Project Introduction:
A medical product company needed to install 230 thin client PCs across four manufacturing plants. Thin clients have been used in offices for many years, but their introduction onto the factory floor has been slow. A thin client network consists of a management computer in a secure, air-conditioned room with back up UPS, whilst on the factory floor there are a number of simple computers which are used to connect to the management computer, thereby removing the need to install individual operating systems and applications on each of the clients whilst also ensuing that there is only one point of failure.
**System Requirements:**
The company was looking for a network architecture that would have the lowest maintenance costs and the quickest deployment time. To meet all these needs, each of these sites would have approximately 50 thin clients installed on the factory floor and these would then be connected to a central server located elsewhere on the site. This leaves only one point of maintenance for software updates, security patches and rules for what applications are allowed to run on the thin clients.

**Project Implementation:**

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<tr>
<td><strong>UNO-2053GL</strong></td>
<td>AMD Geode™ LX800 Automation Computer with 2 x LAN, 2 x COM Ports, and Audio</td>
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<tr>
<td><strong>FPM-3151G</strong></td>
<td>15” XGA Industrial Monitor with Resistive Touchscreen, Direct VGA, and DVI Ports</td>
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**System Description:**
To meet the customer's requirements, Advantech's ThinManager ready hardware, consisting of the **UNO-2053GL**, ACP firmware and ThinManager software was presented. This deployment required the installation of ThinManager and HMI software on the server only, and the **UNO-2053GL** acted as a thin Client on the plant floor. 230 **UNO-2053GL** with AMD Geode™ LX800 processors, were installed...
across the four sites. The UNO-2053GL has no operating system or storage installed; each time the server boots, ThinManager sends the control software to the UNO-2053GL over the network and it then runs the small Linux operating system in RAM. The UNO-2053GL with an operating temperature range of -10 ~ 55°C (14 ~ 131°F) has been designed specifically for harsh industrial environments, and its rugged aluminum chassis protects the fanless and cableless design from the rigors of the factory floor. To guard against network failure, each UNO-2053GL has dual LAN ports that will automatically switch should one go down; thus, data will be protected and successfully transferred and stored on the management server. The management server is stored in a separate air conditioned room with UPS systems and a back-up server. On the factory floor, each UNO-2053GL is connected to a flat panel such as the IP65 compliant 15” FPM-3151G for onsite management.

Conclusion:
The deployment of the UNO-2053GL thin clients meant that the customer was able to upgrade their manufacturing management infrastructure on time, under budget and achieve a quick ROI. They were able to take advantage of Advantech’s robust hardware and ACP’s flexible software solution to provide a turnkey solution to meet their needs.