



OPC UA

PLATFORM FOR CONNECTIVITY

ONE STOP SOLUTION

FOR ALL YOUR

CONNECTIVITY NEEDS

uOPC PUBSUB BRIDGE
Datasheet

uOPC PUBSUB SERVER

Greater interoperability and seamless communication are the prime motives behind the emergence of OPC UA. While client-server model is the historical way OPC UA applications have been communicating with each other, it is considered more appropriate for point-to-point communication.

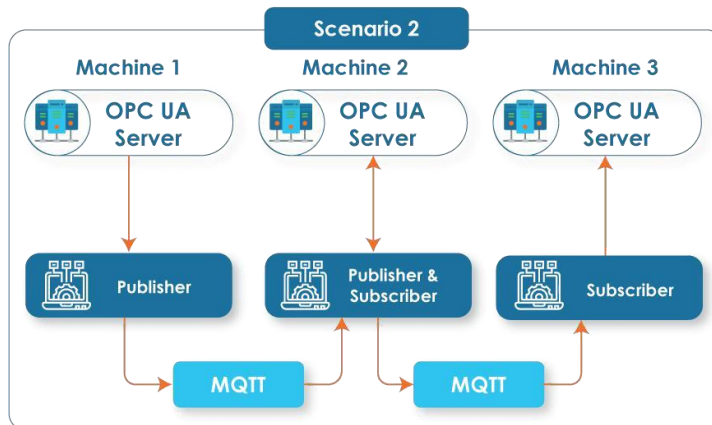
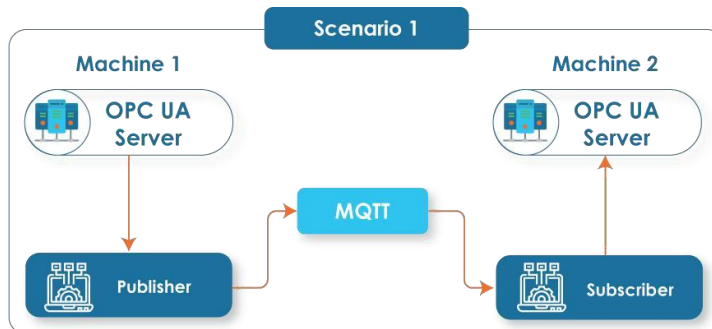
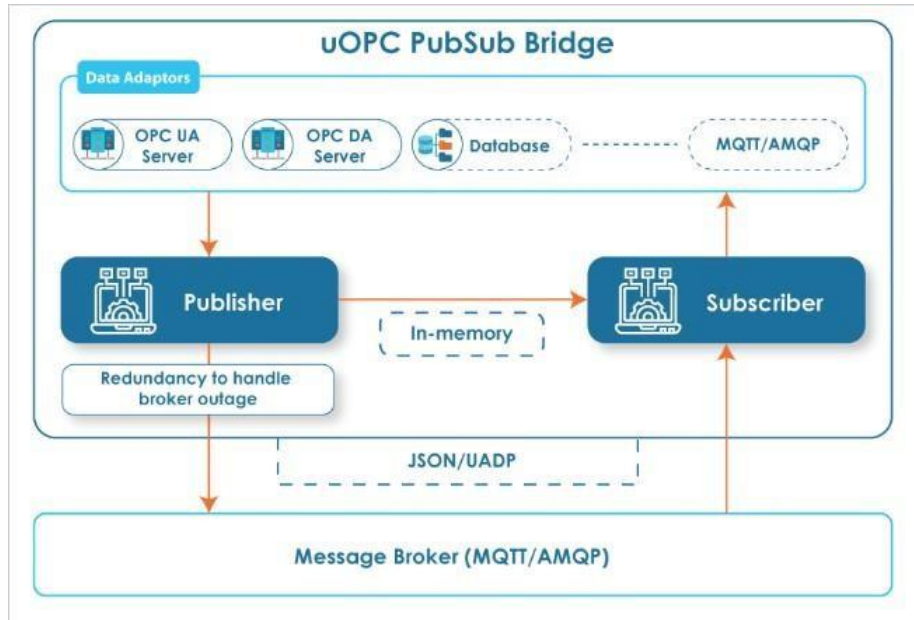
The client and server are directly connected to each other, where a PLC or a host workstation can request for an information, which will be fetched by the sensors, valves, or other field devices. However, as the number of devices on both the ends increase, the number of data requests increase, and in turn the network throughput decreases. Additionally, in client server Model, the response rate for data was always the least of what both components could support.

With a swift proliferation of IIoT devices, a more robust communication network that was independent of client server capabilities and worked in a connection less environment was essential. In order to meet this pressing need, OPC UA Part 14 Specification has emerged, that discusses a PubSub model, a perfect solution to enable communication in modern IIoT scenarios. OPC UA PubSub is the established standard for the IIoT platforms for all the cloud vendors.

In contrast to client-server communication, OPC UA PubSub Bridge enables scalable fast communication which is independent of client or server limitations.

In this model, the publishers send the messages to Message Oriented Middleware without knowing about the Subscriber(s). In the similar fashion, the subscribers show interest in specific messages without knowing about the publisher(s). These publishers are OPC UA servers and the subscribers are OPC UA clients.

ARCHITECTURE



FEATURES & BENEFITS

- **Easy to Scale:** As the client(s) and Server(s) are not directly connected to each other, instead communicate to a broker middleware, increasing the number of devices in either side does not impact the performance. This way, the architecture becomes more scalable.
- **No Data Response Rate Constraints:** In contrast to client-server model, both the parties need not agree upon a messaging interval. The server can publish the datasets whenever it wants irrespective of the client’s data request.
- **IIoT Enabler:** OPC UA PubSub is the established standard for the IIoT platforms for all the cloud vendors. With an ability to enable distributed intelligence, PubSub balances the network loads and distributed messages to the peers in an effective manner, which is the foundation for IIoT.

HARDWARE REQUIREMENTS

- RAM 8 GB or above.
- Core 2
- Processor Intel i5 or i7, 3rd generation and above.
Any AMD Processor with the equivalent specification.

SUPPORTED OPERATING SYSTEMS

- Windows 10 (32 and 64-bit)
- Windows 8.1 (32 and 64-bit)
- Windows 7 (32 and 64-bit)
- Windows 2016 (32 and 64-bit)
- Windows 2019 (32 and 64-bit)

TYPICAL PERFORMANCE & BENCHMARK

<i>Tags</i>	<i>Update Rate (Sec)</i>	<i>CPU (%)</i>	<i>RAM Utilization (MB)</i>
1500	1	0.9	91
10000	1	5	275
50000	1	7	350