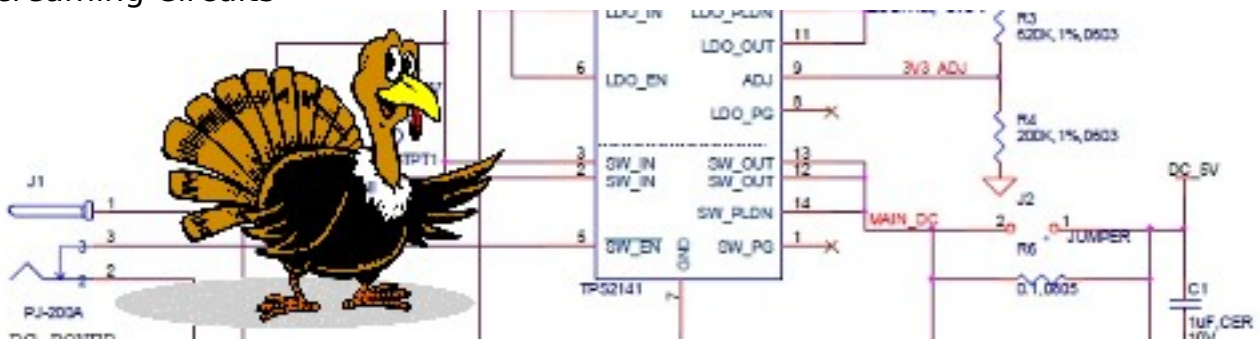
Top Ten Electronic Things To Be Thankful For in 2009

Screaming Circuits



It's that time of year again when we take stock of what's good in our little worlds. Since I'm writing this on my work blog, I'll keep my top ten items focused on work-related thingys.

Number 10: Allocation!? Well, maybe. Nobody likes parts shortages and allocation, but maybe, just maybe, it means that we're seeing the light at the end of the recession tunnel.

Number 9: The mighty QFN. Yes, I know the package can be a pain to layout properly, but the size reductions we can get with it are pretty cool. It used to take something like a TO-220 or D_2Pak to drive an amp of current drain, but some of these new devices can do it in a little QFN (properly laid out, of course) form-factor.

Number 8: 99.47% on-time delivery in the last year. That's less then one job late per month - and remember, if we're one day late, the assembly is half off and if we're two day's late, the assembly is free.

Number 7: The Beagleboard being open source. It's really opened up the world of high-end non-i86 embedded processors to a very large segment of the industry that just couldn't quite get there before. Well done Beagleboard folks!

Number 6: The Internets. Back in the olden days when I was burning my fingers soldering up discrete transistors and plain TTL and such, I had a shelf of data books. I think I may still have an old purple National Semiconductor TTL data book buried in a box somewhere. It was always cool to page through those data books, and, of course, I didn't need to be online in order to find what I needed, but heck, I can find it all now and even more without getting up and walking across the floor to my book shelf. In fact, I pretty much don't have to move at all anymore thanks to the Intertubes.

Number 5: Google translator. Earlier today, I got an email written in German. Before online translators, I wouldn't have been able to do anything with it and I would have missed a very big opportunity. The email was from a barrister in the tiny country of Togo. Apparently, he's been looking for an heir to pass an

inheritance to and can't find one. He said that he went to the American embassy and they suggested me. If not for the Google translator, I would have missed out on this wonderful opportunity to get seven million dollars transferred right into my bank account.

Number 4: Level translators. It's still a pain to deal with interfacing signals at different voltage levels; like a 5V I2C device to a 3V I2C bus to a 1.8V GPIO, but it was way more of a pain before easy to use level translator chips became widely available. Especially the bi-directional chips. Much more convenient.

Number 3: Better static protection built into chips. Yes, we still religiously use static ground straps. We have a conductive floor and wear foot straps and anti-static jackets and have anti-static stuff all over the place, but chips are so much more robust then they used to be. I can remember the old 4000 series CMOS chips. It almost seemed like if you breathed wrong, they'd get zapped.

Number 2: The LGA form-factor package. Just kidding. LGAs are annoying. Sure, there are some redeeming qualities: low profile, a RoHS part can go both leaded and unleaded, decent heat transfer. But, they also don't flex as well as a BGA and the pads have the disdvantages of both BGA and QFN packages. Basically, they're just annoying.

Number 1: And the number one electronic thing that I'm thankful for are these little Flash 8-bit microcontrollers like the PICs (that I use) and Atmels (like the Arduino uses). Holy mackerel, they make life a lot easier. All that GPIO, no support chips. And, self programmable flash. Ahhhh... Anybody out there still have a UV EPROM eraser?

Duane Benson
Embedded in my head

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