

SAPPHIRE reveals the secret behind Vapor-X

SAPPHIRE Technology confirms the source of its Vapor Chamber Cooling

SAPPHIRE Technology uses the brand Vapor-X on all its high performance products based on Vapor Chamber Technology. It has just been revealed that the Vapor chamber technology used in SAPPHIRE Vapor-X coolers comes from Microloops. Vapor-X has very efficient heat dissipation, which helps to remove heat quickly from the hottest component on a graphics card – the GPU. Because this heat transfer is so efficient, the device can be cooled with heatsink fans operating with lower speeds, and therefore lower noise. It also allows the GPU to be run at higher speeds – known as overclocking – to deliver increased performance.

“Sapphire Technology was the first graphics card manufacturer to use Microloop’s Vapor Chamber as the cooling device,” confirms Sapphire CEO Mr. KD Au. “We aspire to give our customers a unique product and create a perfect product integrated energy-saving and low noise design. The Sapphire HD3870 launched in 2007 was the world’s first graphics product using Vapor Chamber cooling. It used an ultra-slim 3mm vapor chamber in a single slot graphics card design, which could dissipate 150W heat. Under test in 3D mode, the Sapphire HD3870 single slot cooler with Vapor Chamber achieved lower operating temperatures than the ATI BBA board dual slot cooling design.”

“Following this successful experience, Sapphire created a new range of HD 4000 series cards named the “Vapor-X Series”, all of which use Vapor Chamber cooling,” added KD. “ The Vapor-X product line is popular in the channel as well as with users and has won over 80 editor awards in the global media. The Sapphire HD 5000 Vapor-X series will be released in the near future, and I believe that the outstanding performance of the Sapphire HD 5000 with Vapor-X cooling system will be another award winning combination.”

100% of Sapphire’s Vapor Chamber technology comes from Microloops. Microloops and Sapphire Technology started to co-operate in 2007. Microloops Vapor Chamber technology was originally used in high level servers from companies like HP and IBM to avoid high operating temperatures. For both Sapphire and Microloops, the HD3870 was the first graphic card to use Vapor Chamber technology.

“We have been working with Sapphire technology for 2 years now, so Vapor Chamber technology is a mature technology for graphics cards,” commented Microloop GM Mr. TS. “ We all know Sapphire’s product design is superior and now combined with Vapor Chamber thermal device, the Vapor-X Series has sold over half million pieces and won over 80 media awards globally. It is a milestone for Microloops, we will keep researching and developing better performance thermal devices and deliver the products on-time. We look forward to creating a ‘dream’ graphics card combining all the target features -” high performance, low temperature, low noise and low power.”

A short description of Vapor-X technology.

Vapor Chamber Technology is based on the same principles as heatpipe technology. A liquid coolant is vaporised at a hot surface, the resulting vapor is condensed at a cold surface then the liquid is returned to the hot surface. The recirculation process is controlled by a wick system. SAPPHIRE Vapor-X flattens the whole system into a slim chamber - which in the graphics application is mounted in contact with the surface of the graphics chip. Actually, the coolant is water – but because the chamber is evacuated to a very low pressure, the vaporisation process occurs at a much lower temperature than normal boiling point. The complex wick arrangement inside the module controls the flow of water and water vapor so that the system can be used in any orientation.

For more details please visit www.sapphiretech.com or go direct to [Catch the Vapors](#)