Fire Alarm System and Remote Monitoring System

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Introduction:

Fire alarm systems are very important when it comes to protecting property, personnel and stock in the event of fire. Uncontrolled, fire can obliterate an entire room´s contents within a few minutes and completely burn out a building in a couple hours.If any people are in the building, smoke can overwhelm them quickly enough to kill them. Therefore it?s essential that smoke and fire are detected quickly so the necessary evacuation processes can be carried out.

System Requirement:

To prevent fire damage, the client needed a system that could give an early warning when it detected flames and smoke. Once that information is received it needed to be able to send the information to a controller and alarms and buzzers situated throughout the building. Since the building was split into zones, the information needed to be able to watch this data from a durable industrial monitor.

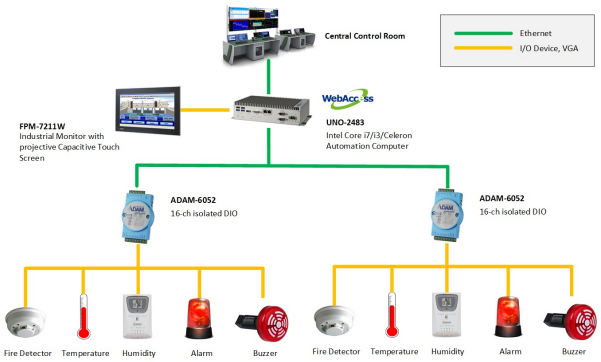
System Implementation:

To receive data from the smoke detectors, humidity sensors and thermometers the system integrator connected them to 16 channel digital I/O ADAM-6052s which can be used to access sensor information either remotely or via Ethernet and the UNO-2483G. The UNO-2483G is a fanless highly ruggedized Embedded Automation Computer which, although not needed in this installation, includes iDoor technology. iDoor technology is a modular system which supports automation feature extensions such as industry fieldbus communication, Wi-Fi/3G, Digital I/O. With a wide array of I/O ports including Gigabit Ethernet, and Dual HDD/SSD the UNO-2483G is ideal for a wide range of difficult situations. Installed on the UNO-2483G is WebAccess 8.0 SCADA software.

Going beyond SCADA, WebAccess 8.x is also a HTML5 Business Intelligent Dashboard which can be opened from anywhere on any HTML5 compatible browser. The Business Intelligent Dashboard analyses data and helps managers make decisions as to what to do and WebAccess 8.x also provides developers with the tools to design their own widgets and applications and the integration of Microsoft Excel reports. Included is a set of Excel templates or users can build their own report templates to generate daily, weekly, monthly and yearly reports to help predict the status of equipment. Through HTML5, a limitless number of users, with varying access levels are able to read information and make changes from wherever they are using either the Internet or Intranet. To watch this information, not only can it be viewed remotely but also on the FPM-7211W.

The IP66 rated 21? FPM-7211W, with its 10-point projected capacitive touch wide screen display and industrial grade design was installed to give users access to a comprehensive view of the information being delivered by WebAccess.

System Diagram



Conclusion:

By providing the customer with a complete fire alarm monitoring system, Advantech helped the client continuously observe the temperature and humidity of the building. Advantech was chosen as the supplier, not only because of the competitive price but also because of the features and effectiveness of the proposed system. The integration of Advantech remote I/O was able to be easily implemented and configured remotely without changing the entire architecture of the control system. Add this to Advantech?s innovative WebAccess software, which goes beyond SCADA, and the solution went above and beyond the customers? expectations.