US006174205B1

(54) **COMMUNICATION CARD EXTENSION AND ADAPTER PORT**

(75) Inventors: **Brent D. Madsen**, Providence; **Timothy W. Aldridge**, Sandy, both of UT (US)

(73) Assignee: **3Com Corporation**, Santa Clara, CA (US)

(*) Notice: Under 35 U.S.C. 154(b), the term of this patent shall be extended for 0 days.

(21) Appl. No.: **09/322,869**

(22) Filed: **May 28, 1999**

(51) **Int. Cl.**[7] **H01R 25/00**; H01R 27/02; H01R 31/00; H01R 33/88; H01R 33/90

(52) **U.S. Cl.** **439/638**; 439/946

(58) **Field of Search** 439/638, 131, 439/946

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,186,988	2/1980	Kobler	.... 439/676
4,241,974	12/1980	Hardesty	.... 439/638
4,303,296	12/1981	Spaulding	.... 439/189

(List continued on next page.)

OTHER PUBLICATIONS

Bluetooth–Document Page, "Radio," www. bluetooth.com/document/default.asp? page=radio, p. 1 (date unknown).
Bluetooth–Document Page, "Baseband," www. bluetooth-.com/document/default.asp? page=baseband, p. 1–3 (date unknown).
Bluetooth–Document Page, "Link Management," www. bluetooth.com/document/default.asp? page=lm, p. 1 (date unknown).
Bluetooth–Document Page, "Software Framework," www. bluetooth.com/document/default.asp? page=swfw, p. 1 (date unknown).

Bluetooth–Document Page, "PC General," www. bluetooth-.com/document/default.asp? page=pc, p. 1 (date unknown).

Bluetooth–Document Page, "Telephone," www. bluetooth-.com/document/default.asp? page=phone, p. 1 (date unknown).

Bluetooth–FAQ "General," www.bluetooth.com/faq/defaul-t.asp, p. 1–2 (date unknown).

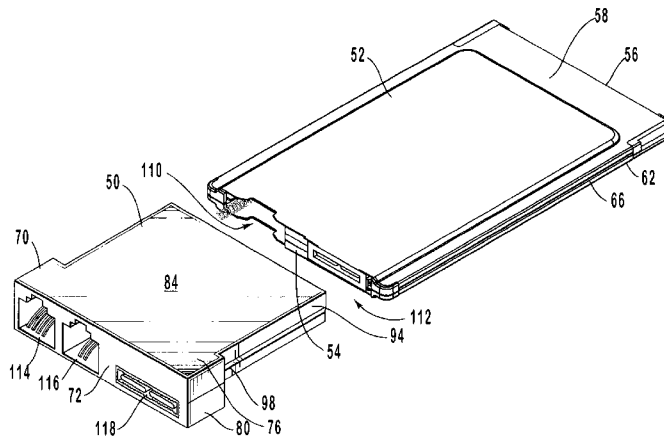Andrew Till, "Bluetooth Expands Wireless Data Appeal," Computer Dealer News, vol. 15, No. 6, pp. 1–2 (Feb. 12, 1999).

Krypton Isolation's Product, www.krypton–iso.com/P–AboutUs.htm, 1 page (1998).

Primary Examiner—Khiem Nguyen
Assistant Examiner—Hae Moon Hyeon
(74) *Attorney, Agent, or Firm*—Workman, Nydegger & Seeley

(57) **ABSTRACT**

The present invention is an adaptor module that allows an electrical connection to be established between a communication system and a communication card. Advantageously, the adaptor module can be configured to provide an interface between the communication card and various communication systems, such as conventional telephone systems, cellular telephone systems, digital telephone systems, local area networks (LANs), personal area networks (PANs), wireless systems, etc. Additionally, the adaptor module can provide an interface between a plurality of communication systems and the communication card. For example, the adaptor module may provide an interface for a plurality of connectors from the same type of communication system and/or the adaptor module may provide an interface for connectors from different types of communication systems. Advantageously, the adaptor module can provide simultaneous communication with these various communication systems. The adaptor module is preferably configured to be attached to a standard PCMCIA card to facilitate communication between a computer and a communication system.

22 Claims, 6 Drawing Sheets

U.S. PATENT DOCUMENTS

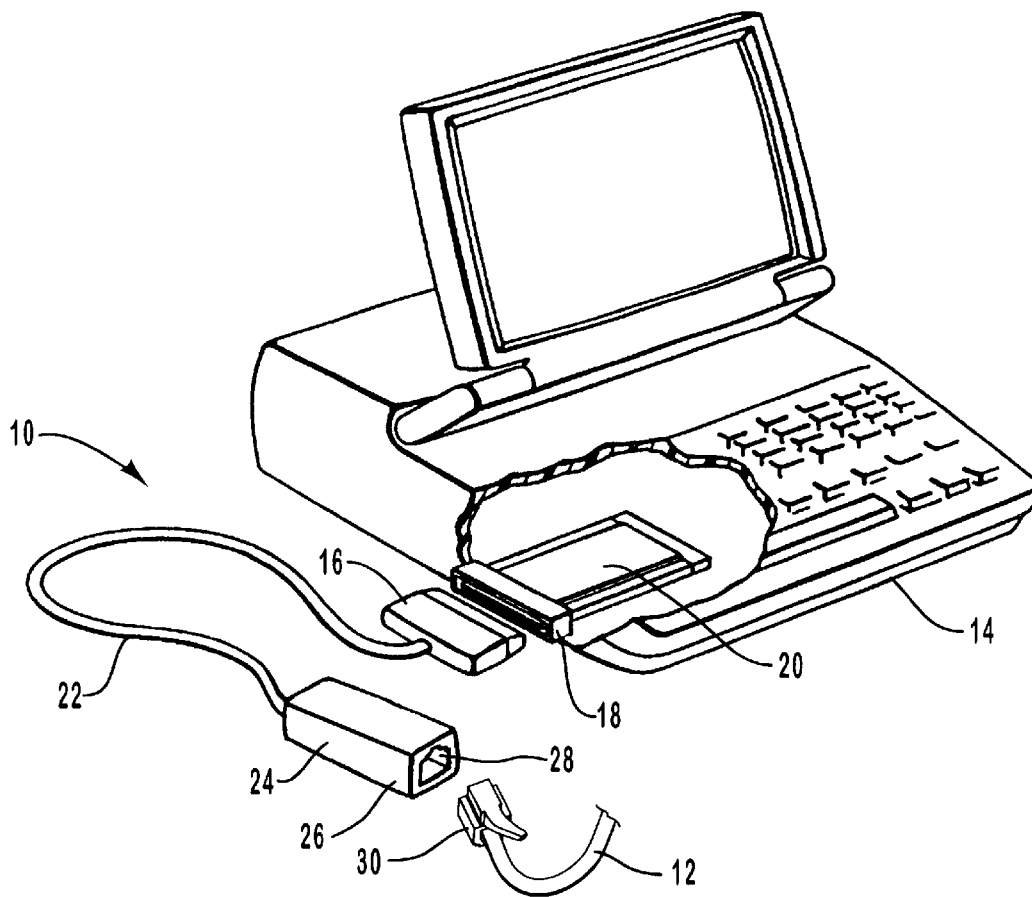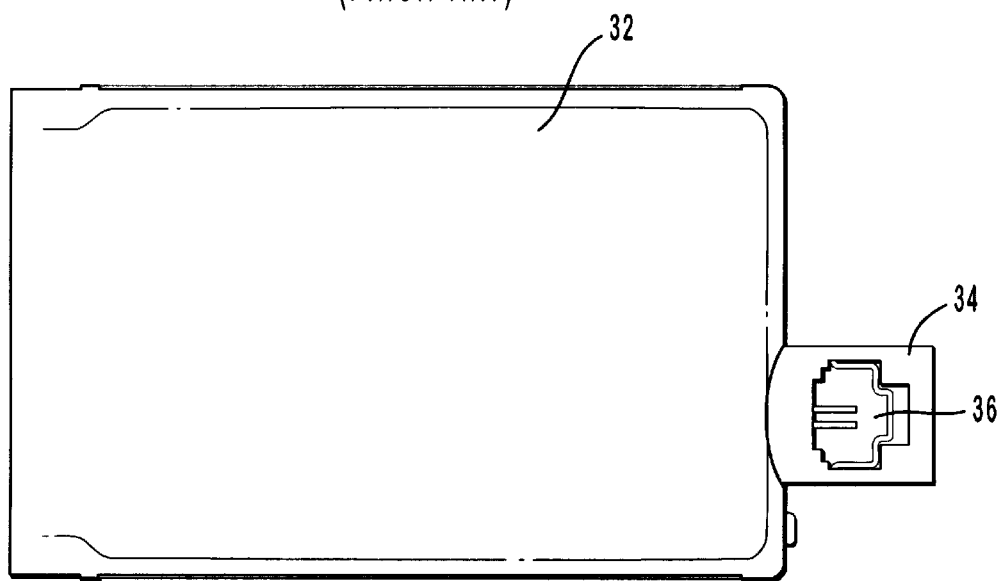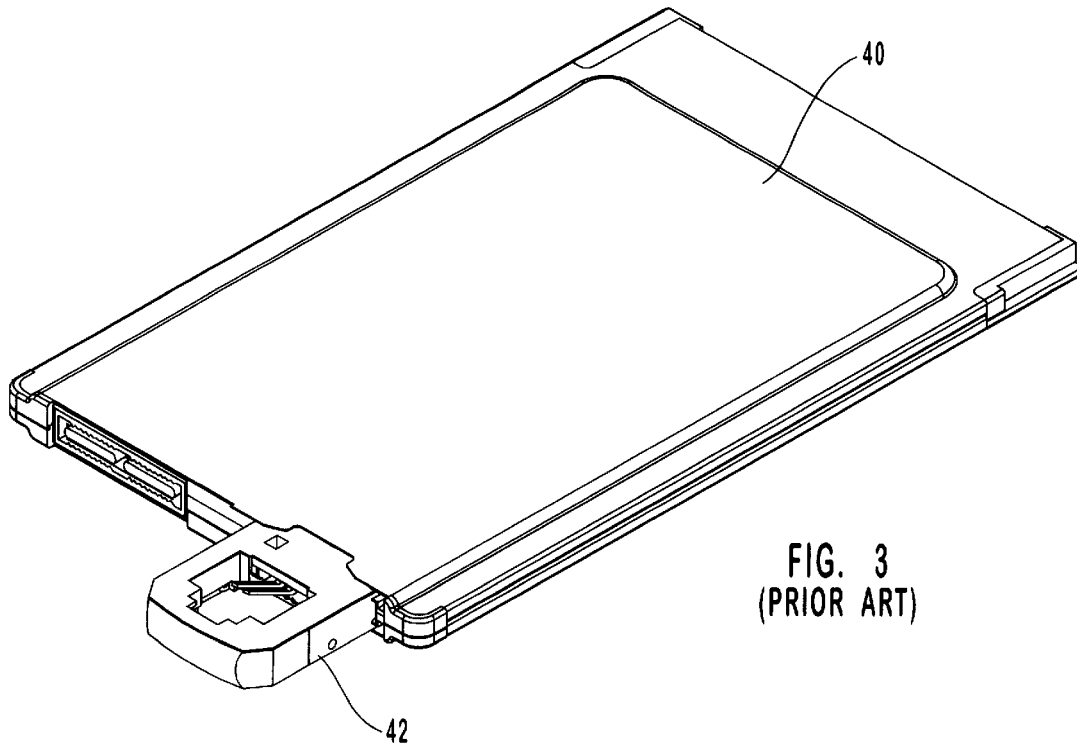|			
4,352,492	10/1982	Smith	361/415
4,428,636	1/1984	Kam et al.	439/404
4,710,136	12/1987	Suzuki	439/374
4,778,410	10/1988	Tanaka	439/676
4,915,648	4/1990	Takase et al.	439/490
5,139,439	8/1992	Shie	439/359
5,183,404 *	2/1993	Aldous et al.	439/55
5,184,282	2/1993	Kaneda et al.	361/395
5,336,099	8/1994	Aldous et al.	439/131
5,338,210	8/1994	Beckham et al.	439/131
5,391,083 *	2/1995	Roebuck et al.	439/638
5,391,094 *	2/1995	Kakinoki et al.	439/638
5,411,405	5/1995	McDaniels	439/131
5,457,601 *	10/1995	Georgopulos et al.	361/686
5,481,616	1/1996	Freadman	381/90
5,499,923	3/1996	Archibald	439/26
5,505,633	4/1996	Broadbent	439/329
5,509,811 *	4/1996	Homic	439/55
5,513,074 *	4/1996	Ainsbury et al.	361/737
5,538,442	7/1996	Okada	439/676
5,547,401	8/1996	Aldous et al.	439/676
5,561,727	10/1996	Akita et al.	385/88
5,562,504	10/1996	Moshayedi	439/638
5,567,537	10/1996	Yoshizawa	428/692
5,606,594	2/1997	Register et al.	379/58
5,608,607 *	3/1997	Dittmer	361/686
5,634,802	6/1997	Kerklaan	439/131
5,646,635	7/1997	Cockson et al.	343/702
5,655,143	8/1997	Alpert et al.	361/600
5,660,568	8/1997	Moshayedi	439/654
5,679,013	10/1997	Matsunaga	439/144
5,684,672	11/1997	Karidis et al.	361/683
5,727,972	3/1998	Aldous et al.	439/655
5,739,791	4/1998	Barefield et al.	343/702
5,748,443 *	5/1998	Flint et al.	361/686
5,752,857 *	5/1998	Knights	439/638
5,773,332 *	6/1998	Glad	439/344
5,797,771	8/1998	Garside	439/610
5,816,832	10/1998	Aldous et al.	439/131
5,820,414 *	10/1998	Omori	439/638
5,821,907	10/1998	Zhu et al.	343/906
5,828,341	10/1998	Delamater	343/702
5,828,346	10/1998	Park	343/826
5,846,092	12/1998	Feldman et al.	439/76.1
5,867,131	2/1999	Camp, Jr. et al.	343/797
5,877,565	3/1999	Hollenbach	307/119
5,896,574	4/1999	Bass, Sr.	455/557
5,898,920	4/1999	Jacobs	455/422

* cited by examiner
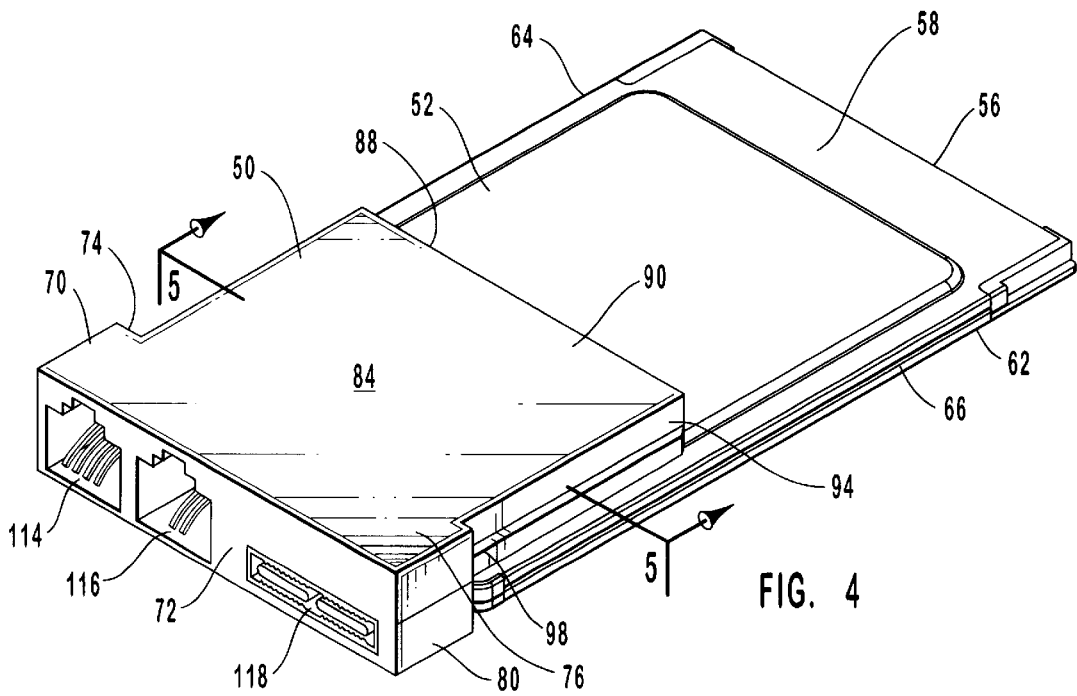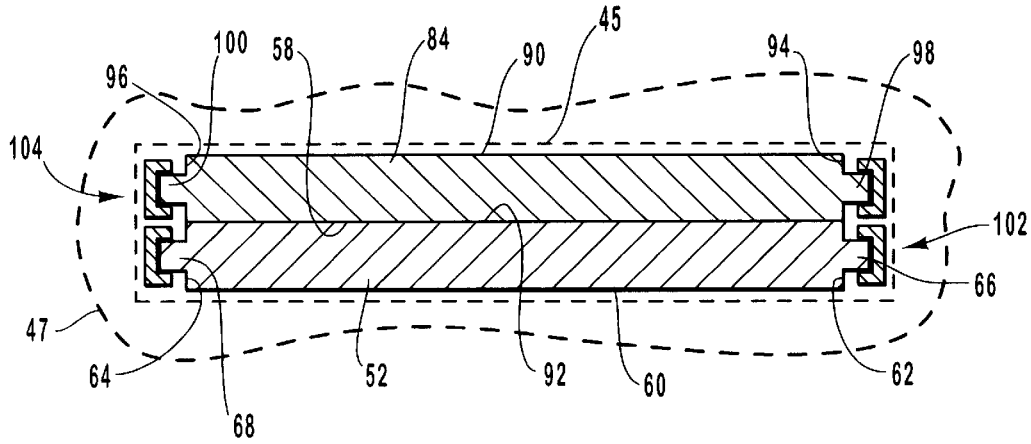
FIG. 1
(PRIOR ART)

FIG. 2
(PRIOR ART)
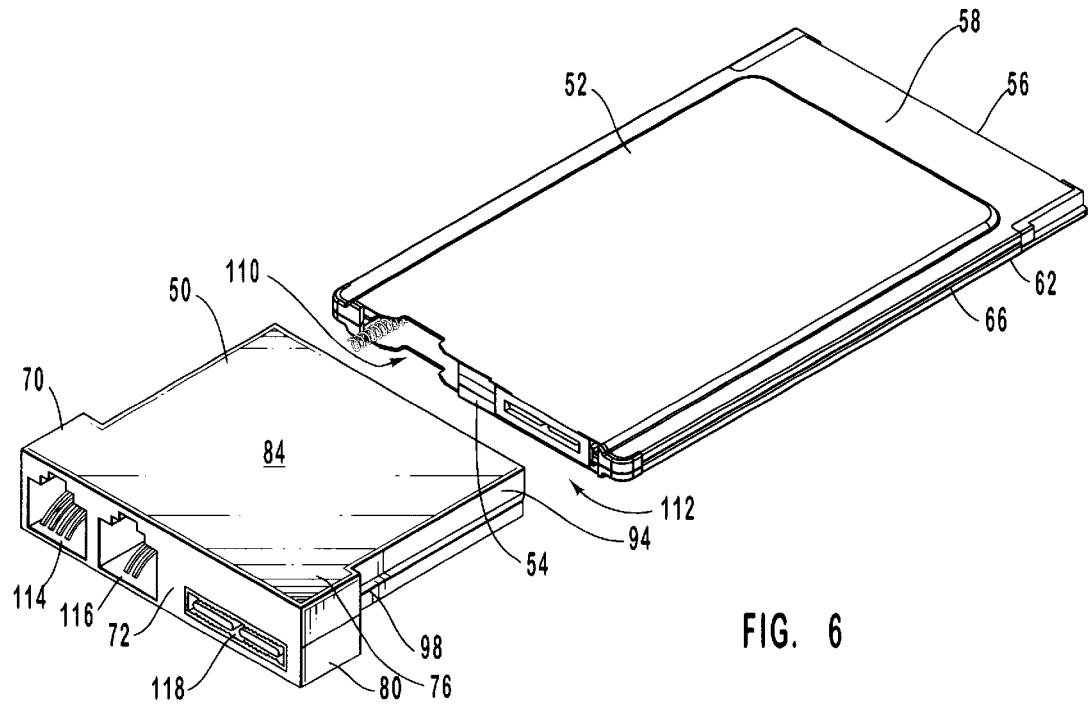
FIG. 3
(PRIOR ART)

FIG. 4

FIG. 5

FIG. 6

DOCKET ALARM

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts

Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research

With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips

Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS
Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS
Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS
Sync your system to PACER to automate legal marketing.

fastcase
Smarter legal research.