# Emergency 24/7 Telecommunications

# Design Note #15

Vigilant 24/7 emergency telecommunications service by Orchid Technologies.

Natural Microsystems, a world-wide telecommunications industry leader, engaged Orchid Technologies to perform the hardware design of their 911-enabled multi-port telecommunications hardware engine.

## 911 Service Takes No Holiday

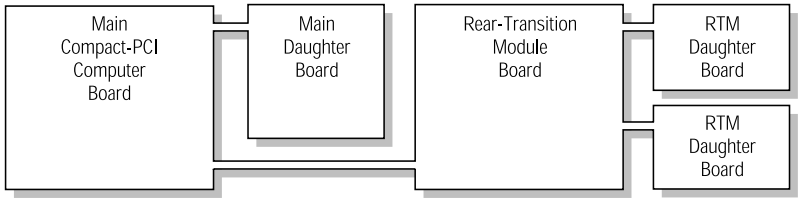
Uninterrupted 24/7 availability is a strict requirement of 911 telecommunications service. Electronic hardware design must provide reliable, fault-tolerant operation under demanding life threatening conditions.

## Compact-PCI with 32 Loop-Start Ports

Support of 32 loop-start telecommunications ports in a Compact-PCI form factor presents a demanding design challenge requiring a creative and flexible design approach. This four board set, consisting of Main Compact-PCI Computer Board, Main Daughter Board, Rear-Transition Module Board, and Rear Transition Module Daughter Board provide the circuit board real estate to cram 32 fully functional loop-start circuits into a single compact-PCI slot.

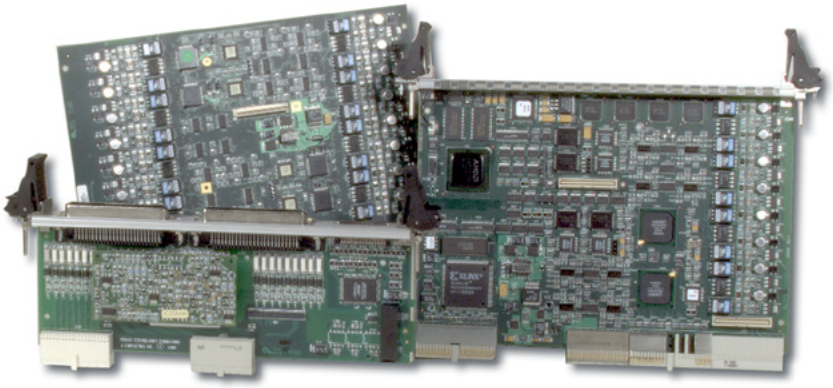
## Analog, Digital, and Dense

This four board set packs Analog Telecommunications loop-start circuits together with Digital Computer control circuits into a board set of unprecedented density. Concurrent design of each board permitted Orchid to trade circuit functionality between each board in the set. Telecommunications creepage and clearance factors were paramount in producing an approvable end-product.




## Serious About Electronic Product Design

Call Orchid today. Let us perform a dense, mission-critical electronic hardware design for you too.



**Custom Engineering From Concept to Production**

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