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## Which Viewing Solution is Right for You?

In today's automation world, there are plenty of ways to control and view industrial and commercial systems but which method is exactly right for your application. Engineers and managers are constantly trying to find ways to increase productivity while also cutting cost. Criteria for your application might be that it is price sensitive, or maybe needs a rugged and durable display, or even needs to be able to record large amounts of data. In this month's tech corner, we will be informing you of some of the options in the automation world and what sets them apart from each other.

### **AutomationDirect C-more:**

With the induction of the new EA9 line into the field, the new C-more starts where the old EA7 line left off with new features such as brighter display, higher resolution, higher processing memory and the processing speed is twice as fast as its predecessor. As for the software, not many changes have been made so going from the EA7 to the EA9 will be a snap.



Depending on size, the EA9 boast a high resolution with 320x240 for the 6 inch, 800x600 for the 8, 10, and 12 inch and 1024x768 for the 15 inch. Most of the C-more have a screen brightness of 280 nits where the 8 inch has a brightness of 310 nits. The CPU is upgraded and now has the processing speed of 800 MHz. For the 12 and 15 inch screen, an HDMI output port is included that will allow the user to connect it to a larger screen if necessary. Also with several inputs, 3 serial ports, 2 USB and 1 Ethernet port, connecting to the C-more shouldn't be a problem.

In addition, the software is extremely user friendly and has several different protocols so integrating with other devices is easy. C-more Programming is \$99 for the package, unless you already have EA7 software, than the upgrade is free (use the same key code). Remote access is still a staple of the C-more as it is still available as long as the C-more still has internet connection. Out of the HMIs tested, we noticed that the C-more had the least amount of power consumption.



### **Advantech WebOP:**

The WebOP is the HMI offered by Advantech and is a quality unit when compared to the price it is going for. The WebOP was designed with the RISC platform while also providing Real-Time OS and built-in Microsoft WinCE OS platform. It is one of the lightest HMI we were testing when comparing size for size. It also comes in many sizes from 3.5 to 12.1 inches with all of them being waterproof/IP66. This is good for projects that do not require a large screen and also a good option for not breaking the bank.

Another great feature for the WebOP is that it has the ability to handle basic scripting so that there can be a little control done by the HMI. A nice feature that the WebOP has is that it can be programmed in either landscape or portrait while having the ability to communicate to over 300 PLC models. Lastly, the WebOP has the ability to have remote access. The remote access is a great feature that allows managers, engineers, and technicians to access the HMI from anywhere that has internet connection and eases the mind knowing you can check up on it whenever you need too.

The drawback that the WebOP has is that its processing power is not as high as other HMI in the market. Also the internal memory is lower only having 16 mb for storage.

## Idec HGxG:

The HGxG line is the HMI that was created by Idec. Just like the 2 lines before, we will be comparing the 12 inch screen with the resolution of 800 x 600. The high performance OI come in sizes 5.7 to 12.1. The 12 in we used is one of the heavier screens but also is one of the brightest reaching up to 550 nits and overall the brightest screens no matter what the size was. The screen brightness was able to get as high as 800 nits on the 5.7 screen. The screen is LED backlit which gives it the lifespan of about 60,000 hours. This is also great for rugged and industrial settings. With the brightness of 550 nits, this can be mounted outside and still be visible in daylight.

A good feature about the WindOI-NV2 is that it allows for remote access. This is extremely helpful for people that can't be in front of the panel but still need to access the information on the screen. Another great feature is its ability to script. By having the option to run a script in the background, gives the programmer a little more control in setting up the programming software. Also the programming software has over 100 major PLC protocols while also having 5000 built in symbols to design the HMI to your liking. The best feature of this HMI is the ease of programming in different languages which is great for sending projects to other countries (all of the IDEC panels support this feature).



## Advantech TPC with Indusoft:

The Advantech TPC (touch panel controller) is another great solution if you need a lot more processing power and also in need of a larger screen. The Advantech TPC is a 2 in 1 system having the computer built straight into the screen. This 2 in 1 system will save space but cost effective more than the other HMI's. Since the TPC is a controller, there is an option to have built in 16 channel digital I/O that are all isolated from each other. It also has the option to expand on the ram, processor and hardrive if the application will need additional requirements. With a fanless cooling system, running the controller and monitor will stay cool and also be quieter with computers and controllers with fans.

The TPC actually runs windows 7 which means some type of viewing or SCADA software like Indusoft is needed. Having a separate software also allows for more flexibility programming as you are not set to the programming of the makers choice but have the option of choosing your own. You can also run any software that is compatible with Windows 7 such as the PLC. This can be helpful for the technician when they go up to the monitor and are able to view the PLC programming and can make changes to the program if necessary.

However running the TPC does have a couple drawbacks. It was one of the heaviest viewable solutions when compared by sizes. This was due to the fact the the controller is built into the screen. Also, the power consumption was higher than any other device as well. The price is also a big setback as it was one of the most expensive screens compared by size to the other HMI's but remember that the controller is now built in which can lower the cost of the overall system.



## Conclusion:

All in all the viewing solution should be based on the parameters of project. If pricing is an issue, than going with the Advantech or the Automation Direct C-more is going to be the best option. If the application demands for something more rugged, than and Idec HMI will be a good fit. If you want more flexibility with the control of the HMI, use the Advantech TPC.

## Question?

If pricing, portrait and a lightweight panel is necessary for your project, what model would be chosen to meet all these parameters?

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