The world's largest virtual training system, Combined Arms Tactical Trainer (CATT) developed through Lockheed Martin under contract with the British government, connects up to 400 war fighters, enabling them to train together in an immersive computer-generated environment.

Soldiers at each training center enter a vast network of linked simulators and emerge onto a virtual battlefield where they can train together in real-time. The realistic, geo-specific environments support training for ground, air, logistics and other components of the modern-day battlefield.

Currently, there are two training sites in operation for the British Army: Warminster, England and Sennelager, Germany. Both sites have the capability to be linked through a wide area network for larger training exercises, making CATT the largest networked virtual training system in the world.

The CATT simulators use a combination of Comtrol’s RocketPort® and DeviceMaster® connectivity platforms. Comtrol’s Rocketport PCI cards provide connectivity for each simulator being linked to a multitude of sensors, while the DeviceMaster platform network enables each simulator to be linked to different locations and tactical groups.

There were a number of connectivity challenges to overcome in the CATT system’s design, and with the amount of simulators to connect, the number of IP addresses were in short supply. Comtrol’s high density DeviceMaster allowed 32 simulators to attach to a single IP address, minimizing the load on the network.

Overall system performance and latency requirements were also critical to the application. Comtrol’s RocketPort cards and DeviceMaster device servers provided an ideal match of performance and functionality.

The CATT simulators provide a large variety of battlefield situations, vantage points and conflict combinations for soldiers to train.

Simulator training specifications include:

- Each training site supporting individual infantry up to battle-group level exercises, with 400 soldiers being trained together against computer-generated forces
- Seventy manned simulator modules with high-fidelity turret and driver compartments
- A system offering 70 different software-reconfigurable generic simulation options defined by the user
- Dismounted infantry stations supporting individual and section training, including combat weapons and observer roles
- Realistic radio communications, both voice and data, across several networks
- High definition visuals using state-of-the-art computer image generators, with 3 choices of geo-specific computer-generated terrain
- Ten battle-group headquarters command cells: Operations, Intelligence/NBC, Fire planning, Engineering, Mortar, Anti-tank, Step Up, Maintenance, Support Company Command and Medical
- Eighteen role player stations for the control of battle-group, sub-unit and opposing force assets Six Exercise Observer/Control stations to provide oversight, interaction and input
- Real-time data logging for after-action reviews in 4 theaters

Comtrol’s connectivity offerings provided the scalability and flexibility needed to link all of the systems together; from each individual simulator to entire networks of training facilities.

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**Product Description:**

The Comtrol DeviceMaster RTS 32-Port Rack Mount RJ45 is a 32-port device server designed for network-enabling serial communications devices. When used with the included NS-Link™ driver software and a host PC, the DeviceMaster RTS enables placement of COM or TTY ports anywhere on an Ethernet network or across the Internet. In applications where connecting legacy serial devices to a PC without software changes is a requirement, a pair of DeviceMaster RTS units can be used to create a point-to-point serial tunnel across the network that seamlessly transfers serial data via TCP or UDP socket connections.

**Key Features and Benefits:**

- No serial cable distance limitations enables communication between a host PC and serial devices located anywhere across an Ethernet network.
- RS-232/422/485 software selectable.
- Native COM, TTY, or TCP/IP socket communication modes.
- Provides 32 serial ports in a 1U rack mount space.
- Web-based configuration makes setup and management changes quick and easy.
- Real-time e-mail event notification alerts administrator of potential connection and security issues.
- Rugged metal housing enables rack mounting.
- Wide operating temperature (-37° to 74°C).
- PortVision® DX remote monitoring and management software.
- Software developer kit available for users interested in writing custom applications to run on the DeviceMaster platform.
- SSL & SSH management, SSL serial data stream encryption.
- RoHS2 compliance under CE.
- IPv6 support.