

How the FDT Desktop Solution Works

A

FDT Desktop

- Utilizes .NETCore platform to build device, cloud and IIoT applications.
- Compatible with a choice of operating systems, including iOS, Linux and Windows.
- Windows platforms are backwards compatible with prior DTM versions.
- Employs Desktop Common Components relieving the developer of integrating the standard into products, allowing them to focus on value-added capabilities.

B

Core Desktop

- Functions as IIoT data hub for the FDT Desktop.
- Included in Desktop Common Components.
- Incorporates DTM user interfaces and business logic.
- Stores, instantiates and executes DTMs, which are always kept up to date via the FDThub repository.
- Provides the FDT topology information.

C

Custom Desktop Value-add

- Integrates into a larger system for enhanced functionality, including higher level, complex systems such as asset management applications, PLC tools and DCS/engineering applications.
- Utilizes Desktop Common Components with all the basic coding groundwork for business logic, project data and Web UI, which system vendors can customize by adding their own wrapper for branding purposes.

D

OPC UA Server

- Leverages a client-based environment.
- Enables IT/OT integration and gateway to data and health information.
- Allows developers to leverage industry-standard OPC UA Server included in the Desktop Common Components, or easily exchange it for their preferred OPC UA Server.
- Supports ERP/MES to optimize enterprise-level connectivity, plant availability and quality yield production.
- Offers OPC UA client/server-authenticated access to plant application data.
- Utilizes Publish-Subscribe environment for real-time data exchange.

E

Desktop Visualization

- Leverages a client-based environment.
- Enables field device management.
- Transforms OT access for improved asset management and maintenance.
- Enables client-based access to physical plant/facility assets using authenticated computer, tablet or phone, or via DCS, PLC, asset management application, etc.
- Programmed into Desktop Common Components however, system vendors may customize the Desktop UI for branding purposes.

F

Security

- Implements role-based user security.
- Provides OPC UA security model.
- Utilizes on-the-wire-security for enabled industrial automation protocols.

G

FDThub™

- Enables convenient access to all certified Device and Communication DTMs in a single repository.
- Supports cloud-based deployment with automatic device discovery.
- Available as a local server for on-premise, air-gapped deployment.
- Supports machine-to-machine communications with 509 certificates for machines with authorized access.

H

Device Connections

- Allows a single desktop to support multiple facilities.
- Provides access to FDThub DTM repository.
- Optimizes security and connectivity via TLS, 509v3 certificates, authentication, authorization, and encryption.
- Compatible with VPN for IT environments, edge with a gateway for a specific protocol such as MQTT or AMQP and Intranet — ensuring communication stays within the secure enterprise network.

