



US 20240237296A1

(19) **United States**(12) **Patent Application Publication**
CHEN et al.(10) **Pub. No.: US 2024/0237296 A1**(43) **Pub. Date: Jul. 11, 2024**(54) **ARRAYED COLD PLATE FOR DIMMS**(71) Applicant: **Quanta Computer Inc.**, Taoyuan City
(TW)(72) Inventors: **Chao-Jung CHEN**, Taoyuan City
(TW); **Kun-Pei LIU**, Taoyuan City
(TW); **Yu-Nien HUANG**, Taoyuan City
(TW)(21) Appl. No.: **18/180,687**(22) Filed: **Mar. 8, 2023****Related U.S. Application Data**(60) Provisional application No. 63/478,831, filed on Jan.
6, 2023.**Publication Classification**(51) **Int. Cl.**
H05K 7/20 (2006.01)
F28F 3/02 (2006.01)(52) **U.S. Cl.**CPC **H05K 7/20636** (2013.01); **F28F 3/02**
(2013.01); **H05K 7/20254** (2013.01); **H05K**
7/20263 (2013.01); **H05K 7/20272** (2013.01);
F28F 2260/02 (2013.01)

(57)

ABSTRACT

A cooling assembly for liquid cooling of a heat-generating component such as a dual in-line memory module (DIMM) in a computer device is disclosed. The cooling assembly includes a bracket holding a micro-pipe assembly. The micro-pipe assembly has a cold manifold, a hot manifold and a series of micro-pipes. The micro-pipes are fluidly coupled between the cold manifold and hot manifold to allow coolant flow between the cold manifold and the hot manifold. The bracket positions the micro-pipe assembly such that micro-pipes are positioned proximate to opposite sides of the heat-generating component. A coolant inlet supplies coolant to the cold manifold and a coolant outlet collecting coolant from the hot manifold.

