



Weekly Newsletter

Communications Equipment/Intelligent Networks Group

February 06, 2004

Company Name	Ticker	Rating	Price	FY CASH EPS		CY P/CASH EPS		
				2003 E	2004 E	2004	2005	
ADC Telecommunications, Inc.	ADCT	2	\$3.35	(\$0.02)	A	\$0.01	167.5x	47.9x
ADTRAN, Inc.	ADTN	1	\$32.60	\$0.76	A	\$0.93	35.1x	31.7x
Advanced Fibre Communications, Inc.	AFCI	2	\$22.46	\$0.39	A	\$0.44	51.0x	36.2x
Extreme Networks Inc.	EXTR	2	\$8.59	(\$0.17)	A	(\$0.05)	286.3x	45.2x
Foundry Networks Inc.	FDRY	2	\$24.14	\$0.56	A	\$0.67	36.0x	34.0x
Scientific-Atlanta, Inc.	SFA	2	\$33.72	\$0.82	A	\$1.22	27.6x	NM
Sonus Networks, Inc.	SONS	2	\$7.75	\$0.00		\$0.14	55.4x	NM
Tekelec	TKLC	2	\$20.20	\$0.38	A	\$0.40	50.5x	43.0x

Source: Company data and Wachovia Capital Markets, LLC estimates NA = Not Available, NC = No Change, NE = No Estimate, NM = Not Meaningful

Key Points

- Covered Companies mentioned: ADC Telecom (ADCT), Advanced Fibre (AFCI), Extreme Networks (EXTR), Foundry Networks (FDRY), and Scientific-Atlanta (SFA).
- Not Covered Companies mentioned: Alcatel (ALA), Carrier Access (CACS), Cedar Point (private), Cisco (CSCO), CopperCom (private), Netopia (private), Procket Networks (private), Redback Networks (RABK), Riverstone Networks (RSTN.PK), Taqua (private), Terayon (TERN), TiVo (TIVO), Tollgrade (TLGD), Tut Systems (TUTS), UTStarcom (UTSI), and Zhone Technologies (ZHNE).
- Service Providers mentioned: ITXC Corp. (ITXC), Phonom LLC (private), Time Warner Telecom (TWTC), and Vonage (private).
- News & Notes.
- Valuation Tables.

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Please see page 6 for rating definitions, disclosure information, and required analyst certifications.



COMMUNICATIONS EQUIP & RELATED INDICES (1/30-2/5)

Industry	Period	YTD	Industry	Period	YTD
Telecom Equipment	-3%	32%	Semiconductors	-3%	2%
Data Networking	-4%	17%	Comm Semis	-4%	18%
ILECs	2%	-1%	Electronic Supply Chain	-4%	7%
CLECs	-13%	20%	Computer Hardware	-2%	4%
Broadband Carriers	-3%	7%	Enterprise Software	-1%	15%
Service Providers	5%	9%	DJIA	0%	0%
Storage	0%	6%	COMP	-2%	1%
Networking Software	1%	22%	SPMC	-1%	1%

* See note on valuation page for Wachovia indices component companies. Source: Wachovia Capital Markets, LLC., FactSet

TELECOMMUNICATIONS EQUIPMENT – COVERED

-- ADC Telecom (ADCT, Market Perform, \$3.37) signed a contract with Vodafone New Zealand to deploy its Metrica software to monitor network performance and quality of service.

-- Advanced Fibre (AFCI, Market Perform, \$22.02) officially completed its FTTP contract with Verizon. AFC will provide its FiberDirect solution, which includes a PON plug-in card for the AccessMax chassis and an ONT at the customer premise. Field trials are scheduled for this summer and the AFC contract extends through 2008.

-- Extreme Networks (EXTR, Market Perform, \$7.76) introduced its Summit 400, a Layer 3, 48-port stackable switch with dual port 10 Gigabit Ethernet uplinks, at a list price of \$9,995.

-- Foundry Networks' (FDRY, Market Perform, \$22.77) product portfolio will be co-branded and resold in India by D-Link India.

-- Scientific-Atlanta's (SFA, Market Perform, \$32.75) will deploy cable modems, EMTAs, and amplifiers to Kosovo-based ISP, Ipko Net, to upgrade its cable network and expand its services to residential subscribers... Separately, SFA was selected by cable operator, Serbia Broadband, to upgrade and expand its cable network with the Prisma II optical platform, Vision 1000 headends, amplifiers and nodes, and cable modems.

TELECOMMUNICATIONS EQUIPMENT – NOT COVERED

-- Alcatel (ALA) reported a 29.4% sequential increase in Q4 sales. During Q4, ALA shipped 5.1 million DSL ports, or 34% of its 2003 total of 15.1 million DSL lines. ALA's Fixed Network division also benefited from a strong revenue performance in Next Generation Network (NGN) solutions and noted that its IP PBX business continued to grow, especially in Europe... Separately, ALA announced plans to acquire Boston-based WaterCove Networks for its GPRS Gateway Support Node mobile networking equipment.

-- Carrier Access (CACS) completed a public offering of 6.0 million shares of its common stock, raising \$73.5 million.

-- Cedar Point Communications (private) completed interoperability testing of its SAFARI C with Motorola's BSR 64000 CMTS, SURFboard multi-terminal adapters and Advanced Provisioning System. The companies will jointly market and sell the combined solution, which is designed to allow cable operators to implement packet-based cable telephony services.



- **Cisco Systems (CSCO)** is helping Italy-based **Unicredito** to encapsulate Fibre Channel traffic using FCIP connectivity and transport it over an IP network using Cisco's MDS 9000-based SAN infrastructure.
- **CopperCom (private)** announced availability of its version 2.2 software for its CSX 1100 and CSX 2100, which allows service providers to deliver IP-based residential and business services.
- **Netopia (NTPA)** introduced two 3-D reach WiFi gateway starter kits, the 3387W Cable/DSL Gateway and the 3347W ADSL Gateway, which include WEP security features.
- **Procket Networks' (private)** COO, Vito Palermo, resigned from the company.
- **Redback Networks (RBAK)** plans to open a Broadband Services Development Center at its corporate headquarters to enable service providers to develop and test subscriber solutions that are based on its SmartEdge Service Gateway and NetOp Policy Manager platforms.
- **Riverstone Networks (RSTN.PK)** reported December quarter revenue of \$9-10 million. The company is now recognizing all indirect sales on a "sell-through" basis.
- **Taqua (private)** completed interoperability testing of its iX7000 Class 5 packet switch with **Tellabs' 2300** telephony distribution system to enable cable operators to offer triple play offerings, including voice, to their subscribers.
- **Terayon's (TERN)** Broadcast Platform (BP) 5100 was selected by **FOX Broadcasting Company** to power its high-definition broadcast delivery system.
- **TiVo (TIVO)** reduced the price of its 40-hour Series2 DVR to \$199, and the 80-hour DVR to \$299.
- **Tollgrade Communications (TLGD)** introduced an FTTP voice services testing solution for telephone service providers, the LoopCare Test Operations Support System.
- **Tut Systems' (TUTS)** Espresso products were deployed jointly by **Isrighthere, Ltd.** and **Colt Telecom** to provide high-speed Internet access over existing telephone lines to guest and conference rooms in hotels in more than 33 cities in Europe.
- **UTStarcom (UTSI)** signed a \$40 million contract with **China Netcom** for additional deployments of its IP-based PAS in the Shandong Province.
- **Zhone Technologies (ZHNE)** announced plans to acquire **Gluon Networks** for approximately \$7.0 million, which includes \$650,000 in cash and 1.0 million shares of unregistered Zhone common stock.

SERVICE PROVIDERS

- **ITXC Corp. (ITXC)** introduced a new release of its VoIPLink service, which gives carriers a direct connection to its ITXC.net while increasing connectivity speeds to and from traditional and IP phones.
- **Phonom LLC (private)** recently began offering Internet telephone service (VoIP) to customers from Virginia to southern New Jersey.
- **Time Warner Telecom (TWTC)** introduced its Extended Native LAN Ethernet service in 44 U.S. metro areas.
- **Vonage (private)** announced it activated 15,000 lines in January, which helped the company reach 100,000 total lines on its network.



NEWS & NOTES

-- The **FCC** plans to vote on Pulver.com's Free World Dial petition next Thursday, February 12. The Commission is expected to approve the petition, refraining from regulating "computer based" voice services that do not use NANP phone numbers. The FCC is also expected to launch a broader proceeding into other forms of VoIP that use at least part of the conventional PSTN.



Wachovia Securities Equity Research
Communications Equipment / Intelligent Network
Summary Valuation for Coverage Universe

(in millions)	Price 2/6/2004	Rating	52 wk		Mkt. Cap.	Enter. Value	Cash EPS			P/E			Price/Sales		
			High	Low			CY03e	CY04e	CY05e	CY03e	CY04e	CY05e	CY03e	CY04e	CY05e
Access															
ADC Telecom	\$3.37	2	\$3.85	\$1.96	\$2,725	\$2,420	\$0.00	\$0.02	\$0.07	NM	169x	48x	3.6x	3.6x	3.3x
Adtran	32.64	1	38.00	14.40	2,696	2,419	0.76	0.93	1.03	43x	35x	32x	6.8x	5.7x	5.3x
Net Cash, after-tax interest inc.	29.29						0.62	0.82	0.91	47x	36x	32x			
Advanced Fibre Communications	22.02	2	27.50	13.93	1,968	1,131	0.39	0.44	0.62	56x	50x	36x	5.9x	5.3x	4.6x
Net Cash, after-tax interest inc.	12.66						0.28	0.35	0.58	45x	36x	22x			
Data Networking															
Enterasys Networks	4.37	SR	6.70	1.65	882	670	NE	NE	NE	NE	NE	NE	NE	NE	NE
Extreme Networks	7.76	2	10.60	3.55	913	720	(0.15)	0.03	0.19	NM	259x	41x	2.7x	2.5x	2.2x
Foundry Networks	22.77	2	33.75	7.32	3,251	2,745	0.56	0.67	0.71	41x	34x	32x	8.1x	7.0x	6.5x
Next-Gen Switching/Signaling															
Sonus Networks	7.61	2	10.00	1.14	1,822	1,588	0.00	0.14	0.26	NM	54x	29x	18.4x	10.0x	7.1x
Tekelec	19.78	2	21.10	7.56	1,395	1,184	0.38	0.40	0.47	52x	49x	42x	5.3x	4.4x	4.0x
Cable Equipment															
Scientific-Atlanta	32.75	2	38.59	11.09	5,060	3,984	1.15	1.22	NE	28x	27x	NE	3.2x	3.0x	NE

Source: Wachovia Capital Markets, LLC. estimates, company management and Factset

Intelligent Networks Summary Valuation

	Price		52 Week		YTD	EPS			P/E			Price/Sales		
	2/6/2004	Hi	Low			CY '03E	CY '04E	CY '05E	CY '03E	CY '04E	CY '05E	CY'03E	CY '04E	CY '05E
Diversified Comm Equipment														
Alcatel	\$15.44	\$17.68	\$6.09	20%		(\$0.13)	\$0.47	\$0.70	NM	33x	22x	1.2x	NA	NA
Lucent	4.24	\$5.00	\$1.35	49%		(\$0.20)	\$0.10	\$0.14	NM	41x	31x	2.5x	2.4x	2.2x
Nortel	7.65	\$8.43	\$1.82	81%		\$0.12	\$0.19	\$0.28	64x	41x	27x	3.4x	3.1x	2.8x
Group Mean									64x	39x	27x	2.4x	2.7x	2.5x
Next-Gen Switching/Signaling														
Sonus	7.61	\$10.00	\$1.16	1%		\$0.00	\$0.14	\$0.26	NM	54x	29x	18.4x	10.0x	7.1x
Tekelec	19.78	\$21.10	\$7.56	27%		\$0.38	\$0.40	\$0.47	52x	49x	42x	5.3x	4.4x	4.0x
UTStarcom	33.95	\$46.45	\$16.57	-8%		\$1.64	\$1.93	\$2.23	21x	18x	15x	2.2x	1.7x	1.5x
Group Mean									36x	40x	29x	8.6x	5.4x	4.2x
Data Networking														
Cisco	23.83	\$29.39	\$12.33	-2%		\$0.64	\$0.77	\$0.88	37x	31x	27x	8.4x	7.4x	6.5x
Extreme	7.76	\$10.60	\$3.55	8%		(\$0.15)	\$0.03	\$0.19	NM	259x	41x	2.7x	2.5x	2.2x
Foundry	22.77	\$33.75	\$7.32	-17%		\$0.56	\$0.67	\$0.71	41x	34x	32x	8.1x	7.0x	6.5x
Juniper	28.21	\$31.25	\$7.45	51%		\$0.15	\$0.36	\$0.49	188x	79x	58x	16.6x	12.6x	10.3x
Group Mean									89x	101x	39x	10.0x	8.2x	6.4x
Broadband Access														
ADC Telecom	3.37	\$3.85	\$1.96	13%		\$0.00	\$0.02	\$0.07	NM	169x	48x	3.6x	3.6x	3.3x
Adtran	32.64	\$38.00	\$14.40	5%		\$0.76	\$0.93	\$1.03	43x	35x	32x	6.8x	5.7x	5.3x
Advanced Fibre	22.02	\$27.50	\$13.93	9%		\$0.39	\$0.44	\$0.62	56x	50x	36x	5.9x	5.3x	4.6x
Harmonic	10.48	\$11.44	\$2.75	45%		(\$0.30)	\$0.14	\$0.35	NM	73x	30x	3.9x	3.0x	2.5x
Scientific-Atlanta	32.78	\$38.59	\$1.39	20%		\$1.15	\$1.22	NE	28x	27x	NE	3.2x	3.0x	NE
Terayon Communications	4.45	\$8.25	\$1.39	-1%		(\$0.68)	(\$0.05)	NE	NM	NM	NE	2.5x	1.8x	NE
Westell	7.45	\$12.00	\$2.29	18%		\$0.28	\$0.37	NE	27x	20x	NE	2.3x	2.1x	NE
Zhone	5.19	\$7.64	\$2.29	5%		\$0.28	\$0.37	NE	19x	14x	NE	1.6x	1.5x	NE
Group Mean									70x	53x	34x	3.5x	3.1x	3.5x
S&P 500	1,129	1,154	788	1%										

Source: Sales and EPS for covered companies (italics) based on Wachovia Capital Markets, LLC estimates; all other estimates/data from FactSet and company reports. Diluted shares used in market cap calculation. Italicized companies in Intelligent Networks Summary Valuation under coverage by Wachovia Capital Markets LLC. analyst Richard Church.



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