

## Raritan's PX-1000 series - enter the affordable intelligent rack PDU

Datacenters and Colocation

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Tier1 Research is seeing more deployments of power monitoring equipment in new datacenter builds and expansions. This can be achieved in a number of ways – branch circuit monitoring at the PDU or RPP level and rack-level smart PDUs/power strips that monitor and report at the rack level or individual circuit level depending on the product. There is little debate that providers and end users want this type of power monitoring intelligence; but the main contention and barrier to adoption in most cases is the cost. While prices for these types of systems range widely, initial up-front cost can be \$1,000 per rack or more. For a few hundred racks, this can obviously get quite pricey and decision makers often view it as a luxury.

**Raritan**, well aware of this challenge, recently disclosed the unveiling of a new series of intelligent rack PDUs, the PX-1000 line, which targets smaller operations. It is positioning the product as a power management system for datacenters of all sizes, starting at a reasonable \$450 per unit. Functionality of the smart PDUs is in line with what you would expect from such a device – datacenter managers may view PX-1000 analytics at the rack on LED displays, or from a remote user interface on the Web. The skeptic would assume that the analytics available would be fairly minimal, but as it turns out the PX-1000 line includes the important metrics – voltage, current (amps), power factor, apparent power (kVA), active power (kW), environmental temperature, humidity, and energy consumption in kW-hr. T1R thinks this is more than enough for most folks, and anyone hoping to capture PUE or other such trended metrics would likely find this attractive.

When one thinks about power monitoring and trending, the notion of metered billing also comes to mind (especially in the multi-tenant world). One would also assume that this affordable smart PDU would have a high range of meter accuracy. What is most impressive, however, is that the kWhr metric is measured in real time to ISO/SEC +1/-1% billing grade accuracy, and not through the use of calculations or assumptions. For metered billing applications (or the ability to add this type of functionality in the future), this system is very compelling.

Power and environmental thresholds can be set to trigger alarms in the event of emergencies, so managers can respond immediately – pretty standard fare. The units are also compatible with Raritan's Power IQ energy managing software and optional environmental sensors that capture humidity and temperature around the rack that plug into the PX-1000 are available should additional granularity be desired

### T1R take

There are two trends in eco-IT that will genuinely improve datacenter efficiency in the short term: innovative cooling systems and power management systems. We continue to see more and more analytic approaches as of late and expect to see this trend continue. Price, however, has been a significant barrier to adoption, and Raritan's PX-1000 line of smart PDUs has been one of the most affordable options we've seen to date. Tier1 Research thinks we're likely to see many folks in the industry evaluate these types of systems when they have balked at price in the past. This is good timing for Raritan also, since we are continuing to see an upswing in new datacenter construction. As we've discussed before, retrofitting any type of power monitoring system can be disruptive and quite risky. We expect, therefore, that Raritan will see great success with its more affordable line of rack-level smart PDUs.