



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT) sheets

(51) International Patent Classification ⁶ :

H05K 7/20

A1

(11) International Publication Number:

WO 96/01035 ✓

(43) International Publication Date:

11 January 1996 (11.01.96)

(21) International Application Number:

PCT/US95/06769 ✓

(22) International Filing Date:

25 May 1995 (25.05.95) ✓

(30) Priority Data:

08/269,431

30 June 1994 (30.06.94) ✓

US

(71) Applicant: INTEL CORPORATION [US/US]; 2200 Mission College Boulevard, Santa Clara, CA 95052 (US). ✓

(72) Inventor: NELSON, Daryl, J.; 1184 N.W. 175th Place, Beaverton, OR 97006 (US).

(74) Agents: SALTER, James, H. et al.; Blakely, Sokoloff, Taylor & Zafman, 7th floor, 12400 Wilshire Boulevard, Los Angeles, CA 90025-1026 (US).

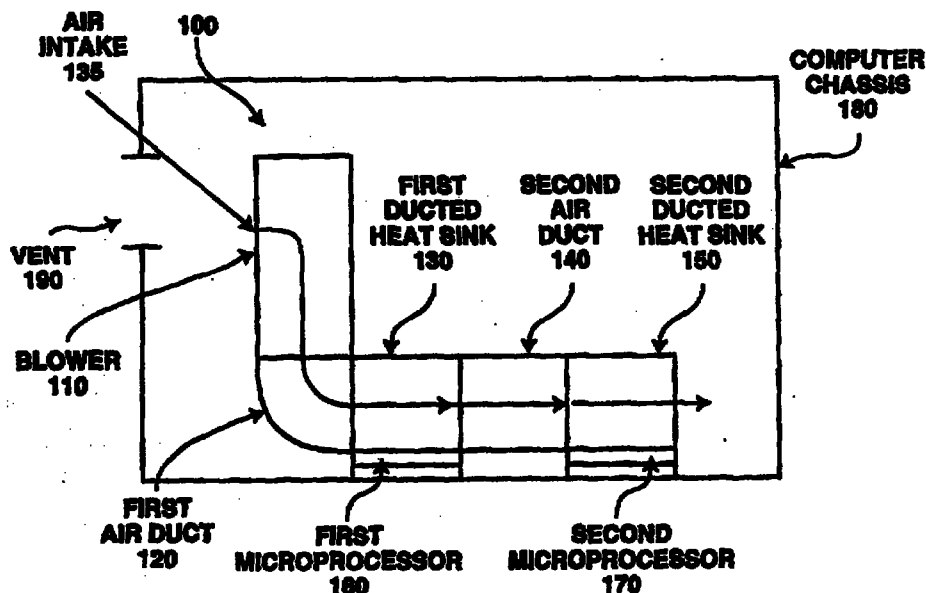
(81) Designated States: AM, AT, AT (Utility model), AU, BB, BG, BR, BY, CA, CH, CN, CZ, CZ (Utility model), DE, DE (Utility model), DK, DK (Utility model), EE, ES, FI, FI (Utility model), GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (Utility model), TJ, TM, TT, UA, UG, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG), ARIPO patent (KE, MW, SD, SZ, UG).

Published

With international search report.

SG 9612195-9

(54) Title: DUCTED OPPOSING BONDED FIN HEAT SINK BLOWER MULTI-MICROPROCESSOR COOLING SYSTEM



(57) Abstract

A device and method for cooling an integrated circuit package - in particular, a microprocessor - within an enclosed computer system. The device comprises a blower (110), a first heat sink (130) attached to the microprocessor, and a first air duct (120) coupling the blower (110) to the first heat sink (130). The blower (110) has an air intake (135) from the exterior of the computer system. The blower (110) generates an air stream which flows through the first air duct (120) to the first heat sink (130) for cooling the first microprocessor (160). A second air duct (140) connected to the first heat sink (130) may be used to subsequently direct the air stream to a second heat sink (150) for cooling a second microprocessor (170). An efficient duct heat sink for use in this cooling system (100) can be easily constructed by attaching two extruded heat sinks.

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AT	Austria	GB	United Kingdom	MR	Mauritania
AU	Australia	GE	Georgia	MW	Malawi
BB	Barbados	GN	Guinea	NE	Niger
BE	Belgium	GR	Greece	NL	Netherlands
BF	Burkina Faso	HU	Hungary	NO	Norway
BG	Bulgaria	IE	Ireland	NZ	New Zealand
BJ	Benin	IT	Italy	PL	Poland
BR	Brazil	JP	Japan	PT	Portugal
BY	Belarus	KE	Kenya	RO	Romania
CA	Canada	KG	Kyrgyzstan	RU	Russian Federation
CF	Central African Republic	KP	Democratic People's Republic of Korea	SD	Sudan
CG	Congo	KR	Republic of Korea	SE	Sweden
CH	Switzerland	KZ	Kazakhstan	SI	Slovenia
CI	Côte d'Ivoire	LI	Liechtenstein	SK	Slovakia
CM	Cameroon	LK	Sri Lanka	SN	Senegal
CN	China	LU	Luxembourg	TD	Chad
CS	Czechoslovakia	LV	Latvia	TG	Togo
CZ	Czech Republic	MC	Monaco	TJ	Tajikistan
DE	Germany	MD	Republic of Moldova	TT	Trinidad and Tobago
DK	Denmark	MG	Madagascar	UA	Ukraine
ES	Spain	ML	Mali	US	United States of America
FI	Finland	MN	Mongolia	UZ	Uzbekistan
FR	France			VN	Viet Nam
GA	Gabon				

9612195-9