

Case Study

Video capture and graphics technology riding high on the Prasarana Rapid Bus

Written by Steed Webzell

Datapath ImageDP4 graphics cards and VisionHD4 capture cards are being used by Rapid Bus, a subsidiary of Prasarana, at the company's recently constructed depot in Balakong in the southern suburbs of Kuala Lumpur.

The technology is being used to facilitate a super high resolution (19200 x 4320) 40 screen video wall that helps the company control its large fleet of buses as they criss-cross this rapidly growing city.



Kuala Lumpur is the federal capital and most populous city in Malaysia with circa 6.9 million people (including suburbs). It covers an area of 243 km² (94 square miles) and is among the fastest growing metropolitan regions in the country. Needless to say, controlling the city's bus network is easier said than done.

With this in mind, Rapid Bus recently constructed a new state-of-the-art depot in nearby Balakong. The centrepiece of the facility's control room is a 40 screen video wall offering 19200 x 4320 super high resolution. Each of the 40 panels measures 46" with 1920 x 1080 native resolution, while the configuration comprises 10 panels wide and four panels high.

The architect of this impressive installation is Nextplus System, a subsidiary of VR Solutions, which is also located close to Kuala Lumpur.



"In short we were appointed to the project via our main contractor and given the brief of creating a display for monitoring the bus fleet at the Prasarana Rapid Bus control centre," says the company's Technical Director, Azlan Jizam.

Nextplus System is an AV company that creates tailored, state-of-the-art solutions for applications that range from theme parks and museums, to control rooms and corporate meeting facilities.

Nextplus designs its own video wall controller that offers real time simulation, 4K media playback, multi-display configuration, warp with blending and many more functions besides.

"We used three of our display wall processor units in the Rapid Bus control room at Balakong," says Mr Azlan. "As well as the main 40 output screen there are two sets of 12 panel displays on either side, making 64 screens in total. These are the same 46" panels, again with 1920 x 1080 native resolution."

The system also makes use of Datapath ImageDP4 graphics cards and VisionHD4 capture card technology, with 10 ImageDP4 and nine VisionHD4 units deployed on the project.

"Put simply, we use Datapath products because they represent extremely workable and confident solutions," says Mr Azlan. "Ultimately, the benefit to the customer is that this system can cater super high resolution."

The Datapath ImageDP4 graphics card combines a single, powerful graphics processor with improved memory and PCI Express bandwidths to provide responsive performance at up to double the resolution of previous Datapath graphics cards. This four-channel DisplayPort graphics card is optimised for use with the Datapath Vision range of capture cards for systems requiring video overlays from a wide range of sources and resolutions. As a result, the use of Datapath VisionHD4 capture cards proved the ideal choice for the Rapid Bus control room.

The VisionHD4 is an eight lane PCI Express capture card with four independent video capture channels, each supporting full HD capture. The card provides a high performance, high density video capture solution for control room applications that require high capture bandwidth.

"The installation, which is fully expandable and hence futureproof for the customer, took two weeks to construct and was completed without any complications," concludes Mr Azlan. "The customer is very satisfied with the performance and flexibility of the system."

