



CATI
Center for Advanced Technology and Innovation

Cooling System for Electronic Equipment Cabinets

Description: An apparatus for providing cool air to electronic module cabinets where a plurality of electronic modules are stacked within the same, such that front surfaces of the modules face a front cabinet opening, the apparatus including a plenum door assembly having an inlet for receiving cooling air and a plurality of outlets, the outlets positioned proximate the front faces of the electronic modules so as to provide cool air to the unit, the modules in some embodiments having fans that draw air to back sides of the modules opposite the front surfaces, the plenum openings being adjustable to modify the amount of cooling air being delivered to the modules.

Patent:

US Patent No. 6,535,382 Issued 03/18/2003

Market Potential: This type of unit would find application in server farms, in locations where multiple servers have to be located together and external cooling is required in order for the equipment to operate effectively.

Benefits: The present invention is directed to air cooling for electronic equipment and more specifically to a system for delivering cooling air to an electronics equipment cabinet. This is a superior and more cost effective approach relative the commonly used raised floor cooling systems. In addition, it is recognized that a plenum or other form of air delivery member can be constructed on the inside of an electronic module cabinet door that can deliver cool air extremely efficiently to modules inside the cabinet to increase overall cooling efficiency. In some embodiments the plenum includes the cabinet door while in others the plenum can be a retrofit assembly that can be added to an existing door to provide the cooling air. In several embodiments cool air is pumped directly into the plenum via a conduit member that extends from a cooling air source below the cabinet. In general terms, the invention lends itself well to the modular cabinet designs found throughout the industry and is highly adaptable to the same.

Contact:

Kate Walker -- CATI Assistant Director
kwalker@thecati.com -- 262-898-7410