Your systems.
Working as one.

# IIOT Communication Solutions

| | AMQP | CoAP | DDS | RTI DDS | MQTT | Zero MQ |
|---|---|---|---|---|---|---|
| **Architecture** | Broker with Queues | Restful Client / Server model with support for Multicast | Connection Architecture not defined by standard | Peer to Peer, no daemons | Broker | Peer to Peer for limited scale project, broker needed for higher scale projects |
| **Pattern: Publish/Subscribe** | Yes | Partial, using Observe mode | Yes | Yes | Yes | Yes |
| **Pattern: Request/Reply** | Yes, through the use of 2 queues | Yes | RPC over DDS | Yes | No | Yes |
| **Pattern: Queing** | Yes | No | No | Yes, with Queue Service | No | Yes |
| **One to Many** | Yes | Yes | Yes | Yes | Yes | Yes |
| **Many to One** | Yes | Yes | Yes | Yes | Yes | Yes |
| **Payload type** | Opaque | JSON, XML, CBOR, EXI, custom | Strongly defined types, Opaque, Mixed | Strongly defined types, Opaque, Mixed | Opaque | Opaque |
| **Filtering** | Queue Filtering | HTTP URI scheme for requests | Topic Filtering, Content Filtering, Time Based Filtering | Topic Filtering, Content Filtering, Time Based Filtering, Supports Writer side filtering | Topic based wildcard scheme | Filtering on message envelope fields only |
| **Quality of Service** | Limited to High Availability and Redundancy of Brokers | Limited | Extensive: Reliability, History, Durability, Lifespan, Liveliness, etc | Extensive: Reliability, History, Durability, Lifespan, Liveliness, etc | Limited | None |
| **Transports** | TCP | UDP, DTLS | Not Specified | UDP, TCP, TLS, DTLS, Shared Memory, Custom | TCP | TCP, TIPC, multicast, Shared memory |
| **Routing / Bridging capabilities** | Routing through exchanges | Via Proxy to HTTP | None | Routing Service | Between broker routing | Brokers used for routing |
| **Security** | TLS / SSL Connections | DTLS | DDS Secure specification | DDS Secure Implementation with Authentication, Access Control and Cryptography on a per Topic basis | TLS / SSL Connections | SASL Authentication |