

Go to [www.edn.com/051216pe](http://www.edn.com/051216pe) to see images of the meat of the Mac Mini as well as a more detailed write-up.



# Thinking different

With the Mac Mini, Apple squeezes substantial computing horsepower into a diminutive form factor

The carefully thought-out design of the Mac Mini enables Apple to squeeze a solid-performing, quiet, and cost-effective computer into a 6.5×6.5×2-in., less-than-3-lb form factor. Read about some of its elements here, then visit [www.edn.com/051216pe](http://www.edn.com/051216pe) for a more in-depth description of the Mac Mini's building blocks, along with a series of high-resolution images of the system internals, courtesy of Other World Computing ([www.otherworldcomputing.com](http://www.otherworldcomputing.com)).

**Rectangular antennas** for the Mac Mini's Bluetooth/WiFi wireless module clip to the internal frame at the top of the unit; the Bluetooth antenna is in the front left corner, and the WiFi antenna is in the back right corner. Along the left side of the system is the single-slot PC7200 (DDR-266) DRAM module.

**Wireless mezzanine** and analog modem boards mate to the main system board by means of connectors and mounting screws. Underneath a passive heat sink, you'll find the Freescale G4 PowerPC CPU, along with ATI Technologies' Radeon 9200 graphics processor and its corresponding 32 Mbytes (64 Mbytes on latest generation systems) of frame-buffer DRAM.

**A Matsushita/Panasonic UJ-835F SuperDrive** plays and burns DVDs (as well as CDs); lower-priced system variants contain "Combo Drives," which are capable of reading, but not writing, DVDs but read and write CDs.

**Underneath** the optical drive is the 2.5-in. hard-disk drive. When swapping out the drive for a faster replacement, a denser one, or both, be careful to note that it's mechanically possible to install the hard-disk drive upside-down!

**Airflow** is one of the most intriguing aspects of the system design. Air enters the system through a series of vents at the periphery of the Mac Mini's underside. It flows through a fan and over a passive heat sink and finally exits the system through a vent at the back of the unit, where you'll also find two USB2 connectors, a Firewire-400 connector, a DVI-I video port, a 10/100-Mbit Ethernet port, a modem port, a headphone jack, a power connector, and the on-off switch.

