

## Embedded OPC XML-DA server for building automation

In building automation today, it is frequently necessary to provide access to data points in a building via conventional Web-based methods. This may be required for operating controls in Web browsers, for connections to standard software packages for visualization, or for facility management. Direct access from ERP systems to building data is becoming increasingly important as well. OPC XML-DA provides for a standardized, vendor-neutral Web service which can also be used in building automation.



Conventional DCOM solutions are usually based on a central OPC server. The disadvantage of this is that it calls for a dedicated Windows PC and represents a single point of failure.

The L-OPC from LOYTEC, an Austrian manufacturer of building automation products, is the first embedded OPC server which can export the data points from each network segment in a building. No dedicated PC is necessary. By mapping native data points to Web services, several L-OPCs can be combined to form a type of distributed Web service gateway. The L-OPC also distributes OPC network traffic to the respective local segments. One implementation of the OPC XML-DA standard involved porting Softing's C++ Toolkit from Windows to the embedded platform. In the device, native data points are exported from EIA-709 (Lon® networks) or BACnet to OPC tags. The embedded OPC server can manage up to 1000 OPC tags per device. The L-OPC can be used for the following applications:

- Interface for visualizations and SCADA systems
- Web visualization of individual areas
- Room control via a Web browser

Functions which go beyond OPC XML-DA include the recording of values, the monitoring of alarm states, and the scheduling of daily routines.

Dr. Stefan Soucek, LOYTEC summarizes LOYTEC's experiences during the development: "We reviewed several options for developing an embedded OPC server. Softing's XML-DA Toolkit proved to be very easy and quickly portable. The quality of the OPC software and the support confirmed that our decision to opt for Softing was the right one."

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**Industry**  
Building automation

**Task / Objective**  
Export native building data to facility management system

**Requirements**  
Firewall-friendly, platform-independent, easy to maintain

**Solution**  
Implementation of an embedded OPC server based on the Softing OPC XML-DA Toolkit.

**Benefits**  
Short development time, 100% OPC compliance, cost savings

**Market segments**  
Building automation