

COMMAND & CONTROL



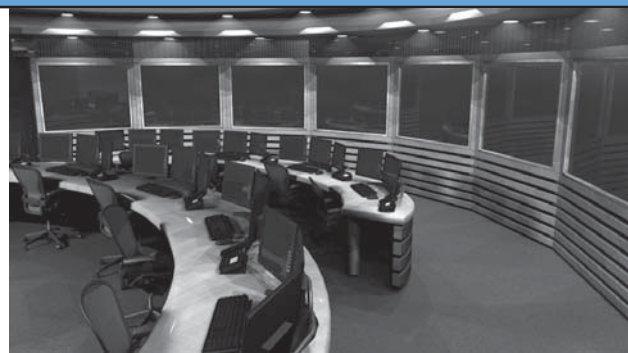
C4ISR

For military operations the challenge of rapidly increasing sophistication and sources of situational awareness data across the spectrum of conflict are quickly outpacing the IT infrastructure currently in place. The rapid adoption of UAVs, UAS and RPVs as well as growth in ground and space based surveillance has had a multiplying effect on the amount of real-time data feeds and processing. In addition, high definition and rapid response requirements have further added to the burden on command and control centers. Also, the rapid growth in cyber attacks adds additional complexity to the C2/C3/C4ISR operating environment.

State and local governments are also experiencing a dramatic increase the quantity and quality of data feeds for emergency response. Federal, state and local agencies are often mobilized to address the threat landscape or respond to emergencies.

To achieve optimal performance of real-time data feeds and content delivery from multiple sources across multiple networks in order to coordinate a multi-agency response, the command and control computing systems must have these key feature sets:

- **Secure** - Incorporating robust hardware security into the C2/C3/C4ISR infrastructure eliminates downtime and mitigates the escalating risks from cyber attack threat vectors.
- **Flexible** - The command and control system will need to operate on copper and/or fiber networks and be able to process the wide range of data feeds, including high definition video and support multiple monitors.
- **Agile** - Command and control systems resources have to be assigned on a moments notice. Therefore an agile system that can apply mission critical computing resources to C2/C3/C4ISR personnel is mandatory.
- **Reliable** - C2, C3 and C4ISR operations require much greater reliability than traditional computing environments. Therefore, the benefit of achieving 99.99% uptime by locating workstations in the data center is paramount to command and control success.
- **Sustainable** - With 24x7/365 operations being a requirement, Command and Control systems not only have to be highly reliable, but they also have to deliver sustained operations by eliminating heat and noise from the operating environment while consuming a fraction of the energy of traditional workstations.



PC-over-IP is an advanced remoting protocol for Command and Control centers.

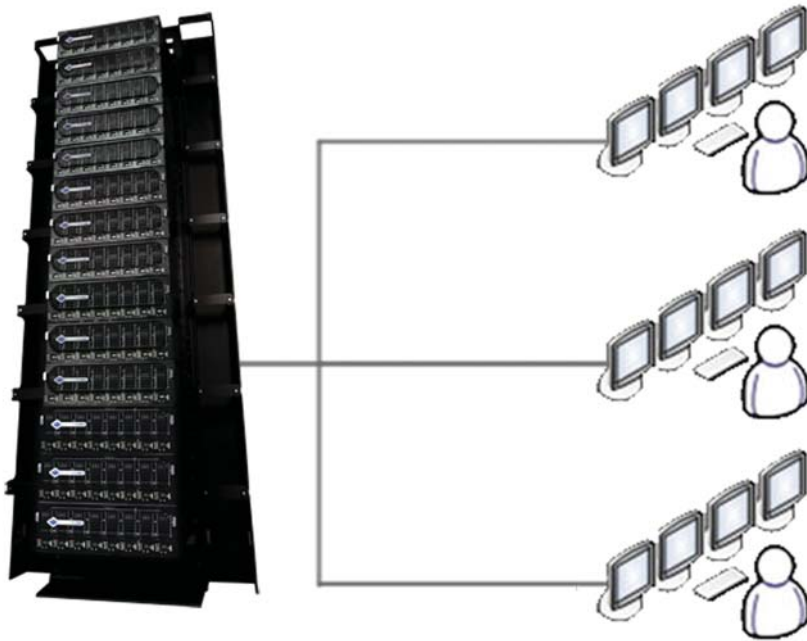
PC-over-IP technology allows enterprise PCs and workstations to be centrally managed in a data center while providing high resolution, full frame rate 3D graphics and HD media, with full USB peripheral interoperability, locally over a LAN or remotely over a high-latency WAN.

PC-over-IP is an innovative display protocol technology that enables the practical consolidation of all IT resources into a data center, eliminates the need for desktop workstations, PCs and thin clients, and delivers an uncompromised user experience to each desk, anywhere, without incurring the security risks associated with transmitting data across a network or having data reside in remote PCs.

ClearCube has the largest installed base of PCoIP Command and Control workstations, including:



ClearCube Technology
www.clearcube.com
1-866-652-3500



ClearCube C7424 Digital Fiber Zero Client with Integrated Smart Card Reader

A ClearCube Zero Client connects the monitors, keyboard, mouse and USB devices to the ClearCube PCoIP secure blade workstation over fiber or copper networks.

By replacing desktop PCs with ClearCube Zero Clients over 94% of the heat and noise will be eliminated from the work environment. In addition, ClearCube Zero Clients utilize 30 watts or less which significantly improves the ability to sustain command and control operations.

The ClearCube Zero Clients seamlessly connect to high performance workstations or VMware View virtual machines. They deliver a lossless image for high performance high definition video environments.

ClearCube Zero Clients are tamper resistant, don't have a hard drive, don't store data and they don't have an operating system. Therefore they're not prone to viruses or require software patches and are highly secure.

ClearCube Command & Control Secure Workstations in the Data Center Accessed with ClearCube Zero Clients

ClearCube invented the blade PC and continues to innovate with PCoIP secure blade workstations for command and control centers. ClearCube blade workstations deliver the highest level of physical security that include:

- Intel AES-NI - Advanced encryption hardware acceleration and key security
- Intel TXT - Trusted Execution Technology for safeguarding controlling software
- Intel TPM - Trusted Platform Module for high performance cryptographic and authentication processes
- ClearCube MSL - Mass Storage Lockout which eliminates the risk of removable media by locking out unauthorized storage devices from the workstation blades.

ClearCube PCoIP secure blade workstations utilize the latest Intel processors for high performance computing and video performance for command and control centers.

To learn more about ClearCube PCoIP Command and Control Secure Workstations or to Setup a Demonstration call: 1-866-652-3500 or email: sales@clearcube.com