

I've had computer hardware and software related jobs since 1990. This document only shows my "highlights" in the computer hardware industry.

ASI

In 1997, I worked in the RMA/RTV department of the Tampa branch of ASI. I was responsible for testing returns, replacing them and returning defects back to the manufacturer. After my supervisor left in 1998, I took over managing the department.

TCWO

In 1999, I took a position as technical support lead at Thompson's Computer Warehouse (TCWO). Responsibilities included providing technical support, troubleshooting, doing compatibility testing, processing RMA's and doing RTV.

It was at TCWO that I gained a wide breadth of knowledge of several different computer hardware components.

In 2002, we launched a line of complete and barebones PC builds called TRÜ.

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The TRÜ product line provided many new opportunities. Not only was I allowed to specify the hardware used, but I was in charge of setting up the assembly line for putting the systems together in mass production.

Ultra Products

In 2005, when I joined Ultra Products, they had just released the X-Connect fully modular power supply and were working on the updated X2 version of that power supply. X-Connect and X2 did not have active power factor correction or a level of efficiency that could be considered a marketing advantage. Furthermore, the build quality from using factories like Wintech and Youngyear was questionable.



Photo from bit-tech.net

I expanded Ultra's "X-Connect" product line with X3 and X-Finity (fixed cable version) series. Increased wattage offerings up to 2000W. Added full range APFC and 80 PLUS efficiency to product offerings.

In 2006, we marketed the "Chill-Tec" CPU cooler. The cooler featured a TEC (thermo electric cooler). But instead of using the TEC to cool the CPU directly, heatpipes coming from the evaporator mounted to the CPU's heat spreader are cooled with the TEC.



Up to now, all of Ultra's cases were rebadged Chenming/Chieftec cases. I appreciated the Yeou Chih YCC-61F1 chassis, sold in Europe as the GlobalWin YCC-61F1, for its aluminum construction, 120mm fan mounts and removeable stainless steel motherboard tray.



I updated the looks a little changing the color to black (the case was originally sold in classic “ivory” color), putting a window in the side panel and adding the vent for the CPU cooler and the GPU. Also, inside we added a small PCB that could replace longer motherboard cables. The user would simply plug all of the PSU cables into the top of the PCB. The PCB would then carry the power down to connectors located closer to where the power is needed on the motherboard, graphics cards, drives, etc.

BFG Technologies

In late 2007, I was given the opportunity to move up to Illinois and become part of the BFG Technologies team as their first and only power supply product manager.

Since BFG was known for premium products made for demanding customers, I decided to take some chances on raising the bar in the tech used in my power supplies.



Resonant mode LLC had been used in many power supplies in other parts of the industry, but the BFG ES800 was one of the first, if not the first, to use it in an ATX desktop PSU. An ON Semi NCP1395 controller was utilized. We also played with a different PCB layout from what was typically used to help improve airflow within the PSU.

In 2009, I decided to step up the game and increase the wattage to 1000W and 1200W as well as introduce a semi-modular version called the “EX Series”. DC to DC for the +3.3V and +5V were also added, which was very new for ATX power supplies at the time.



I also expanded the remaining PSU product line up at BFG to include lower wattages and more entry level offerings in order to hit every potential price point.

In 2009, my responsibilities expanded from PSU PM to case PM as I made several trips to China and Taiwan to find the ideal chassis manufacturer for BFG's new system's, called Phobos.



Phobos was a top of the line gaming PC, featuring all closed loop cooling and an ARM powered touchscreen that allowed the user to control fan speed, overclocking and monitor temperatures and more.

Later in 2009, we released Deimos. Once again, I had to expand my product management skills beyond power supplies. But essentially the Deimos was a rebadged Clevo M980NU, so managing this product meant making sure all the configuration options were available. CPU, RAM, optical drive and graphics cards were all configurable.

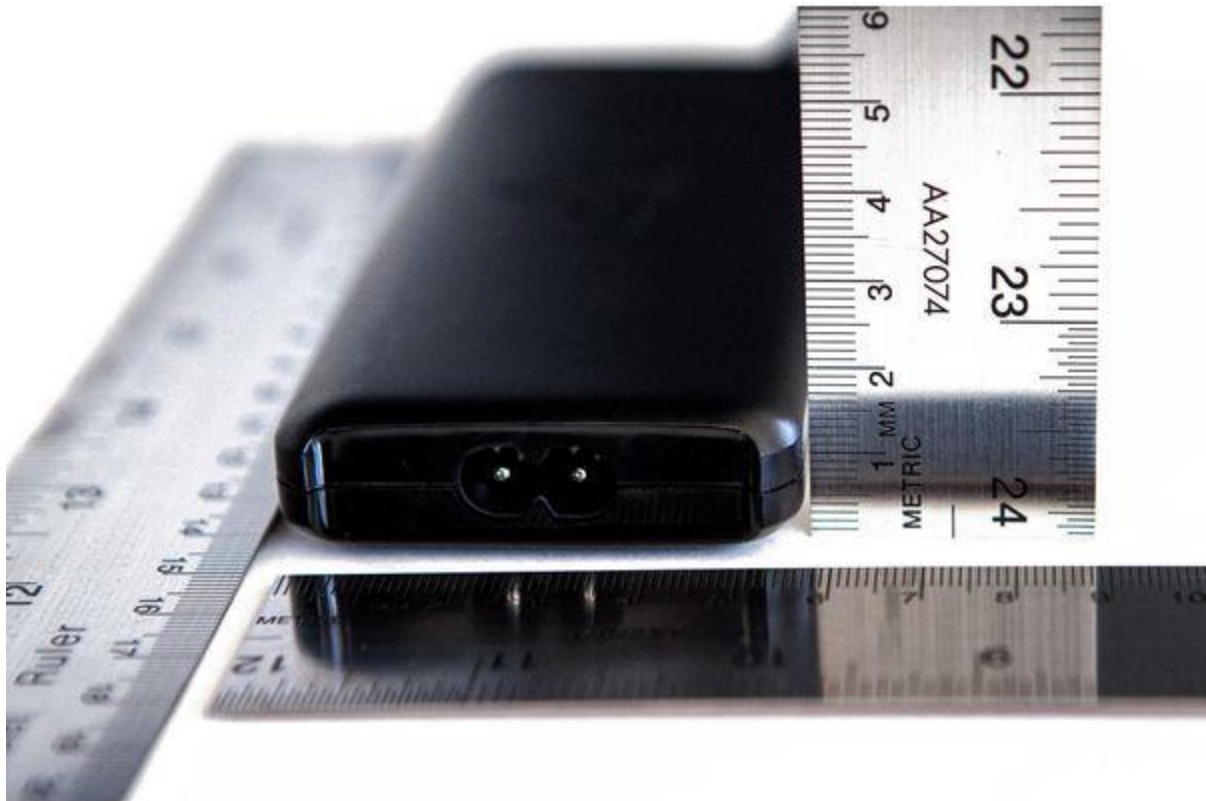


Unfortunately, sometimes very good things come to an end. In 2010, BFG did not get the allocation of GTX400 (Fermi) chips to supply their number one customer, Best Buy, so Best Buy dropped BFG graphics cards from their assortment. The power supplies followed soon after.

Razer Products

In 2010, I received a call from Min-Liang Tan from Razer. He told me about a new gaming laptop Razer was working on, the Razer Blade, and wanted me on board to help create the power adapter.

The goal for the power adapter was to not only meet the aesthetic standards Razer customers have come to expect, but also achieve a power density not previously achieved with laptop power adapters.



The result was the Razer power brick shown above. Measuring in at only 148mm x 59mm x 19mm; the feat was achieved by using resonant mode LLC with a very high switching frequency, which was unheard of at the time.



In the above photo, we can see two of your typical 120W laptop power adapters, with the Razer Blade power adapter to the far right.

While there were additional Blade laptops on Razer's roadmap, there were other mobile devices I was enthusiastic to design power adapters for. At this time in 2012, Razer had acquired the design and engineering team from OQO. And while I worked well with them and respected their experience, they

wanted to take the direction of using adapters provided by the ODM's of the mobile devices being built. I decided I needed a challenge, so I left Razer to pursue an opportunity at Corsair Components.

Corsair Components

When I first started at Corsair, I worked as the technical marketing manager for their power supply product line. In this position, I would write the reviewer's guides, marketing copy and any kind of technical documentation required for the power supply product line.

When our director of technical marketing, John Beekley, retired in 2014, I took over managing the technical marketing department at Corsair. After a year and a half, I moved to the product marketing manager position for the power supply category. After another year and a half, I moved from marketing to the R&D department and managed the PSU engineering department for a year.

Since I'm qualified to talk about computer power supplies and don't shy away from the camera, I've ended up in a number of Corsair videos:

<https://www.youtube.com/watch?v=UM3eGLiKbKg>

<https://www.youtube.com/watch?v=PRpPFefuICO>

https://www.youtube.com/watch?v=WvGyJB_hSvs

At CES 2018, we launched the AX1600i power supply.

And what's a launch without a video?

<https://www.youtube.com/watch?v=FDLWWvXJ0Q0>



This was a huge accomplishment for everyone involved. The AX1600i was the first desktop power supply to go to market with GaN components. We replaced the entire silicon based bridgeless PFC circuit of our prior flagship product, the AX1500i, with a Transform GaN Totem Pole solution. This allowed us to increase efficiency, which helped reduce temperatures, making the PSU quieter at higher loads. And since the PSU used less power, we were able to output 100W more than its predecessor. And because of the higher switching frequency of the GaN components, we were able to reduce the size of other components reducing the overall size of the product by 20mm.

In March 2018, I was promoted to director of PSU engineering where I hold my position today.