

Customer: UV Ray (AOnline customer)

Market: Machine Automation

Location: Italy



UV Curing System for Silk-screen Printing Machines

Project Introduction:

Based in Milano Italy, UV Ray is a world-wide manufacturer of UV curing system with strong experience in the sector of graphic arts. They are well known for developing leading edge curing solutions and high end performance, and constantly look for new technologies and reliable solutions. Recently, UV Ray was looking for a reliable, cost effective and scalable Human Machine Interface (HMI) product to be used to control the UV system on printing machines. The product needed to be compatible with their dedicated software and applications for the graphic arts market.

System Requirements:

Before discovering Advantech's industrial PCs, UV Ray used to build their own HMI hardware but with poor results in terms of quality and reliability. What they needed was a reliable, cost effective, and scalable HMI product that was small in size. So, they chose a 6.5" LCD panel with resistive touch screen, high color resolution and high graphic quality. Advantech sent UV Ray a demo PPC on loan and their Field Application Engineer (FAE) worked closely with UV Ray's engineers in order to understand if PPC-L61T could be a suitable solution. A problem occurred in the implementation when the OS performed unexpectedly. This produced a code sequence which blocked their machine when the HMI system was started, but the issue was promptly solved, with help from Advantech's FAE, by using a different protocol. PPC-L61T was connected to a bridge card through a serial port which puts in operation a UV-Ray piece of equipment for graphic printing. Within this architecture, PPC-L61T played the role of a HMI monitor/interface between the user and the machine, and the bridge card keeps the system operating even when the PC is turned off.

System Description:

The main advantage PPC-L61T brought was the possibility for UV Ray to have a reliable graphic interface solution – which was fast enough, and of high quality - on which they could run their dedicated software. They used a non-standard bridge card with special protection to prevent poor quality reproductions compared to the average solutions on the market that are normally based on a PLC interface. This innovative and flexible approach is not bound to any single language or pre-installed software like other products.

PPC-L61T is a very small and compact panel PC. Its bezel measures just 7.9 x 5.82 inches and the entire computer is less than two inches thick. Weight is less than three pounds despite all-metal construction.

PPC-L61T was designed as a small, inexpensive, unobtrusive panel computer that would fit into small spaces. It has ample onboard connectivity to interface with most machinery and provides current and legacy system support. What's more, Advantech panel PC's are more reliable and less likely to breakdown which is another reason why UV Ray chose PPC-L61T for their ink polymerization application.

Benefits:

- Reliable and high quality graphic interface solution
- Easy dedicated software integration
- PPC-L61 has a compact perfect size to fit into small space

System Diagram:

