

Extend 7000[®]

MOBILE VISUALISATION

Be in control, always
Innovative, mobile SCADA



e-Factory
Partner Product

FULL ACCESS 

Improved monitoring and control via continuous contact

IMPROVE PROFITABILITY 

Fast response saves resources and minimises downtime

IMPROVED COMMUNICATION 

Location-independent access enhances flexibility

Control on your terms



The Project server incorporates Communication, Notification and Trend Servers, who collectively handle communications with production equipment like the Mitsubishi programmable controller product line. The architecture uses proven Microsoft® SQL Server technology to operate the System and Project information databases and runs under Windows Server operating systems. This ensures easy installation, configuration and maintenance. Finally, end-to-end 256 bit AES encryption assures security.

The mobile control room

Many companies operate facilities that are either very large, or distributed over multiple locations spread far apart. Hence responsiveness can be a serious issue. Technicians confined to a central control room may take significant time to reach plant equipment when an incident occurs. A call out to a remote location can take hours. While time elapses, production may be lost, scrap produced, or regulatory compliance jeopardized. With Extend 7000, all available personnel can be informed of plant status and incidents immediately. Hence the closest workers are able to respond in real time, allowing potential problems to be addressed before serious issues occur. Further, because Extend 7000 provides control as well as monitoring, even if immediate site access is not possible, technicians have the ability to take corrective action remotely.

Know and respond

The demands of international competition mean companies need reactions to changing market conditions in real time. This requires automation systems which provide constant real time plant information combined with the ability to take immediate action based on this information. Innovative use of mobile handset technology allows the Schad Extend 7000 mobile visualization solution to provide this. Extend 7000 allows plant technicians, maintenance personnel and management to always be in touch with plant status via the popular BlackBerry® mobile device. Hence a short learning curve is assured.

Versatile, secure architecture

Extend 7000 uses several key components to provide this real time overview. The backbone of the system is the Systemserver, which includes the Device Manager and System Manager. These components provide communications to the BlackBerry wireless infrastructure while also exchanging information with the Projectserver.

A final powerful feature is the ability to establish remote video links. Hence remote operation can be enhanced by actually seeing what is happening, ensuring better understanding and safety.



See plant equipment from anywhere

Intuitive operation

Rapid responsiveness is compromised if the system has a long learning curve or is awkward to use. Extend 7000 avoids this by using a self-explanatory approach that allows intuitive understanding. Its layered structure and user interfaces are modeled after industry standard Microsoft practices, meaning any user will quickly master it.

Knowledge and traceability

Extend 7000 is more than just a means to improve operational efficiency. The Trend Server also allows key production or other data to be archived and examined as required. Since this also takes place through the BlackBerry, analysis can happen anywhere at any time, regardless of location, allowing informed decisions concerning plant operations to be made instantly. Moreover, as all activities can be logged, full traceability is possible. This is becoming an increasingly important requirement across a variety of industries for quality, regulatory, safety and security reasons.



Understand production trends at all times



Free operators from the control room

Synchronization and collaboration

Often when multiple users need to access information, there can be challenges with providing the required knowledge to everyone. Extend 7000 allows all users to see the same system at the same time. Opportunities for collaboration are increased, as each user has the same understanding of a situation, regardless of location. Solutions can be devised by the best employees available to analyze the situation and act.



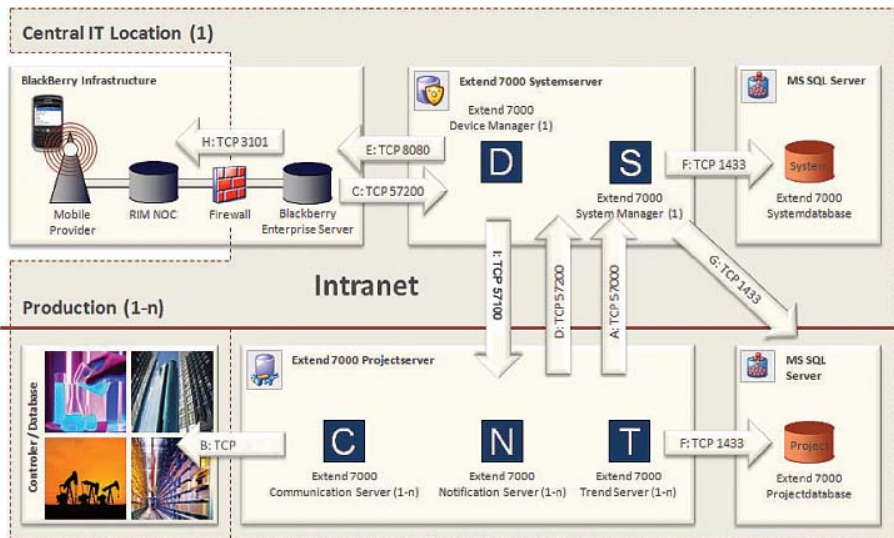
Know immediately if there is a problem

Connectivity and responsiveness

Extend 7000 is closely coupled to Mitsubishi automation systems. Currently, the FX PLC family, System Q and iQ Platform are directly supported. Other SCADA systems can also be connected, and a built-in OPC client allows open connectivity.

Finally, while communications use the secure BlackBerry wireless infrastructure, performance is not compromised. Reporting occurs in real time, and performance is comparable to a direct connection to plant floor hardware.

Extend 7000 Architecture ///



Connection A: All Extend 7000 services and programmes communicate with the System Manager service. It receives requests via this connection.

Connection B: Used by the Communication Server to access controller hardware memory, or to access external databases used by third party SCADA applications.

Connection C: Handles incoming traffic from the wireless BlackBerry infrastructure. Connection C links the BlackBerry Enterprise Server and the Extend 7000 Device Manager.

Connection D: Links the Notification Server to the Device Manager, allowing plant information to be sent to the mobile user.

Connection E: Handles outgoing traffic to the mobile user via the BlackBerry Enterprise Server using Push technology.

Connection F: Connection to the MS SQL Server, on which the Extend 7000 system database runs.

Connection G: Connection to the MS SQL Server, on which the Extend 7000 project database runs.

Connection H: Securely links the BlackBerry Enterprise Server to the wireless BlackBerry infrastructure.

Connection I: Handles read and write requests between the Communication Server and the rest of the Extend 7000 modules.

System requirements

Extend 7000 services and programmes run on Microsoft Windows Server operating systems, version 2003 or later.

TCP ports can be individually configured to establish communications between different Extend 7000 modules.

Extend 7000 services and programme modules use Microsoft SQL Server, version 2005 or later.

Key communication channels

Extend 7000 uses a number of individually configurable connections to handle system data between the various modules.

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