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J. [US/US]; 21869 Woodbury Drive, Cupertino, CA 95014 (US). ZHOU, Nian [US/US]; 7569 Kirwin Lane, Cupertino, CA 95014 (US).

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(74) Agents: SCHAAL, William, W. et al.; Blakely, Sokoloff, Taylor & Zafman, 7th floor, 12400 Wilshire Blvd., Los Angeles, CA 90025-1026 (US).

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(71) Applicant (for all designated States except US): NORTEL NETWORKS LIMITED [CA/CA]; 2351 Boulevard Alfred-Nobel, St. Laurent, Quebec H4S 2A9 (CA).

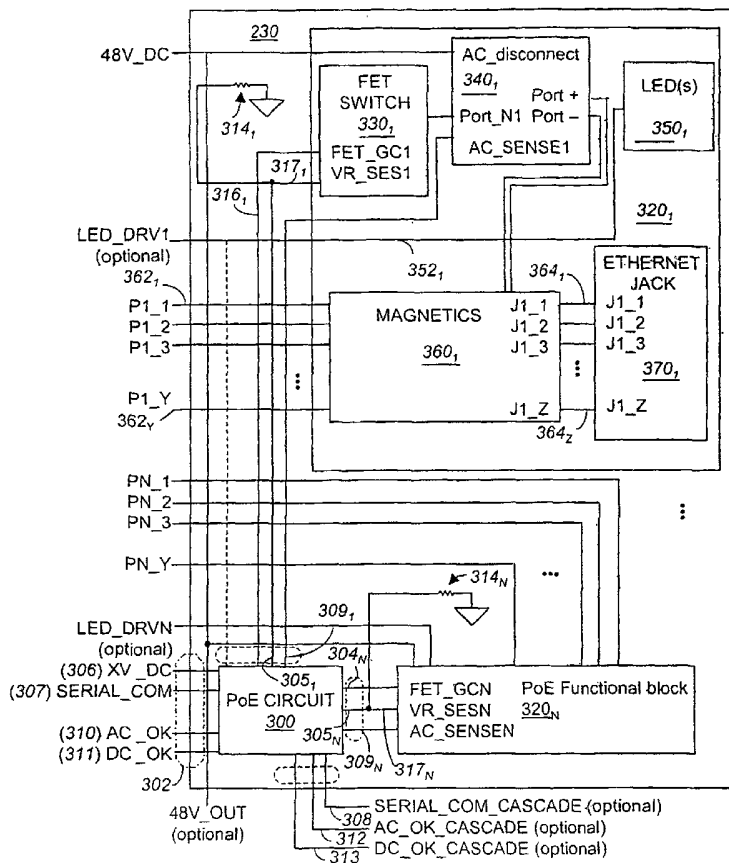
(72) Inventors; and

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

(75) Inventors/Applicants (for US only): PARKER, Timothy,

[Continued on next page]

(54) Title: CONNECTOR MODULE WITH POWER-OVER-ETHERNET FUNCTIONALITY



(57) Abstract: Connector module with embedded Power-over-Ethernet (PoE) functionality. Having a compatible pin configuration as an Ethernet jack module without PoE functionality, the connector module is adapted for placement on a circuit board employed within a switching device.

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GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (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 (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US2004/002683

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04L12/10

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)
IPC 7 H04L H01R

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 practical, search terms used)

EPO-Internal, WPI Data, INSPEC, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	AVAYA: "Avaya 1152A1 Mid Span Power Supply" INTERNET CITATION, [Online] 2002, XP002285733 Retrieved from the Internet: URL:http://www1.avaya.com/enterprise/factsheets/lb1895.pdf> [retrieved on 2004-06-23]	1-3,11, 14-16
Y	page 1 - page 2 ----- -/--	4-10,17, 18

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "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)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "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
- "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
- "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.
- "&" document member of the same patent family

Date of the actual completion of the international search

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Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

De la Peña, J

INTERNATIONAL SEARCH REPORT

 International Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	LINEAR TECHNOLOGY: "LTC4255 Quad Network Controller with I2C Compatible Interface" INTERNET CITATION, [Online] 2002, XP002285734 Retrieved from the Internet: URL:http://www.linear.com/pdf/4255f.pdf> [retrieved on 2004-06-23] page 1 - page 2 page 6 - page 7 page 11 - page 14	4-10,17,18
A	----- ROBERT LEONOWICH: "IEEE 802.3af DTE Power via MDI Detection and Signature Tutorial" INTERNET CITATION, [Online] 7 October 2000 (2000-10-07), XP002286255 Retrieved from the Internet: URL:http://www.ieee802.org/3/tutorial/jul00/tutorial_2_0700.pdf> [retrieved on 2004-06-28] the whole document -----	4-6,10,15,17,18

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2004/002683

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-11, 14-18

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-11,14-18

A connector module, including circuitry comprising an AC disconnect component.

2. claims: 12 (dependent on claims 1 and 2), 19-24

A connector module, a circuit, and a method involving receiving direct current voltage from an external power supply.

3. claim: 13 (dependent on claims 1 and 11)

A connector module, including circuitry comprising at least one opto-coupler.
