

ASX Announcement ([ASX: AXE](#))

12 August 2022

Hong Kong patent granted for ¹²CQ quantum computing chip

Highlights

- ¹²CQ chip technology patent is granted in Hong Kong.
 - The grant of the Hong Kong patent marks the successful grant of all ¹²CQ chip patent applications in Archer's current portfolio.
 - Granted ¹²CQ chip patents span Australia, the US, China, South Korea, Japan, Hong Kong, and a further 12 countries in Europe including the UK, France, and Germany.
 - Archer is the only ASX listed company and one of a few players in the world developing qubit processor technology.
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Archer Materials Limited ("Archer", the "Company", "[ASX: AXE](#)") is pleased to announce the granting of the Hong Kong patent associated with Archer's ¹²CQ quantum computing chip technology ("¹²CQ chip"). Archer is the only ASX listed company and one of a few players in the world developing qubit processor chip technology in the semiconductor industry.

The granting of the Hong Kong patent (Publication No. 1256636) represents a significant early-stage milestone in Archer's development of the ¹²CQ chip. The granted patent protects a proposed qubit processor chip that offers a path to realise practical quantum computing.

The Hong Kong patent provides Archer with exclusive and legally enforceable commercial rights to the ¹²CQ chip invention in Hong Kong ("Commercial Rights"). The Commercial Rights add to the protection provided by the patent systems of Europe (ASX ann. [Feb 23 2022](#)), the US (ASX ann. [22 Sept 2021](#)), China (ASX ann. [11 Aug 2021](#)), Japan (ASX ann. [20 Jan 2021](#)), South Korea (ASX ann. [10 Aug 2021](#)), and Australia (ASX ann. [23 May 2022](#)).

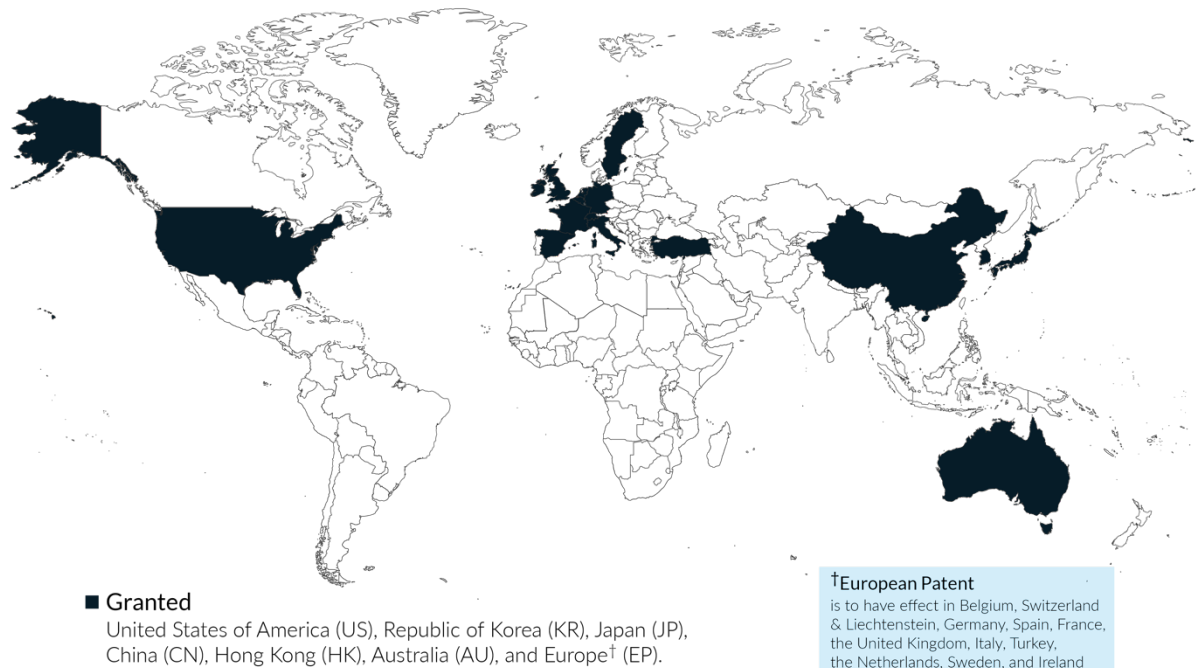
With the grant of the Hong Kong patent, all pending patent applications in the current ¹²CQ chip portfolio have been granted (Exhibit 1). Patent protection gives Archer the right to stop others from manufacturing, using and/or selling the ¹²CQ chip technology invention and is required for any possible future commercialisation operations in the respective granting jurisdictions.

Commenting on the grant of the Hong Kong patent, Archer CEO Dr Mohammad Choucair said: "The grant of the ¹²CQ chip patent in Hong Kong is great news. A patent is evidence of invention and patent protection in major markets is a central element in Archer's strategy to develop the ¹²CQ chip.

"The patent granting procedure related to the ¹²CQ chip technology has been an outstanding success. With the grant of the Hong Kong patent, all the patent applications in the current ¹²CQ chip portfolio have now been granted, with protection given by the patent systems in the US, China, Japan, South Korea, Europe, and Australia."

"Archer is one of few companies with granted patents protecting quantum computing chip technology and one with a unique global competitive advantage."

Exhibit 1. Jurisdictions with granted patents related to the 12CQ chip technology.



Further information on Archer's global competitive advantage and tech differentiation

The scientific breakthrough to realise Archer's 12CQ qubit material is available online in the peer-reviewed scientific journal [Nature Communications](#), which reports the advantages and technological trade-offs that have been overcome towards realising practical quantum computing, over several qubit proposals. Patent information related to the 12CQ chip qubit and proposed device(s) is available online, including examiner reports, through the [WIPO website](#).

About Archer

Archer is a technology company developing advanced semiconductor devices, including processor chips that are relevant to quantum computing. Archer is developing the 12CQ chip, a world-first qubit processor technology, that could potentially allow for quantum computing powered mobile devices ('QPMDs').

The Board of Archer authorised this announcement to be given to ASX.

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