change the Session user.
24		Session Cancel	○				Support the Cancel Service to cancel outstanding requests.
25		Session Minimum 1	○	○	○	○	Support minimum 1 Session (total).
26		Session Minimum 2 Parallel	○	○	○		Support minimum 2 parallel Sessions (total for all Clients).
27		Session Minimum 50 Parallel	○				Support minimum 50 parallel Sessions (total for all Clients).
28	View Services (ビューサービス)	View Basic	○	○	○	○	Support the View Service Set (Browse, BrowseNext).
29		View TranslateBrowsePath	○	○	○	○	Support TranslateBrowsePathsToNodeIds Service.
30		View RegisterNodes	○	○	○	○	Support the RegisterNodes and UnregisterNodes Services as a way to optimize access to repeatedly used Nodes in the Server's OPC UA AddressSpace.
31		View Minimum Continuation Point 01	○	○	○	○	Support minimum 1 continuation point per Session.
32		View Minimum Continuation Point 05	○				Support minimum 5 continuation points per Session. This number has to be supported for at least half of the minimum required sessions.
33	Attribute Services (アトリビュートサービス)	Attribute Read	○	○	○	○	Supports the Read Service to read one or more Attributes of one or more Nodes. This includes support of the IndexRange parameter to read a single element or a range of elements when the Attribute value is an array.
34		Attribute Write Values	○	○	○	○	Supports writing to values to one or more Attributes of one or more Nodes.
35		Attribute Write StatusCode & Timestamp	○				Supports writing of StatusCode and Timestamps along with the Value.
36		Attribute Write Index	○	○	○	○	Supports the IndexRange to write a single element or a range of elements when the Attribute value is an array.
37	Monitored Item Services (監視項目サービス)	Monitor Basic	○	○	○		Support the following MonitoredItem Services: CreateMonitoredItems, ModifyMonitoredItems, DeleteMonitoredItems and SetMonitoringMode.
38		Monitor Value Change	○	○	○		Support creation of MonitoredItems for Attribute value changes. This includes support of the IndexRange to select a single element or a range of elements when the Attribute value is an array.
39		Monitored Items Deadband Filter	○	○			Supports an absolute Deadband filter as a DataChangeFilter for numeric data types.
40		Monitor Items 2	○	○	○		Support at least 2 MonitoredItems per Subscription where the size of each MonitoredItem is at least equal to size of Double.
41		Monitor Items 10	○	○			10
42		Monitor Items 100	○	○			100
43		Monitor Items 500	○				500
44		Monitor QueueSize_1	○	○	○		This ConformanceUnit does not require queuing when multiple value changes occur during a "publish period". I.e. the latest change will be sent in the Notification.

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45		Monitor MinQueueSize_02	○	○			Support at least 2 queue entries for MonitoredItems. Servers often will adapt the queue size to the number of currently MonitoredItems. However, it is expected that Servers support this minimum queue size for at least one third of the supported MonitoredItems.
46		Monitor MinQueueSize_05	○				5
47		Monitor Triggering	○	○			Support the SetTriggering Service to create and/or delete triggering links for a triggering item.
48	Subscription Services (サブスクリプションサービス)	Subscription Basic	○	○	○		Support the following Subscription Services: CreateSubscription, ModifySubscription, DeleteSubscriptions, Publish, Republish and SetPublishingMode.
49		Subscription Minimum 1	○	○	○		Support at least 1 Subscriptions per Session. This number has to be supported for all of the minimum required sessions.
50		Subscription Minimum 02	○	○			
51		Subscription Minimum 05	○				
52		Subscription Publish Min 02	○	○	○		Support at least 2 Publish Service requests per Session. This number has to be supported for all of the minimum required sessions. Support of a NotificationMessage retransmission queue is not required; if not available the Republish Service returns Bad_MessageNotAvailable.
53		Subscription Publish Min 05	○	○			5
54		Subscription Publish Min 10	○				10
55		Subscription Publish Discard Policy	○	○	○		Respect the specified policy for discarding Publish Service requests. If the maximum number of Publish Service requests has been queued and a new Publish Service request arrives, the "oldest" Publish request has to be discarded by returning the proper error.
56	Method	Method Call	○	○	○*	○*	Support the Call Service to call (invoke) a Method which includes support for Method Parameters.
57	Protocol and Encoding (プロトコルとエンコーディング)	Protocol UA TCP	○	○	○	○	Support the UA TCP transport protocol as defined in UA Part 6.
58		UA Secure Conversation	○	○	○	○	Support UA Secure Conversation specified in UA Part 6.
59		UA Binary Encoding	○	○	○	○	Support UA Binary Encoding. Values of these data types are encoded in compact binary formats, contiguously and without tagging. I.e. the receiver is assumed to understand the structure it is decoding.
60	Security (セキュリティ)	Security User Name Password	○	○	○*	○*	The Server supports User Name/Password combination(s). The token will be encrypted if required by the security policy of the User Token Policy or by the security policy of the endpoint. An unencrypted token either requires message encryption or means outside the scope of OPC UA to secure the identity token so that it cannot be retrieved by sniffing the communication. One option would be a secure transport like a VPN.
61		Security User X509	○				The Server supports a public/private key pair for user identity. The use of this feature must be able to be enabled or disabled by an administrator.
62		Security Invalid user token	○	○	○*	○*	Servers shall take proper measures to protect against attacks on user identity tokens. Such an attack is assumed if repeated connection attempts with invalid user identity tokens happen. See ActivateSession Service in UA Part 4.
63		Security Default ApplicationInstanceCertificate	○	○	○	○	An application, when installed, has a default ApplicationInstanceCertificate that is valid. The default ApplicationInstanceCertificate shall either be created as part of the installation or installation instructions explicitly describe the process to create and apply a default ApplicationInstanceCertificate to the application.
64		Security - No Application Authentication	○	○	○	○	The Server supports being able to be configured for no application authentication, just User authentication and normal encryption/signing: - Configure Server to accept all certificates - Certificates are just used for message security (signing and encryption) - Users level is used for authentication
65		Security Policy Required	○	○	○	○	Support at least Security Policy [A] and Security Policy [B]. Support of multiple Security Policies - even obsolete ones - is recommended. This will provide best interoperability and allows the end user to choose the required level of security. Obsolete Security Policies shall not be enabled / usable without administrative intervention.

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66		Security None CreateSession ActivateSession	○	○	○*	○*	When SecurityPolicy=None, the CreateSession and ActivateSession service allow for a NULL/empty signature and do not require Application Certificates or a Nonce.
67		Security None CreateSession ActivateSession 1.0	○	○	○*	○*	The Client can connect to Servers that require a certificate being passed on Session establishment. The Client in this case will first try without a certificate and if this fails present a certificate.
68		Security Administration	○	○	○*	○*	Allow configuration of the following Security related items. * select the allowed User identification policy or policies (User Name/Password or X509 or Kerberos or Anonymous). * enable/disable the security policy "None" or other security policies. * enable/disable endpoints with MessageSecurityMode SIGN or SIGNANDENCRYPT. * set the permitted certification authorities. * define how to react to unknow
69		Security Role Server Authorization	○	○	○	○	Restrict access based on the configured Roles and permissions.
70		SymmetricSignatureAlgorithm_None	○	○	○	○	This algorithm does not apply.
71		SymmetricEncryptionAlgorithm_None	○	○	○	○	This algorithm does not apply.
72		AsymmetricSignatureAlgorithm_None	○	○	○	○	This algorithm does not apply.
73		AsymmetricEncryptionAlgorithm_None	○	○	○	○	This algorithm does not apply.
74		KeyDerivationAlgorithm_None	○	○	○	○	This algorithm does not apply.
75		SecurtyPolicy_None_Limits	○	○	○	○	DerivedSignatureKeyLength: 0

\*が付いているものは、本来サポートされないProfileです