Breaking Down The Valuation For Nest's $3.2 Billion Purchase Price

At over $3 billion, it seems like pretty much everyone thinks Google overpaid for Nest.

Now while the company hasn't really revealed what it's total unit sales or revenues are, that leaves us mostly guessing, including me. So to make my guessing a little more accurate (or at least a seem a little more accurate), I decided to do some back of the envelope calculations to try and figure out exactly what Nest's overall unit sales and resulting revenues were, which hopefully would help me better understand what type of valuation multiple Google may have paid.

So, here goes:

I assume that since Nest CEO Tony Fadell said the company has thermostats in roughly 1% of US homes, that they've sold probably 1 million or so thermostats. Given that at the beginning of 2013 they were selling roughly 50,000 per month, I estimated that the company would likely have significant month over month unit sales growth, which at the end of 2013 resulted in an estimated monthly average of around 75,000 total thermostats sold per month.

Now to get at this average, mind you, the company likely would need to be at over 100 thousand units sold per month on average through the eyar, which I think is completely possible. In fact, I'd estimate the company is selling around 110 thousand or so thermostats per month at this point.

Looking forward to 2014, I think unit sales momentum will continue and possibly even accelerate now that they have Google behind them, so I'd estimate the company selling 200 thousand thermostats on average per month over the course of the 2014. What would that look like? Below my very back-of-envelope annualized unit sales estimate for Nest thermostats through 2015 with estimated revenue.

	2013	2014	2015
Thermostats	900,000	2,400,000	3,300,000
Wholesale price	125	125	125
Revenue	$ 112,500,000	$ 300,000,000	$ 412,500,000

For revenue, I use an estimated wholesale price of $125 for the Nest thermostat, which is 50% of the retail price of $249, times unit sales. I could be wrong on the markup (either way - too conservative or too aggressive), but I figure a 100% markup is a good ballpark.

Now of course, Nest isn't just thermostats anymore, they also sell a smoke alarm. The interesting thing about the smoke alarm to me is that it likely has much higher units-per-household ratio than the thermostats, meaning long term it could be much more valuable line of business.

For smoke alarms, I assumed the company sold 50 thousand of these in 2013 and will sell 600,000 in 2014 (a 50k per month run rate). For 2015, I can see that easily going

to 100 thousand units per month.
At a 100% markup, this is what I think the unit and revenue would look like:

	2013	2014	2015
Smoke Alarms	50,000	600000	1200000
Wholesale Price	65	65	65
Revenue	$ 3,250,000	$ 39,000,000.00	$ 78,000,000.00

Now we all know that Nest isn't going to stop at two products, and I think that means like more hardware as well as possibly subscription revenues down the road. I've heard whispers of Nest looking at getting into managed smart home subscriptions, which could mean anything from security to an AT&T Life-like managed home service.
I'm going to assume for 2014 that the company launches both a third hardware device as well as some form of subscription business. Below is what that would look like:

	2013	2014	2015
Hardware Category 3		$ 25,000,000.00	$ 80,000,000.00
Total Services Revenue	0	$6,000,000	$ 36,000,000

For services I assume a conservative take rate of 10% of their installed base, and assume that in 2014 they would only offer the service for half the year.
For the hardware, I am only speculating here, so my revenue forecast isn't specific about units or pricing, only that a half a year of a new device from a Google-powered Nest could result in an additional $25 million in 2014 and another $80 million in 2015.
Obviously this is a bunch of speculation put together with spit and gum, then wrapped in a rubber bands. True spit-balling, but I figured my spit balling is as good as anyone else's spit-balling.
So with all that said, this is what I estimate Nest's revenues to look like in 2013 and 2014:

	2013	2014	2015
Thermostat Revenue	$ 112,500,000	$ 300,000,000	$ 412,500,000
Smoke Alarm Revenue	$ 3,250,000	$ 39,000,000.00	$ 78,000,000.00
Hardware Category 3		25,000,000	80,000,000
Total Services Revenue	0	$6,000,000	$ 36,000,000
Revenue	$ 115,750,000	370,000,000.00	606,500,000.00

At those revenue numbers, that would put the Nest Valuation at roughly a 30x trailing revenue valuation and a 10x forward revenue valuation.
Of course, trailing or forward 12 month revenue, it's a rich valuation, but like with YouTube I think Google sees this acquisition as a way to enter an entirely new and largely greenfield line of business with a disruptive platform. For the right to entry the company clearly places significant value on and is willing to pay for the price of entry.

I also think that people need to realize that Google pays rich valuations in part because they like to keep the management team in tact. Think Andy Rubin with Android. I think they see Tony Faddell as their new hadware guy, the person who will lead the

vision for the connected home. They knew Tony and the Nest team are world-class, once in a generation type hardware designers, and for that they were willing to pay a rich premium.

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