# KVM SOLUTION FOR SEMICONDUCTOR MANUFACTURING

## CHALLENGES OF SEMICONDUCTOR MANUFACTURING

Semiconductor manufacturing has many challenges with hundreds of processes using complex machinery in a 24x7, clean room environment.

Multiple, diverse types of equipment must be configured, maintained and efficiently utilized. These machines typically have embedded PC's that control and monitor the device's operation. Staff must visit the clean room to use this equipment. This reduces productivity and jeopardizes the integrity of the clean room environment.

## KVM-OVER-IP FOR REMOTE ACCESS TO SEMICONDUCTOR EQUIPMENT

Raritan's KVM-over-IP technology can provide local access to semiconductor equipment in the fab, as well as centralized remote access for engineers, technicians and supervisors outside the clean room. Thousands of machines can be controlled floor using standard IP networking.

Remote access to the embedded PC's in the equipment can be used for the following purposes: inspection, monitoring, maintenance and troubleshooting.

Raritan's KVM solutions can also be integrated with factory automation systems via SDK/API's for seamless operation.

## MANUFACTURING SOLUTION

Raritan's Manufacturing Solution can provide secure, controlled local and remote access and control to hundreds/thousands of semiconductor manufacturing devices. The embedded PC in the equipment is connected to the Local Console Controller (LCC), which then connects to a keyboard, video and mouse console in the clean room. The LCC also connects to a Computer Interface Module (CIM) which connects to the Dominion KX III KVM-over-IP switch.

The KX III provides users in or outside of the clean room access and control of the equipment utilizing a standard TCP/IP network. Raritan CommandCenter is the optional management system providing centralized access and integration with factory automation systems.

## CONCLUSION

Modern semiconductor fabs have hundreds or thousands of complex machines that must be efficiently utilized, monitored, maintained and repaired. The Raritan Manufacturing Solution can provide local and remote access and control of this equipment to managers, engineers, technicians and supervisors, using standard Ethernet and IP networks. With the Raritan Solution you can increase productivity, quality and efficiency. You can limit unnecessary visits to your clean rooms and improve air quality.

## SOLUTION BENEFITS

The solution has the following benefits:

- Centralized monitoring of hundreds/thousands of factory devices
- Remote access and control of clean room equipment from laptop, PC or User Station
- Local access to equipment on the fab floor, with the ability to disable remote access
- Controlled access to factory equipment by multiple users over LAN and WAN
- Ability to automatically collect and save snapshots of video from the equipment
- Integration with factory automation systems using API and SDK

**The solution will greatly expand the flow of information and control across the entire facility. Visits to the clean room will be reduced and productivity increased.**
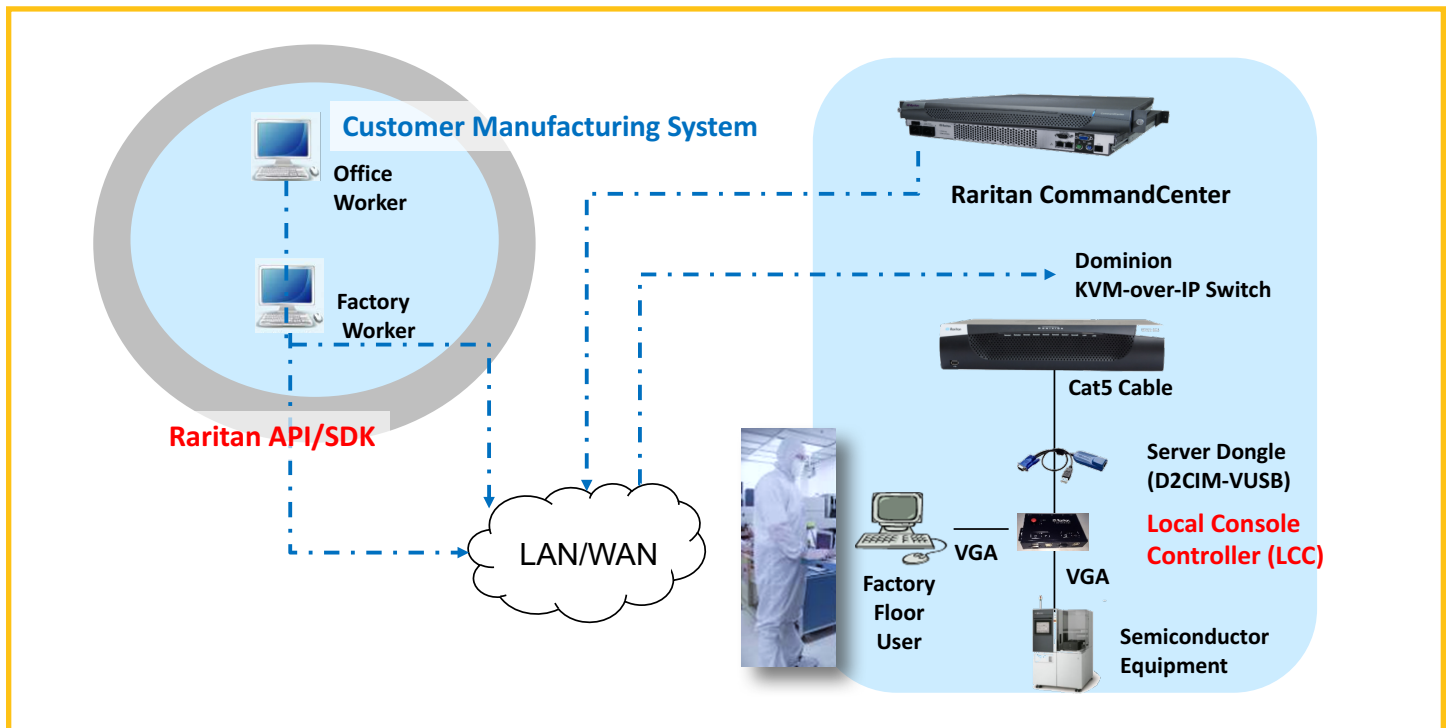
| Specifications | Description | Dimensions (WxDxH) | Weight | Power & Heat Dissipation |
|---|---|---|---|---|
| DKX3-864 | 64 server ports, 8 remote users, 1 local port for use at the rack | 17.3" x 13.3" x 3.5"; 440mm x 338mm x 88mm | 12.39 lbs; 5.62 kg | Dual Power 110V/240V, 50-60Hz 1.8A 60W 52 KCAL |
| DKX3-832 | 32 server ports, 8 remote users, 1 local port for use at the rack | 17.3" x 13.15'' x 1.73''; 440mm x 334mm x 44mm | 9.96 lbs; 4.52 kg | |
| DKX3-808 | 8 server ports, 8 remote users, 1 local port for use at the rack | | | |
| DKX3-464 | 64 server ports, 4 remote users, 1 local port for use at the rack | 17.3" x 13.3" x 3.5";  440mm x 338mm x 88mm | 12.39 lbs; 5.62 kg | |
| DKX3-432 | 32 server ports, 4 remote users, 1 local port for use at the rack | | 9.08 lbs; 4.12 kg | |
| DKX3-416 | 16 server ports, 4 remote users, 1 local port for use at the rack | | | |
| DKX3-232 | 32 server ports, 2 remote users, 1 local port for use at the rack | 17.3" x 13.15'' x 1.73''; 440mm x 334mm x 44mm | | |
| DKX3-216 | 16 server ports, 2 remote users, 1 local port for use at the rack | | | |
| DKX3-132 | 32 server ports, 1 remote user, 1 local port for use at the rack | | 8.60 lbs; 3.9 kg | |
| DKX3-116 | 16 server ports, 1 remote user, 1 local port for use at the rack | | | |
| DKX3-108 | 8 server ports, 1 remote user, 1 local port for use at the rack | | | |

| Local Console Controller | |
|---|---|
| LCC-USB-VGA | Local Console Controller with push button |
| LCC-USB-VGA-6MC | Local Console Controller with switch cable |

| Computer Interface Modules (CIMs) | |
|---|---|
| D2CIM-DVUSB — Dual USB, VGA CIM for BIOS virtual media and advanced features | D2CIM-DVUSB-DVI — Dual USB, DVI-D CIM for BIOS virtual media and advanced features |
| D2CIM-VUSB — USB CIM for virtual media and Absolute Mouse Synchronization | D2CIM-DVUSB-HDMI — Dual USB, HDMI CIM for BIOS virtual media and advanced features |
| DCIM-PS2 — CIM for PS/2 | D2CIM-DVUSB-DP — Dual USB, DisplayPort CIM for BIOS virtual media and advanced features |
| DCIM-SUN — CIM for Sun | D2CIM-PWR — CIM for remote power management |
| DCIM-USBG2 — CIM for USB and Sun USB | P2CIM-SER — CIM for serial (ASCII) devices |

## KVM in Semiconductor Manufacturing Diagram



## Visit www.raritan.com/kxiii
## or Call 1.800.724.8090 for more information.

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