

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
12 February 2004 (12.02.2004)

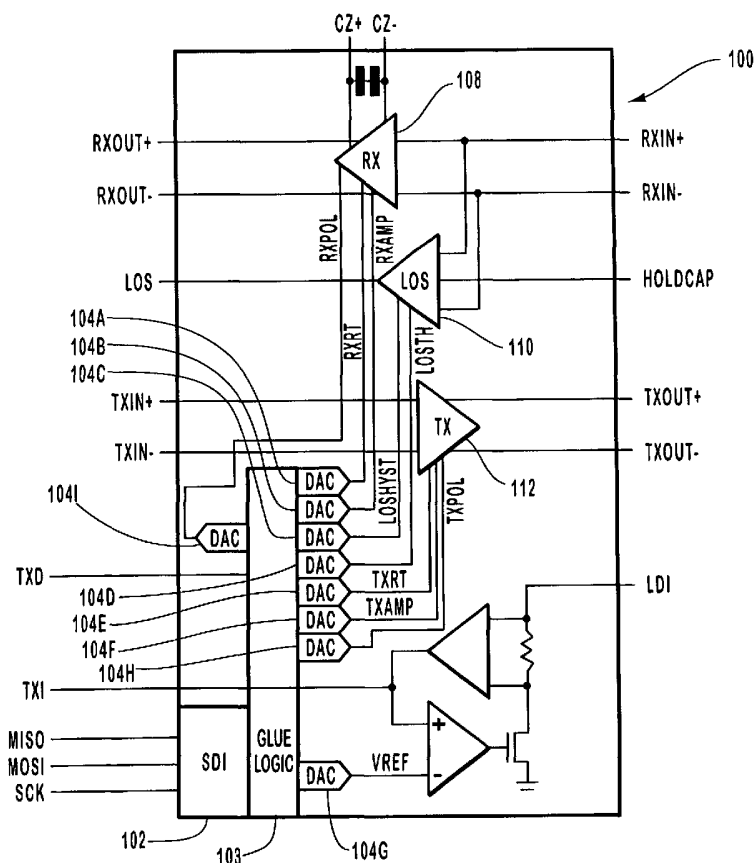
PCT

(10) International Publication Number
WO 2004/013979 A3

- (51) International Patent Classification⁷: **H04B 10/08**
- (21) International Application Number:
PCT/US2003/024071
- (22) International Filing Date: 31 July 2003 (31.07.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/400,965 2 August 2002 (02.08.2002) US
10/282,605 29 October 2002 (29.10.2002) US
- (71) Applicant: **FINISAR CORPORATION** [US/US]; 1308 Moffett Park Drive, Sunnyvale, CA 94089-1133 (US).
- (72) Inventors: **WEBER, Andreas**; 485 Los Pajares Court, Los Altos, CA 94024 (US). **GIARETTA, Giorgio**; 1609 Ronden Court, Mountain View, CA 94040 (US). **CASE, Dan**; 1407 Casablanca Circle, Gilroy, CA 95020 (US).
- (74) Agents: **ISRAELSEN, R., Burns et al.**; Workman Nydegger, 1000 Eagle Gate Tower, 60 East South Temple, Salt Lake City, UT 84111 (US).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: INTEGRATED POST-AMPLIFIER AND LASER DRIVER ASSEMBLY WITH DIGITAL CONTROL INTERFACE



(57) Abstract: An integrated post-amplifier and laser driver assembly is provided that is implemented as a single integrated circuit and includes a plurality of amplifiers (108, 110, 112) or other control devices or circuits configured to implement various effects concerning data signals received and/or transmitted by a transceiver in conjunction with which the integrated post-amplifier and laser driver assembly is employed. A digital control interface (102) is included in the integrated post-amplifier and laser driver assembly and is configured to receive a control signal from an external digital controller. A glue logic module (103), and associated digital to analog controllers (104), of the integrated post-amplifier and laser driver assembly parse the control signal and generate and transmit corresponding analog signals to one or more of the amplifiers so as to implement processing of a data signal received from the optical receiver, as well as the control of data transmission by way of a suitable transmitter.



Published:

— with international search report

(88) Date of publication of the international search report:

16 December 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/24071

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H04B 10/08

US CL : 398/135, 137, 138, 139

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 398/135, 137, 138, 139

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,383,208A (QUENIAT et al) 17 JANUARY 1995 (17.01.1995) FIG 6, 11, 13	1-47
A	US 5,019,769 (LEVINSON) 28 MAY 1991 (28.05.1991) FIG 3	1-47

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

08 March 2004 (08.03.2004)

Date of mailing of the international search report

29 MAR 2004

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (703)305-3230

Authorized officer

Jason Chan

Telephone No. (703)305-3900