Rapidly Deployable Advanced Mobile Communications

In today's rapidly changing world of voice and data communications the ability to deploy advanced mobile communications systems in any location and at a moments notice is both expected and critical to military success. The tactical challenge is heightened in peacekeeping and disaster recovery situations where the need to respond to local civilian communications while maintaining conventional warfare capability places new demands on the use and flexibility of deployable communications systems.

Deployable systems conventionally break down into two types of equipment; either physical level patching and switching products, or higher OSI level switches, routers and access devices. New generation products provide a greater level of integration, embedding some physical layer switching capabilities within the routing and switching platforms themselves.

Companies such as NSGDatacom are rising to the challenge of building new generation products that facilitate the rapid deployment of mobile systems. Such solutions allow a dynamic mix of terrestrial, wireless and satellite communications to be utilized by combining conventional patching and switching functions with automated switching and routing systems. Advanced software control capabilities and simple patching capabilities facilitate the initial deployment with maximum flexibility for multiple real-time field reconfigurations.

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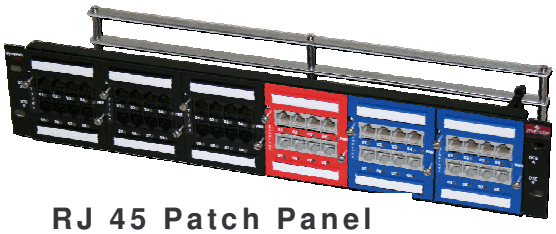

RJ 45 Patch Panel

For example, the newest generation voice/data switching platforms have the capability to passively monitor an existing link and upon a given event physically “take over” one end of the link and reroute over a backup or substitute connection. The inherent flexibility of software control and a highly programmable management interface allows features such as voice and/or data compression to be automatically enabled over low bandwidth or high cost links such as satellite, and to automatically fall back to lower cost circuits when they become available. Such switches can be programmed to respond to more than just link failure. High link error rate, high demand, time of day or other criteria can be invoked to bring on additional bandwidth for temporary periods. Recovery may be automatic or be placed under manual control with information on link stability and operational statistics accessible in real time from a centrally located management system.

In the military environment physical level routing for emergency services or secure communications may still need to be under manual control. Physical line patching for manual re-routing of communications is still a critical component of modern deployable systems. The latest generation of patch panels provides new capabilities and is smaller in size than conventional patching and switching systems.

Normal-through patch panels allow an initial clean installation with no basic wiring visible to the operator and with the ability to rapidly reconfigure connections on location. Reliable changes can be made quickly, clearly and simply using patch cords. Clear labeling allows changes to be instantly recognizable and understood by any qualified personnel. Additional benefits such as embedded line activity monitors, patch trace capability and field replaceable hot-swappable modules are also typical of these systems.

NX 2205D

NSGDatacom provides solutions for the manual and automated redirection of communications. Its patch panels and Nx2200 series of switch/routers compliment each other in their use in deployable systems. The patch panels provide manual re-direction of communications and were designed in conjunction with the US Military for use in mobile systems being deployed around the world. Normal-through circuits provide primary connections that can be instantly redirected via patch cords, which also provide visual confirmation of all temporary changes.

The newest Nx2200 series products provide embedded physical layer monitoring and switching in addition to higher-level ISO functionality for automatically redirecting voice and data traffic. In the event of a primary link failure these products can optionally compress and route toll quality voice and data over an alternate wireless or satellite network connection. They also allow a controlled return to normal link when primary communications are restored. Nx2200 series products are already used extensively by the Military for voice and data communications over satellite.

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