

## Shining a light on Panasonic sale to Nuvoton: When quantity is not enough

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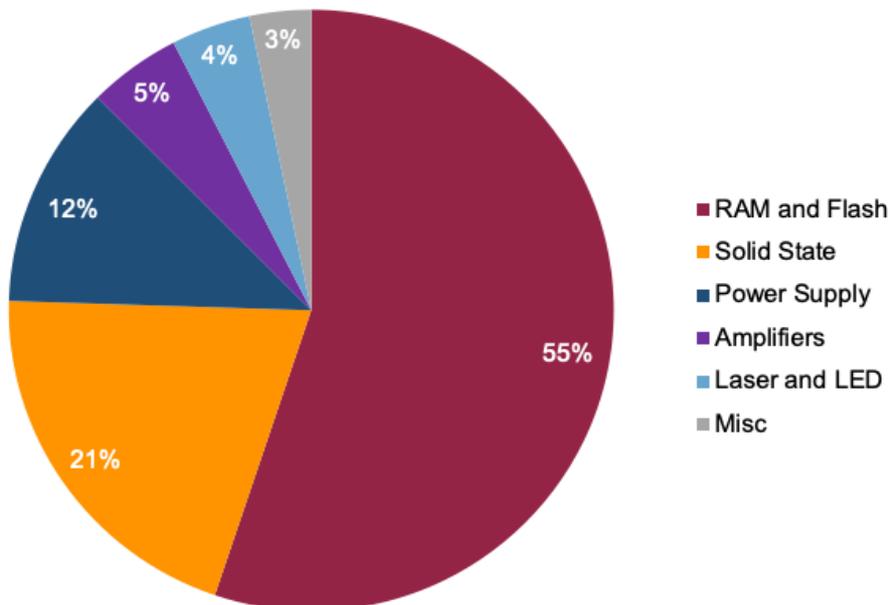
*“The goal is to turn data into information, and information into insight.”*  
Carly Fiorina, former CEO of HP

### What’s in the Sale?

When we see that Panasonic will transfer over 1,400 US patents as part of its recent sale to Nuvoton, what do we hear? On the one hand, Panasonic is delivering against its commitment to exiting unprofitable businesses. Panasonic Semiconductor Solutions (PSCS) sold for \$250m, with losses of \$214m. On the other hand, Winbond, and its subsidiary Nuvoton, is committed to growing its business even in the face of increased competition and an unstable geopolitical situation.

As Panasonic has slowly dismantled its interest in the sector (its first patent sale to WiLAN dates back to 2013), it is worth taking a closer look at what was included in the PSCS transaction. Chart 1 is the portfolio broadly clustered into technology areas.

**Chart 1: PSCS Portfolio by Technology**



### Gaining Territory, Some

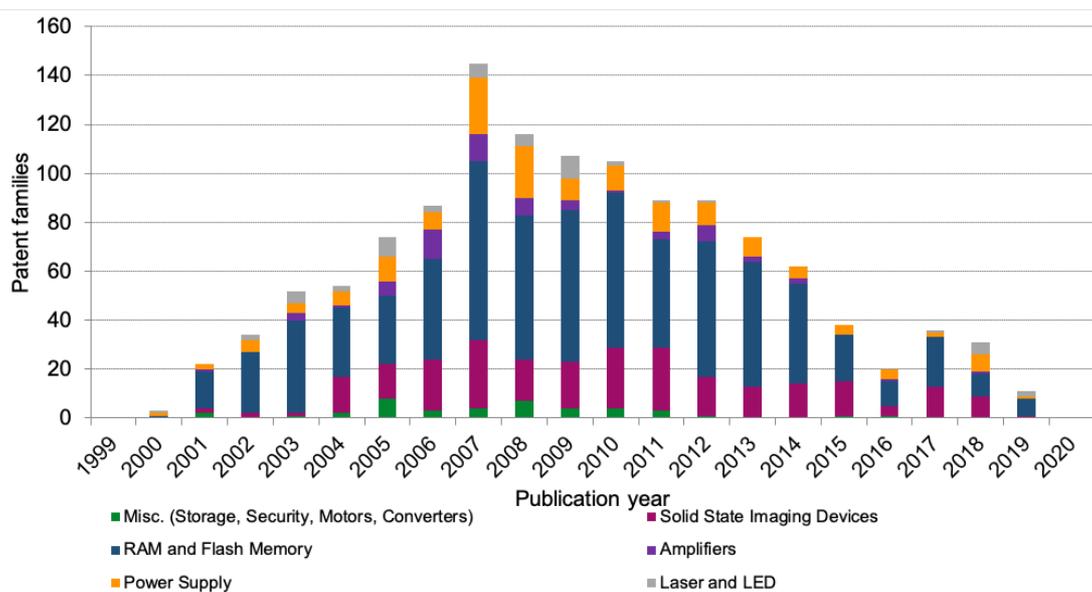
It is important to take a global view when analysing portfolios, and Chart 2 shows the PSCS portfolio broken down by territory. Over 90% of the patent assets subsist in the US, Japan, China, Taiwan and Germany. This is very different from Winbond’s portfolio, which understandably has a bias towards Taiwan.

**Chart 2: PSCS Country Breakdown**

	granted	pending
United States	1,341	52
Japan	634	314
China	301	77
Taiwan	12	61
Germany	35	20
Next 42	78	298
<b>TOTAL</b>	<b>2,401</b>	<b>822</b>

Also of note is the low number of applications, which makes sense as Panasonic have been exiting the sector for nearly a decade. Chart 3 indicates the priority dates of the PSCS families.

**Chart 3: Priority Date of Families, by Technology**



## Everything is Relative

What’s missing from this analysis is a sense of industry perspective. How will these patents support future business strategy? The semiconductor sector is one that understands the importance of patents, and it is home to some of the biggest portfolios in the world. The PSCS patent portfolio is not exactly small, but the PSCS business has now left the protection of the Panasonic mothership, and with it the IP benefits that come from belonging to one of the largest patent owners in the world.

Even after assuming the Panasonic rights, Nuvoton remains surrounded by organisations with much larger and more balanced portfolios, including Global Foundries (8,835 families), Infineon (10,684 families) and TSMC (16,696 families). Chart 4 is an aerial perspective of the size of the challenge.

**Chart 4: Sector Snapshot**

**Portfolio size: Active patent families, by organisation and technology**

	RAM and Flash Memory	Power supply	Solid State Imaging Devices	Amplifiers	Lasers and LEDs	Misc. (Storage etc.)	Unrelated	TOTAL
Intel	1888	382	468	161	23	52	29578	32552
TSMC	2805	140	211	29	12	10	13489	16696
Infineon	1583	570	132	107	14	46	8232	10684
NXP	1112	447	127	211	13	45	7475	9430
Global Foundries	1564	56	48	20	19	7	7121	8835
ARM	203	46	67	1	2	1	2617	2937
Winbond	327	42	6	6	1	0	1605	1987
PSCS	689	150	254	62	53	41	0	1249
<b>TOTAL</b>	10171	1833	1313	597	137	202	70117	84370

So, how does the risk of operating the Panasonic chip business compare with the protection afforded by the 1,400 patents included in the deal? In these situations, what’s required is the answer to the question [How Many Patents are Enough?](#) which we have explored in a couple of recent IAM [webinars](#). The solution which has been adopted by many in the sector is the use of an optimisation model, which requires a 3-step process. First, the design of a taxonomy that enables you to map patents to technologies. Secondly, the introduction of revenue data at the product level to understand the risk exposure. Thirdly, the use of both subjective and objective weightings to factor in both strategic considerations and also subjective factors such as the importance of the technology and the quality of the assets.

While Nuvoton have bolstered the size of their patent holdings as part of the acquisition, reducing risks depends on having a well-balanced portfolio. Most companies in this sector need the right blend of patented technologies in order to neutralise threats. Figuring out their patenting strategy going forward ought to feature high on their corporate agenda.

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*The model and some worked examples are set out in our webinar, [Beyond Portfolio Optimisation](#). For more information around the Cipher Reports referred to in this snapshot, access Cipher via your subscription or contact us directly at [www.cipher.ai](http://www.cipher.ai).*

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