

Case Study: **eBay**

# eBay Bids for the Best with New Data Center



Project:

**eBay Data Center**  
South Jordan, Utah

**Tier IV Level Data Center**

**1,370**

Laser Smoke



**389**

Photoelectric Smoke



**253**

Horn Strobes



**130**

Strobe Devices



**40**

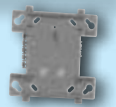
Horn Devices



Pull Stations



Monitor & Relay Modules



The **Internet giant's** continuous operations requirements **demand** a fire protection system based on **reliability and redundancy.**

eBay's business is global and entirely online, and having a reliable and powerful data center is core to its business. Supporting this mission-critical need was the goal when eBay decided to build a leading-edge, Tier IV level data center in South Jordan, Utah.

The master plan for the site breaks down into four phases, which will allow eBay to consolidate leased data center space currently spread across three states. The first phase of the project

is a 240,000 sq. ft. building housing three 20,000 sq. ft. data center halls – one for eBay Marketplace, one for PayPal.com, and a third for expansion space. The facility has 7.2 megawatts of capacity in phase one with an onsite 30 megawatt substation.

This flagship facility is the second LEED® Gold-certified data center for eBay, which previously had one of its San Jose, Calif., facilities earn that distinction.

eBay managed this feat, in part, through a range of built-in energy-efficiency features, including 400 V power distribution, cooling from a water-side economizer system, in-row cooling units for close-coupled cooling, a hot air containment system to isolate the hot and cold air within the server area, and the ability to support power densities of up to 30 kw per rack using this design.

Because maintaining and operating this \$287 million data center is an absolute necessity, fire and life safety systems help meet the important goal of continuous operation and mission continuity. The fire and life safety system design complexities were handled by Schmid & Associates, P.C. Fire Protection Engineers of Maryland. Getting the system up

in the programming – let alone the vast number of very early warning detectors used.”

And they’re relying on System Sensor and NOTIFIER’s broad portfolio of products to make it possible – from very early warning laser smoke detectors that can provide warning of incipient fires before disaster strikes to duct smoke detectors and addressable photoelectric smoke detectors all networked to three NOTIFIER NFS2-3030 panels. Even the several hundred track units are networked into the panels for complete localized monitoring.

According to Ferrin, the key to dealing with all the intricacies involved was collaboration with the electrical engineer and the electricians onsite. “There were a lot of drawings and interfacing with the engineer going back and

“The new eBay data center requires **reliable and redundant fire protection**. The unique requirements **demand much more**, especially in the generator rooms and four chiller plants.”

— **Boyd Ferrin**, General Manager for the fire side of Mountain Alarm

and running was awarded to Fire Protection Service, Mountain Alarm of Ogden, Utah.

“The new eBay data center requires reliable and redundant fire protection. The unique requirements demand much more, especially in the generator rooms and four chiller plants,” says Boyd Ferrin, general manager for the fire side of Mountain Alarm.

The fire and life safety system design was specified to use 50 percent capacity loads, which coincides with eBay wanting to achieve high levels of redundancy while using as much as 50 percent less energy than other facilities that it leases.

For the fire and life safety system, this was achieved using several loops, which increased programming. “The devil is in the details,” says Ferrin. “With numerous designated preaction zones, we had to make sure that if something happened in those areas, there was redundant protection and confirm that the formulas and calculations were accurate and written correctly

forth to make sure it was correct and minimizing change orders. The technician was well trained and handled the detail in which things needed to be programmed. And now we’re in there doing test inspects on the facility. Everything is still working up to par,” he says.



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