



IEEE 802.3 Inline Power

Cisco AVVID and Cisco IP Communications

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The foundation of Cisco AVVID is open-standards, and to this end, Cisco is committed to the development and implementation of industry standards, and to open interfaces through the AVVID Partner Program.

Inline Power

Inline Power is 48 Volt DC power provided over standard Ethernet UTP cable. Instead of using wall power, Powered Devices (PDs) such as Cisco IP Phones utilize power provided from Power Source Equipment (PSE) such as Cisco Catalyst Ethernet Switches.

Inline power provides a universal low-voltage power distribution system that dramatically lowers power provisioning and administration costs, and enables high-availability network designs. Uses for inline power include IP phones, wireless access points, and building telemetry.

Cisco Inline Power

Cisco pioneered Inline Power over Ethernet with the release of Cisco Catalyst Inline Power in March of 2000. Cisco has shipped more than 8 million PSE ports on the Catalyst 3500, 4000 and 6500 families of multiservice Ethernet switches. Cisco PDs include the Cisco IP Phones and Aironet Access Points.

Cisco Inline Power is pre-standard, as the IEEE 802.3 standard does not include specifications for power over Ethernet. The 802.3af task force will amend this omission and a standard is expected to be available by Mid-2003. Cisco is actively involved in the 802.3af taskforce and is committed to the development and support of the IEEE inline power standard.

Statement of Direction

The IEEE 802.3af Draft for inline power is evolving (as of July 2002), and should become a ratified standard in the first half of 2003. The standard will comprise a base set of requirements and a number of options. The options include:

IEEE 802.3af Optional Feature	Introduced in	Benefit
1. Power Classification signature in the PD	Draft 3.0	Power provisioning and operational savings. The PD defines its maximum power consumption to the PSE for power conservation
2. PSE Power Classification	Draft 3.0	1. Power provisioning and operational savings. The PSE only budgets sufficient power to cover the maximum power reported by the PDs Power Classification signature. 2. Solution cost reduction. Through tight management of the power budget the PSE can support a higher number PDs for a given power budget.
3. AC-based PD removal detection	Draft 3.1	Lower capital cost

Cisco fully intends to support all the base IEEE inline power requirements, and the above options to provide a reliable, fully featured implementation on all Cisco inline powered IP Phones, Aironet Access Points, and Catalyst Ethernet Switches. Support for IEEE inline power should be available in approximately the same timeframe as the ratified standard.

Investment Protection with Cisco Inline Power

To preserve customer's existing investment in Cisco Inline Power, Cisco intends to implement Cisco Inline Power and IEEE inline power on future Cisco PDs and PSEs. This will enable existing Cisco Inline Power PDs and PSEs to be connected to future Cisco IEEE PSEs and PDs.



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