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14 **WILLEM VROEGH AND**
15 **SCOTT WITTHOFF**

16 **SUPERIOR COURT OF THE STATE OF CALIFORNIA**
17 **CITY AND COUNTY OF SAN FRANCISCO**

18 **WILLEM VROEGH, an individual, and California**
19 **resident, on behalf of himself, the general public and**
20 **one or more classes of similarly situated persons, AND**
21 **SCOTT WITTHOFF, an individual, and California**
22 **resident, on behalf of himself, the general public and**
23 **one or more classes of similarly situated persons,**

24 **Plaintiffs,**

25 **v.**

26 **DANE ELEC CORP. USA, a foreign corporation; FUJI**
27 **PHOTO FILM USA, INC., a foreign corporation;**
28 **EASTMAN KODAK COMPANY, a foreign**
corporation; LEXAR MEDIA, INC., a foreign
corporation; P.N.Y. ELECTRONICS, INC., a foreign
corporation; SANDISK CORPORATION, a foreign
corporation; AND DOES 1 THROUGH 200,

Defendants.

CASE NO. GCG-04-428953

UNLIMITED CIVIL CASE

THIRD AMENDED CLASS
ACTION COMPLAINT AND
COMPLAINT IN
INTERVENTION FOR
FALSE ADVERTISING;
UNFAIR BUSINESS
PRACTICES;
BREACH OF CONTRACT;
FRAUD, DECEIT AND/OR
MISREPRESENTATION;
VIOLATION OF THE
CALIFORNIA CONSUMERS
LEGAL REMEDY ACT

1 **COME NOW**, Willem Vroegh and Scott Witthoff, individuals and California residents,
2 and bring this Third Amended Class Action Complaint against Defendants identified herein, on
3 behalf of himself, the general public and/or one or more classes of similarly situated persons, for
4 violations of sections 17200 and 17500 *et seq.*, of the California Business and Professions Code,
5 breach of contract, fraud, deceit and/or misrepresentation and violation of the California
6 Consumers Legal Remedies Act, California Civil Code § 1750, *et seq.*

7 **WHO ALLEGES AS FOLLOWS:**

8 **I. PARTIES**

9 1. Willem Vroegh (“Vroegh”) is, and at all times alleged in this Third Amended
10 Class Action Complaint was, an individual, and a California resident, with his place of residence
11 in the City and County of San Francisco, California.

12 2. Scott Witthoff (“Witthoff”) is, and at all times alleged in this Third Amended
13 Class Action Complaint was, an individual, and a California resident, with his place of residence
14 in the City and County of San Francisco, California.

15 3. The Parties identified in paragraphs 1 and 2 of this Third Amended Class Action
16 Complaint are collectively referred to hereafter as “Plaintiffs.”

17 4. Defendant Dane Elec Corp. USA (“Dane Elec”) is a corporation duly incorporated
18 under the laws of the state of Delaware, having its principal place of business in Irvine,
19 California.

20 5. Defendant Fuji Photo Film USA, Inc. (“FujiFilm”) is a corporation duly
21 incorporated under the laws of the state of New York, having its principal place of business in
22 Valhalla, New York.

23 6. Defendant Eastman Kodak Company (“Kodak”) is a corporation duly incorporated
24 under the laws of the state of New Jersey, having its principal place of business in Rochester,
25 New York.

26 7. Defendant Lexar Media, Inc. (“Lexar”) is a corporation duly incorporated under
27 the laws of the state of Delaware, having its principal place of business in Fremont, California.

28 8. Defendant P.N.Y. Electronics, Inc. (“P.N.Y.”) is a corporation duly incorporated

1 under the laws of the state of New Jersey, having its principal place of business in Parsippany,
2 New York.

3 9. Defendant SanDisk Corporation (“SanDisk”) is a corporation duly incorporated
4 under the laws of the state of Delaware, having its principal place of business in Sunnyvale,
5 California.

6 10. The true names and capacities of Defendants sued as Does 1 through 200 inclusive
7 are unknown to Plaintiffs, who therefore sue said Defendants by such fictitious names pursuant to
8 section 474 of the California Code of Civil Procedure. Plaintiffs will seek leave of Court to
9 amend this Third Amended Class Action Complaint when said true names and capacities have
10 been ascertained. The Parties identified in paragraphs 4 through 10 of this Third Amended Class
11 Action Complaint are collectively referred to hereafter as “Defendants.”

12 11. At all times herein mentioned, each of the Defendants was the agent, servant,
13 representative, officer, director, partner or employee of the other Defendants and, in doing the
14 things herein alleged, was acting within the scope and course of his/her/its authority as such
15 agent, servant, representative, officer, director, partner or employee, and with the permission and
16 consent of each Defendant.

17 12. At all times herein mentioned, Defendants, and each of them, were members of,
18 and engaged in, a joint venture, partnership and common enterprise, and acting within the course
19 and scope of, and in pursuance of, said joint venture, partnership and common enterprise.

20 13. At all times herein mentioned, the acts and omissions of Defendants, and each of
21 them, concurred and contributed to the various acts and omissions of each and all of the other
22 Defendants in proximately causing the injuries and damages as herein alleged.

23 14. At all times herein mentioned, Defendants, and each of them, ratified each and
24 every act or omission complained of herein. At all times herein mentioned, the Defendants, and
25 each of them, aided and abetted the acts and omissions of each and all of the other Defendants in
26 proximately causing the damages, and other injuries, as herein alleged.

27 **II. STATEMENT OF FACTS AND ALLEGATIONS**

28 **a. Defendants Market, Advertise, Manufacture And/Or Sell Flash-Based**

1 **Memory Cards And Devices.**

2 15. Defendants are engaged in the business of manufacturing, advertising, marketing
3 and/or selling throughout the world, and to California residents in particular, removable digital
4 storage media that incorporate flash memory technology. These media commonly are known as
5 memory sticks, flash memory cards, CompactFlash cards, SmartMedia cards, MultiMedia cards,
6 SecureDigital (or SD) cards, and xD-picture cards. For the purposes of this Third Amended Class
7 Action Complaint, these and other removable digital storage media incorporating flash memory
8 technology will be collectively referred to as “Flash Memory Cards.”

9 16. Defendants’ Flash Memory Cards typically are produced in the form of thin wafers
10 which are square or rectangular in shape and one to two inches in length and/or width. They are
11 designed to be inserted into, and removed from, numerous digital devices, including digital
12 cameras, personal digital assistants (PDAs), cellular telephones, Flash Memory Drives, digital
13 musical instruments, and television recording devices. They also can be connected to a personal
14 computer, usually by being inserted into a card reader that is connected to a computer’s universal
15 serial bus (USB) port or by being inserted into a card adapter that plugs into a computer’s PC-
16 card slot.

17 17. Defendants also are engaged in the business of manufacturing, advertising,
18 marketing and/or selling throughout the world, and to California residents in particular, integrated
19 digital storage devices that incorporate that flash memory technology. These devices are
20 commonly known as “USB memory,” “USB drives,” “thumb drives,” “jump drives” or “flash
21 drives.” For the purposes of this Third Amended Class Action Complaint, these digital storage
22 devices that incorporate flash memory technology will be collectively referred to as “Flash
23 Memory Drives.” Essentially, a Flash Memory Drive is a device that integrates a Flash Memory
24 Card with a card reader and (typically USB) connector in a single unit. As used herein the term
25 “Flash Memory Drives” shall include Defendants’ use of such Flash Memory Cards when they
26 are embedded in digital cameras and/or other electronic devices.

27 18. Flash Memory Drives often are cylindrical or box-like, one to two inches in
28

1 length, and sometimes designed to be connected to a key chain or zipper. They typically can be
2 plugged directly into a USB port on a personal computer or into a computer's PC-card slot.

3 19. For the purposes of this Third Amended Class Action Complaint references to
4 "flash memory" and "flash technology" mean both Flash Memory Cards and Flash Memory
5 Drives unless otherwise stated or contextually inappropriate.

6 20. Both Flash Memory Cards and Flash Memory Drives store digital information
7 using "flash" memory technology. Flash memory is a solid-state, non-volatile, rewritable
8 memory that combines the benefits of random access memory ("RAM") and a hard disk drive.
9 Like RAM, flash memory requires no moving parts and stores bits of electronic data in memory
10 cells that can be quickly accessed. Like a hard disk drive, flash memory is non-volatile and thus
11 does not require power to maintain data. As a result, Flash Memory Cards and Flash Memory
12 Drives can be "hot-swapped" into and out of devices without powering them on or off. In
13 addition, data can be maintained for many years, with few to no risks of mechanical failures or
14 other degradation. These features have made flash memory/technology ideal for many
15 applications and led it to increasingly dominate the data storage marketplace.

16 21. Every Flash Memory Card or Flash Memory Drive marketed, advertised,
17 manufactured and/or sold by Defendants has a particular capacity for storing digital information.
18 This capacity is invariably represented as a number of "megabytes" (or "MB") or gigabytes (or
19 "GB").

20 22. All Flash Memory Cards and Flash Memory Drives are designed to be used in
21 conjunction with personal computers and their operating systems. For example, after a digital
22 camera stores image files on Flash Memory Cards, those files might be uploaded into a personal
23 computer to be edited or emailed to friends. Likewise, a word processing file might be
24 downloaded onto a Flash Memory Card for use in a PDA or on another computer. Flash Memory
25 Drives are designed specifically for the purpose of uploading and downloading files from a
26 personal computer for ease of transport and safekeeping.

27 **b. Defendants Knowingly and Deceptively Misrepresent The File Storage**
28 **Capabilities Of Their Flash Memory Cards and Flash Memory Drives, Which**
Deceives And Misleads Consumers.

1 23. In marketing, advertising and/or packaging their Flash Memory Cards and Flash
2 Memory Drives, Defendants misrepresent the size of the memory storage contained in the Flash
3 Memory Cards and Flash Memory Drives.

4 24. Defendant Dane Elec--via its website located at www.dane-memory.com and
5 through online and offline distributors and retailers--markets, advertises and/or sells a number of
6 Flash Memory Cards and Flash Memory Drives including for example and without limitation the
7 Dane-Elec 128MB Multimedia™ Card. Attached hereto as Exhibit 1 and incorporated herein as
8 if set forth in full are true and correct copies of advertising, marketing or website materials
9 disseminated by Defendant Dane Elec, which contain examples of the representations that
10 Defendant Dane Elec makes to the general public about the Flash Memory Cards or Flash
11 Memory Drives it sells.

12 25. Defendant FujiFilm--via its website located at www.fujifilm.com and through
13 online and offline distributors and retailers--markets, advertises and/or sells a number of Flash
14 Memory Cards and Flash Memory Drives including for example and without limitation the 64MB
15 FujiFilm Secure Digital™ (SD) card and 256MB USB Flash Memory Drive. Attached hereto as
16 Exhibit 2 and incorporated herein as if set forth in full are true and correct copies of advertising,
17 marketing or website materials disseminated by Defendant FujiFilm, which contain examples of
18 the representations that Defendant FujiFilm makes to the general public about the Flash Memory
19 Cards or Flash Memory Drives it sells.

20 26. Defendant Kodak--via its website located at www.kodak.com and through online
21 and offline distributors and retailers--markets, advertises and/or sells a number of Flash Memory
22 Cards and Flash Memory Drives including for example and without limitation the Kodak 256 MB
23 SD™ Card and Kodak Easy Share CX7530 digital camera. Attached hereto as Exhibit 3 and
24 incorporated herein as if set forth in full are true and correct copies of advertising, marketing or
25 website materials disseminated by Defendant Kodak, which contain examples of the
26 representations that Defendant Kodak makes to the general public about the Flash Memory Cards
27 or Flash Memory Drives it sells.

28 27. Defendant Lexar--via its website located at www.kingston.com and through online

1 and offline distributors and retailers--markets, advertises and/or sells a number of Flash Memory
2 Cards and Flash Memory Drives including for example and without limitation the 256MB
3 CompactFlash Card. Attached hereto as Exhibit 4 and incorporated herein as if set forth in full
4 are true and correct copies of advertising, marketing or website materials disseminated by
5 Defendant Lexar, which contain examples of the representations that Defendant Lexar makes to
6 the general public about the Flash Memory Cards or Flash Memory Drives it sells.

7 28. Defendant P.N.Y. Electronics--via its website located at www.pny.com and
8 through online and offline distributors and retailers--markets, advertises and/or sells a number of
9 Flash Memory Cards and Flash Memory Drives including for example and without limitation the
10 32MB PNY SmartMedia™ Card. Attached hereto as Exhibit 5 and incorporated herein as if set
11 forth in full are true and correct copies of advertising, marketing or website materials
12 disseminated by Defendant P.N.Y. Electronics, which contain examples of the representations
13 that Defendant P.N.Y. Electronics makes to the general public about the Flash Memory Cards or
14 Flash Memory Drives it sells.

15 29. Defendant SanDisk--via its website located at www.sandisk.com and through
16 online and offline distributors and retailers--markets, advertises and/or sells a number of Flash
17 Memory Cards and Flash Memory Drives including for example and without limitation the
18 SanDisk 64MB SmartMedia Card. Attached hereto as Exhibit 6 and incorporated herein as if set
19 forth in full are true and correct copies of advertising, marketing or website materials
20 disseminated by Defendant SanDisk, which contain examples of the representations that
21 Defendant SanDisk makes to the general public about the Flash Memory Cards or Flash Memory
22 Drives it sells.

23 30. Defendants overstate the storage capacity of the above-mentioned products, as
24 well as all other Flash Memory Cards and Flash Memory Drives manufactured, marketed,
25 advertised and/or sold by each of them. Additionally, in other Flash Memory Cards and Flash
26 Memory Drives that are manufactured, marketed, advertised and/or sold by Defendants,
27 Defendants and each of them overstate the amount of memory available to the end user or
28 consumer (i.e., they overstate the amount of memory which the end user or consumer can use to

1 store his or her files, pictures, etc....). For example, the following Defendants overstate the
2 memory capacity of the following Flash Memory Cards and Flash Memory Drives:

- 3 a. Defendant Dane Elec manufacturers, markets, advertises and/or sells the Dane-
4 Elec 256 MB CompactFlash memory card. In actuality, the Dane-Elec “256 MB”
5 CompactFlash memory card only provides the end user with 255,827,968 bytes or
6 approximately 243MB of usable memory. See the Windows property screen for
7 that Flash Memory Card attached hereto as Exhibit 1.
- 8 b. Defendant FujiFilm manufacturers, markets, advertises and/or sells the FujiFilm
9 256MB USB Drive. In actuality, the FujiFilm “256MB” USB Drive only provides
10 the end user with 255,320,064 bytes or approximately 243MB of usable memory.
11 See the Windows property screen for that Flash Memory Card attached hereto as
12 Exhibit 2.
- 13 c. Defendant Kodak manufacturers, markets, advertises and/or sells the Kodak 64MB
14 CompactFlash memory card. In actuality, the Kodak “64MB” CompactFlash
15 memory card only provides the end user with 63,868,928 bytes or approximately
16 60.9MB of usable memory. Additionally, Kodak’s EasyShare CX7530 digital
17 camera with “32MB” of memory, in actuality provides the end user with
18 approximately 26,353,664 bytes or 25.1MB of usable memory. See the Windows
19 property screen for the Flash Memory Card attached hereto as Exhibit 3.
- 20 d. Defendant Lexar manufacturers, markets, advertises and/or sells the Lexar 128MB
21 SD memory card. In actuality, the Lexar “128MB” SD memory card only
22 provides the end user with 127,041,536 bytes or approximately 121MB of usable
23 memory. See the Windows property screen for that Flash Memory Card attached
24 hereto as Exhibit 4.
- 25 e. Defendant P.N.Y. Electronics manufacturers, markets, advertises and/or sells the
26 P.N.Y. 32MB SmartMedia memory card. In actuality, the P.N.Y. “32MB”
27 SmartMedia memory card only provides the end user with 32,735,232 bytes or
28 approximately 31.2MB of usable memory. See the Windows property screen for

1 that Flash Memory Card attached hereto as Exhibit 5.

2 f. Defendant SanDisk manufacturers, markets, advertises and/or sells the SanDisk
3 64MB SmartMedia memory card. In actuality, the SanDisk “64MB” SmartMedia
4 memory card only provides the end user with 65,486,848 bytes or approximately
5 62.4MB of usable memory. See the Windows property screen for that Flash
6 Memory Card attached hereto as Exhibit 6.

7 31. As is set forth in more detail below, Plaintiffs allege that one possible explanation
8 for the overstated memory in Flash Memory Cards and Flash Memory Drives is that Defendants
9 intentionally, misleading and deceptively employ a method of determining memory size that is
10 inconsistent with the binary standard on which all digital files are based. There are, however,
11 other possible explanations for the diminished accessible storage capacity in Defendants’ Flash
12 Memory Cards and Flash Memory Drives of all of which are equally as misleading and deceptive.

13 32. Other possible explanations or rationales for the diminished accessible storage
14 capacity in Defendants’ Flash Memory Cards and Flash Memory Drives include disk partitioning
15 and/or formatting, bad disk sectors, pre-installed software or internal operational data storage
16 requirements, and/or idiosyncratic interoperability with particular operating systems. There may
17 be additional explanations or rationales for the diminished accessible storage capacity that are
18 currently unknown to Plaintiffs. Regardless of the rationale or explanation, on all Defendants’
19 Flash Memory Cards and Flash Memory Drives, the end user or consumer is unfairly,
20 misleadingly and deceptively provided with less accessible storage capacity than Defendants
21 market, advertise or otherwise claim.

22 c. **Plaintiffs Were Misled And Deceived By Defendants About The Storage**
23 **Capacity of Their Flash Memory Cards and Flash Memory Drives.**

24 33. On or about August 8, 2001, Plaintiff Vroegh purchased a 32MB SmartMedia
25 Memory Card, which is manufactured by Defendant P.N.Y. Electronics. Plaintiff Vroegh made
26 the purchase from Best Buy stores at its retail location in Skokie, Illinois. The packaging for the
27 product stated that it contained “32MB.” The package did not state the actual number of bytes
28 nor does it state that the actual memory size may be less. After purchasing the product, Plaintiff

1 Vroegh learned of its actual memory size by attaching it to his personal computer. Plaintiff
2 Vroegh' computer reported that the actual available memory of the P.N.Y. "32MB" SmartMedia
3 Memory Card was approximately 31MB.

4 34. On or about December 3, 2002, Plaintiff Vroegh purchased a 64MB SmartMedia
5 Card, which is manufactured by Defendant SanDisk. Plaintiff Vroegh made the purchase from
6 CompUSA via the internet from his home in San Francisco, California. The packaging for the
7 product stated that it contained "64MB." The package did not state the actual number of bytes
8 nor does it state that the actual memory size may be less. After purchasing the product, Plaintiff
9 Vroegh learned of its actual memory size by attaching it to his personal computer. Plaintiff
10 Vroegh's computer reported that the actual available memory of the SanDisk "64MB"
11 SmartMedia Card was approximately 62.4MB.

12 35. On or about July 15, 2002, Plaintiff Vroegh purchased a 64MB CompactFlash
13 Card, which is manufactured by Defendant Lexar. Plaintiff Vroegh made the purchase from Ritz
14 Camera at its retail location in Berkeley, California. The packaging for the product stated that it
15 contained "64MB." The package did not state the actual number of bytes nor does it state that the
16 actual memory size may be less. After purchasing the product, Plaintiff Vroegh tested its actual
17 memory size by attaching it to his personal computer. Plaintiff Vroegh's computer reported that
18 the actual available memory of the Lexar "64MB" CompactFlash Card was 61.2MB.

19 36. On or about December 18, 2004, Plaintiff Vroegh purchased a Kodak EasyShare
20 CX7530 digital camera, which is manufactured by Defendant Kodak. Plaintiff Vroegh made the
21 purchase from Best Buy stores at its retail location in Marin City, California. The packaging for
22 the product stated that it contained "32MB." The package did not state the actual number of
23 bytes nor does it state that the actual memory size may be less. After purchasing the product,
24 Plaintiff Vroegh learned of its actual memory size by attaching it to his personal computer.
25 Plaintiff Vroegh's computer reported that the actual available memory of the Kodak "32MB"
26 digital camera was approximately 25.1MB.

27 37. On or about January 13, 2005, Plaintiff Witthoff purchased a 256MB USB Drive,
28 which is manufactured by Defendant FujiFilm. Plaintiff Witthoff made the purchase via the

1 Internet from his home in San Francisco, California. The packaging for the product stated that it
2 contained “256MB.” The package did not state the actual number of bytes nor does it state that
3 the actual memory size may be less. After purchasing the product, Plaintiff Witthoff learned of
4 its actual memory size by attaching it to his personal computer. Plaintiff Witthoff’s computer
5 reported that the actual available memory of the FujiFilm “256MB” USB Drive was
6 approximately 243MB.

7 **d. Defendants’ Method Of Determining Memory Size Is Inconsistent With The**
8 **Binary Standard On Which All Digital Files Are Based.**

9 **i. The Terms “Byte,” “Kilobyte,” And “Megabyte” Are Each Defined In**
10 **Base-Two.**

11 38. All digital files consist of a series of ones and zeros, which is known as “binary”
12 information. The term “binary” refers to the fact that each digit can have only one of two
13 values—either one or zero.

14 39. Each one or zero in a digital file is called a “bit.” The word “bit” stands for
15 “*binary digit*.”

16 40. Binary information is the standard, because microprocessors process data by
17 passing it through a series of switches stored on silicon chips. When the microprocessor reads a
18 “one,” the switch flips from the “off” position to the “on” position or vice-versa. When the
19 microprocessor reads a “zero,” the switch stays as it was. By passing data through millions of
20 switches, the microprocessor processes the information.

21 41. The binary system used by a microprocessor is different from the system that
22 humans use to process information. People typically count in base-ten, also called the “decimal”
23 system. When doing addition, people count from 0 to 9 in the “ones” column, then 0 to 9 in the
24 “tens” column, then 0 to 9 in the “hundreds” column. Each column represents a factor of 10.
25 Thus $10 = 10^1$, $100 = 10^2$, $1000 = 10^3$, and so on.

26 42. In binary computing, a computer counts in base-two. Each column goes only from
27 0 to 1. Thus each column represents a factor of 2, such as 2^1 , 2^2 , 2^3 , 2^4 , 2^5 , and so on.

28 43. While it may be easiest for humans to process information based on numbers in
base-ten, it is most efficient for computers to process information based on numbers in base-two.

1 44. Except for theoretical prototypes, all computer/digital processors sold everywhere
2 in the world use binary information. These include personal computers, PDAs, digital cameras,
3 cellular telephones, MP3 players and all other devices that use Flash Memory Cards or connect to
4 Flash Memory Drives.

5 45. To harness the speed of binary or base-two computing, memory storage originally
6 was designed in sizes that equaled an exponent of the number two.

7 46. Every group of eight (2^3) bits was called a “byte.”

8 47. Bytes were further grouped in exponents of two. Every group of 2^{10} (or 1024)
9 bytes was called a kilobyte or KB. Every group of 2^{20} (or 1,048,576) bytes was called a
10 megabyte or MB. Every group of 2^{30} (or 1,073,741,824) bytes was called a gigabyte or GB.

11 48. In using this terminology, computer architects borrowed the prefixes “kilo,”
12 “mega” and “giga” from the International System of Units (also known as the “metric system”)
13 but changed the meanings. While a kilometer (km) was 1000 (10^3) meters and a kilogram (kg)
14 was 1000 (10^3) grams, a kilobyte (KB) was 1024 (or 2^{10}) bytes. Likewise, while a megaton
15 (mton) was 1,000,000 (10^6) tons, a megabyte (MB) was 1,048,576 (or 2^{20}) bytes. And while a
16 gigahertz (GHz) was 1,000,000,000 (10^9) cycles per Second, a gigabyte (GB) was 1,073,741,824
17 (2^{30}) bytes.

18 49. Because the metric system did not include the unit “byte,” it did not define terms
19 such as “megabyte” and “gigabyte.”¹ The use of the prefixes “mega” or “giga” before “byte”
20 does not make those terms governed by the metric system any more than it could be said that one
21 is using the metric system by describing a location as “10 kiloyards” away or a volume as “750
22 milliquarts.” “Yard” and “quart” are (like “byte”) not metric measurements, so none of these
23 terms become “metric” merely by adding the prefix such as “mega” or “giga.” Similarly, the
24 words “megaphone” and “megavitamin” are not “metric” terms (they do not literally mean 1
25

26 ¹ The metric system was designed to establish seven base units of measurement: length (meter),
27 mass (kilogram), thermodynamic temperature (Kelvin), time (second), electric current (ampere),
28 amount of substance (mole) and luminous intensity (candela), as well as derivatives of these units
(e.g., force is measured in Newtons, equal to $1 \text{ kg}\cdot\text{m}/\text{s}^2$), and multiples of these units (e.g., $1/100$
= centi, 1000 =kilo).

1 million phones or 1 million vitamins); rather the use of the prefix “mega” is understood to have a
2 different meaning in those contexts because, among other things, “phone” and “vitamin” are not
3 base terms in the metric system.

4 **ii. Consumers Have Become Familiar With The Base-Two System In**
5 **Counting Bytes.**

6 50. The use of the base-two system, and particularly the terms kilobyte (KB) and
7 megabyte (MB) in conjunction with this system, have become familiar to consumers who use
8 computers. It is common, for example, to find a computer that has “256MB” or “512MB” of
9 RAM, but it would be very unusual to see a computer with “250MB” or “500MB” of RAM. The
10 simple reason is that 256 and 512 are base-two numbers ($256=2^8$, $512=2^9$), whereas 250 and 500
11 are not. 256 MB is the same as 2^{28} bytes and 512 MB is the same as 2^{29} bytes. But there is no
12 easy base-two conversion for 250MB or 500 MB.

13 51. Furthermore, computer users are presented with the base-two counting system
14 whenever they look at the size of files stored on their hard disk drive or storage medium, whether
15 they are using the Windows, Linux, Apple or any other operating systems. For example, users of
16 the Microsoft Windows operating system (who comprise more than 97% of all computer users)
17 will see a list of files contained in a particular folder, showing the total size of the folder and the
18 file size of each file as a number of “KB” or kilobytes. If the user clicks on the “properties” for a
19 particular file, the user will then see the same size given in “MB” or megabytes and “bytes.”
20 Each of these numbers is computed using the base-two system. For example, if a particular file
21 appears in the list as “2,088 KB,” the properties screen will show “2.03 MB (2,138,112 bytes).”
22 The reason is that 2,138,112 bytes divided by 1024 (2^{10}) equals 2,088 KB, and 2,088 kilobytes
23 divided by 1024 equals 2.03 MB. If the number had been computed in base-ten instead of base-
24 two, then 2,138,122 bytes would be shown as 2,138 KB instead of 2,088 KB, and as 2.14MB
25 instead of 2.03MB.

26 52. Beyond just becoming accustomed to the base-two system in the context of
27 computers and related applications, consumers are ultimately dependent on their particular
28 operating systems’ calculation and representation of file size. Indeed, for the average consumer,

1 there is no other way to gather such information. So, for example, if a consumer wants to transfer
2 a particular picture file to a CD or email a file to a friend, before doing so, consumers frequently
3 check the file size in their operating system to make certain that it will fit on the CD or is not too
4 large for it to be sent or downloaded by a particular email recipient or account. Additionally,
5 consumers frequently check the space or storage capacity remaining on their Flash Memory
6 Cards, Flash Memory Drives, hard drives, external drives, email in-boxes, CDs, diskettes, etc. In
7 short, the average consumers' understanding and measurement of storage capacity and file size is
8 entirely predicated on the base-two system that is, and has always been, used by operating
9 systems such as Windows, Mac or Linux.

10 **iii. The Binary Representation Of File Sizes And MP3 Player Storage**
11 **Capacity Are Especially Important To Someone Who Wants To Use**
12 **A Flash Memory Card Or Flash Memory Drive.**

12 53. As set forth above, all Flash Memory Cards and Flash Memory Drives
13 manufactured and sold by Defendants are designed to work in conjunction with personal
14 computers.

15 54. In preparing to transfer files from a personal computer (or the Internet) to a Flash
16 Memory Card or Flash Memory Drive, or vice versa, a consumer will typically see on his or her
17 computer screen a list of files, with the file sizes stated in bytes, kilobytes and/or megabytes.
18 Where the files are stored on the consumers' hard drive, the user will also see the total size of
19 all files in a particular folder using the same measures. Where a consumer is downloading a file
20 directly to their Flash Memory Card or Flash Memory Drive from the Internet, they will typically
21 see on a particular website a list of available files, with the file sizes stated in bytes, kilobytes
22 and/or megabytes. Where a consumer is uploading a file directly from their Flash Memory Card
23 or Flash Memory Drive to their computer, they will typically see a particular card/drive, with the
24 drive and file sizes stated in bytes, kilobytes and/or megabytes. In each case, the number of
25 kilobytes will equal the number of bytes divided by 1024 (or 2^{10}) and the number of megabytes
26 will equal the number of bytes divided by 1,048,576 (or 2^{20}).

27 55. Consumers purchase a particular Flash Memory Cards or Flash Memory Drive
28 only after they have made a threshold decision regarding their desired memory size. Flash

1 Memory Cards and Flash Memory Drives are priced in proportion to their storage capacity.

2 56. Only after purchasing a Flash Memory Card or Flash Memory Drive will a
3 consumer learn that the actual capacity of that card or device is less than claimed, and that
4 therefore the card or device can hold fewer files than anticipated based on their experience and
5 understanding of computer storage and file size.

6 **e. Defendants Know That Their Conduct Is Misleading.**

7 57. Defendants have long known that the public was likely to be confused by their
8 overstatement of the number of “megabytes” or “gigabytes” of storage in their Flash Memory
9 Cards and Flash Memory Drives. Defendants knew that these terms had originally been adopted
10 in the computer industry as base-two numbers, and that they were still in widespread use as base-
11 two numbers.

12 **i. International Organizations Recognized The Confusion**

13 58. Defendants gained further knowledge about confusion caused by the definitions of
14 kilobyte, megabyte and gigabyte by participating in or being informed about the proceedings of
15 the International Electrotechnical Commission (IEC) and/or the Institute for Electrical and
16 Electronics Engineers (IEEE).

17 59. The IEC and IEEE are organizations for worldwide standardization in electronics
18 and electrotechnology. In December 1998, the IEC recognized the confusion as to the meaning of
19 terms like “kilobyte” and “megabyte” and attempted to address it by approving an international
20 standard for prefixes for binary multiples for use in the fields of data storage, processing and
21 transmission. Over the next four years, the IEEE addressed the same confusion and attempted to
22 address it by approving a draft standard, and later a trial-use standard, to the same effect.

23 60. Some Defendants are members of the IEC and/or the IEEE and/or participated in
24 the discussions leading up to the adoption of these standards.

25 61. The standards recommended by the IEC and the trial-use standards recommended
26 by the IEEE provide that the measurement 2^{10} bytes, which had previously been known as a
27 kilobyte, should henceforth be called “kibibyte.” Similarly, the measurement 2^{20} bytes, which
28 had previously been known as a megabyte, should henceforth be called a “mebibyte.” Likewise,

1 the measurement 2^{30} bytes, which had previously been known as a gigabyte, should henceforth be
2 called a “gibibyte.”

3 62. The IEC standard and IEEE trial-use standards also provided that the terms
4 kilobyte, megabyte, and gigabyte should be redefined to mean 10^3 , 10^6 and 10^9 bytes,
5 respectively, to bring the prefixes “kilo,” “mega,” and “giga” before “byte” in line with the SI
6 standard definitions for those prefixes, as used in words like kilogram or kilometer or megaton.

7 **ii. Defendants Have Not Adopted The Standards**

8 63. The IEC standard and IEEE trial-use standard have never been uniformly adopted
9 by Defendants. Instead, the base-two computations are still widely used throughout the industry
10 including by Defendants themselves, even in the context of advertising, marketing and selling
11 Flash Memory Cards and Flash Memory Drives.

12 64. In addition, Microsoft Corporation continues to compute file size using the binary
13 standard. Microsoft Corporation is by far the world’s largest computer-related company; it makes
14 an operating system used by more than 97% of computer users as well as many leading
15 applications programs. In the technical support section of Microsoft’s website, it explains that
16 “[t]o convert [from kilobytes] to megabytes, divide by 1024 There are 1024 bytes in a
17 kilobyte, not 1000.” See [http://support.microsoft.com/default.aspx?scid=
18 http://support.microsoft.com:80/support/kb/articles/Q121/8/39.asp&NoWebContent=1](http://support.microsoft.com/default.aspx?scid=http://support.microsoft.com:80/support/kb/articles/Q121/8/39.asp&NoWebContent=1), a true and
19 correct copy of which is attached hereto as Exhibit 7.

20 65. In computing the size of RAM, computer and data storage manufacturers and
21 distributors, including Defendants, always use the base-two counting system instead of the base-
22 ten counting system. One megabyte of RAM is always 2^{20} bytes (1,048,576 bytes), not 10^6 bytes
23 (1,000,000 bytes). One gigabyte of RAM is always 2^{30} bytes (bytes), (1,073,741,824 bytes), not
24 10^9 bytes (1,000,000,000 bytes).

25 66. Similarly, in computing the storage capacity of blank computer media such as CD-
26 R(s), CD-RW(s), DVD-RW(s) and floppy disks, computer and data storage manufacturers and
27 distributors, including Defendants, use the base-two counting system instead of the base-ten
28 counting system. One megabyte of storage on blank media is 2^{20} bytes (1,048,576 bytes), not 10^6

1 bytes (1,000,000 bytes). One gigabyte of storage on blank media is 2^{30} bytes (bytes),
2 (1,073,741,824 bytes), not 10^9 bytes (1,000,000,000 bytes).

3 67. Several of the Defendants, including without limitation FujiFilm and P.N.Y
4 Electronics, sell RAM and/or blank media in addition to selling Flash Memory Cards and Flash
5 Memory Drives and thus increase the confusion by using two counting systems simultaneously.
6 See Exhibits 2 and 5, respectively. When describing RAM or blank media, Defendants state the
7 size in megabytes or gigabytes by using the base-two system. Defendant FujiFilm also markets,
8 advertises and sell blank media with the size stated in megabytes that meets or exceeds the
9 amount expected from the base-two definitions of those terms. See Exhibit 2. At the same time,
10 in marketing Flash Memory Cards and Flash Memory Drives, Defendants state the size in
11 megabytes and gigabytes that do not provide the full number of megabytes or gigabytes that
12 would be required by the base-two system. Defendants do not inform consumers that two
13 different standards are being used, nor do they say that a particular number of megabytes or
14 gigabytes of flash memory is fewer bytes than the same number of number of megabytes or
15 gigabytes of RAM or blank media.

16 68. Defendants also increase the consumer confusion by selling Flash Memory Cards
17 and Flash Memory Drives in sizes that imply but do not actually use a base-two counting system.
18 For example, virtually all of the Defendants advertise, market and sell Flash Memory Cards and
19 Flash Memory Drives in sizes of 32MB, 64MB, 128MB, 256MB and 512MB. The numbers 32,
20 64, 128, 256 and 512 are all base-two numbers (2^5 , 2^6 , 2^7 , 2^8 and 2^9 respectively). But these
21 companies fail to provide the number of megabytes and gigabytes that are required by defining
22 “MB” and “GB” as base-two numbers (2^{10} and 2^{20} , respectively).

23 69. In general parlance about computers and file storage, the terms “kilobyte,”
24 “megabyte” and “gigabyte” are still defined primarily as base-two numbers, not base-ten
25 numbers. For example, the Free On-line Dictionary of Computing
26 (<http://foldoc.doc.ic.ac.uk/foldoc/index.html>) defines “megabyte” as “(MB, colloquially ‘meg’)
27 $2^{20} = 1,048,576$ bytes = 1024 kilobytes. 1024 megabytes are one gigabyte.” American
28 Heritage Dictionary gives the primary definition of megabyte” as “1. A unit of computer memory

1 or data storage capacity equal to 1,048,576 (2²⁰) bytes.” The website www.dictionary.com
2 provides the same primary definition.

3 70. The industry reaction to the IEC standards—which has been largely to ignore
4 them—is perhaps best reflected by the response of a spokesman for Dell Computer Company.
5 When told of the standards, he replied “Are you joking with me?” See Michael Stroh, “Have a
6 kibibyte with your PC,” Baltimore Sun, March 15, 1999, p.1C.

7 71. Defendants have not engaged in any systematic efforts to clarify their definitions
8 of the terms kilobyte, megabyte and gigabyte or to educate consumers about the IEC standards.
9 Rather, Defendants systematic efforts have been to mislead and deceive consumers into thinking
10 that Flash Memory Card or Flash Memory Drive memory capacities are great than they actually
11 are.

12 72. Defendants have also not provided consumers with any disclaimer or explanation
13 that intend to use the terms “megabyte” to mean something less than 1,048,576 bytes and
14 gigabyte to mean something less than 1,073,741,824 bytes in their Flash Memory Cards or Flash
15 Memory Drives. To the contrary, close to half of the Defendants including Kodak and P.N.Y
16 Electronics and Viking actually provide consumers with glossary definitions for “megabytes” and
17 “gigabytes” that are binary (i.e., 1MB = 1,048,576 bytes and 1GB = 1,073,741,824 bytes). True
18 and correct copies of those glossaries for Defendants Kodak and P.N.Y Electronics are attached
19 hereto as Exhibits 3 and 5, respectively.

20 f. **Defendants’ Conduct Is Intentional And Leaves Consumers Unprotected.**

21 73. Consumers cannot know the actual number of bytes of storage capacity in the
22 Flash Memory Card or Flash Memory Drive products sold by Defendants unless they purchase
23 the products, unpack them, connect them to their personal computers, and then view the
24 “properties” of the device on their screen.

25 74. Defendants intentionally mislead and deceive consumers into believing that the
26 products have more memory storage than they actually do. For example, Defendant Lexar has a
27 “Frequently Asked Questions” section on its website that explains, “To calculate how many
28 pictures your [flash memory] card can hold, divide the capacity of your card by the average file

1 size of your images. For example, if you have a 256MB card, and use a camera that has an
2 average file size of 1.2MB, then 256 divided by 1.2 gives you approximately 213 pictures.”
3 There follows a chart that shows that a 256MB card will hold 128 files of 2MB, or 80 files of
4 3.2MB. A true and correct copy of this webpage is attached hereto as Exhibit 4. The statements
5 by Lexar are false and misleading, because Lexar’s 256MB card in fact has only approximately
6 248 MB of available storage, which means that if filled with files of 1.2MB, 2MB, or 3.2MB, it
7 would hold only 206 (not 213), 124 (not 128) or 77 (not 80) images, respectively.

8 75. Defendants also intend to compel consumers to purchase additional Flash Memory
9 Cards or Flash Memory Drives, or upgrade their Flash Memory Cards or Flash Memory Drives to
10 a larger size, at an additional charge.

11 **g. Defendants’ Misleading Conduct Leads To Significant Losses By California**
12 **Consumers, Consumers Nationwide And Harms Competitors.**

13 76. Annual worldwide sales of Flash Memory Cards and Flash Memory Drives by
14 Defendants are in the hundreds of millions of dollars. A substantial proportion of the total
15 worldwide sales, estimated at 10% or more, occurred and will occur in California.

16 77. As set forth above, Defendants overstate the storage capacity of their Flash
17 Memory Cards and Flash Memory Drives.

18 78. If Defendants disclosed the true storage size of their Flash Memory Cards and
19 Flash Memory Drives, the Flash Memory Cards and Flash Memory Drives would not have been
20 purchased, or if purchased, the purchase prices would have been lower. The amounts overpaid to
21 each Defendant can be computed by, among other things, comparing the prices that each
22 Defendant charges for different sized Flash Memory Cards or Flash Memory Drives, which
23 reflects its incremental price for each additional unit of memory storage.

24 79. Defendants’ conduct unfairly disadvantages those competitors who more
25 accurately disclose the number of bytes, kilobytes, megabytes and/or gigabytes in their Flash
26 Memory Cards and Flash Memory Drives. For example, in its website marketing of its flash
27 Memory Sticks with “256MB” of storage, Sony Electronics, Inc., provides the following
28 disclaimer: “Actual Usable Capacity: 123MB per side (for a total of 246MB).” A true and

1 correct copy of that webpage is attached hereto as Exhibit 8. The lack of similar disclosures from
2 Defendants makes their conduct even more misleading, in that it causes consumers to believe that
3 a 256MB Flash Memory Card or Flash Memory Drive sold by Sony Electronics, Inc. has less
4 “actual usable capacity” than a 256MB device sold by Defendants.

5 80. The absence of such a disclosure on Defendants’ marketing, advertisements,
6 websites and/or packaging further deceives, misleads and confuses consumers.

7 81. Defendants supply and sell the overwhelming majority of the Flash Memory Cards
8 and Flash Memory Drives sold in the State of California and the United States.

9 82. Defendants intentionally target their false, deceptive and misleading advertising
10 and marketing materials to users of the personal computers by advertising on major Internet sites
11 and by posting marketing materials at their own Internet sites, in their stores and in print,
12 television and radio media nationwide.

13 **III. JURISDICTION AND VENUE**

14 83. This action is brought by Plaintiffs pursuant, *inter alia*, to the California Business
15 and Professions Code, Sections 17200 *et. seq.* Plaintiffs and Defendants are “persons” within the
16 meaning of the California Business and Professions Code, Sections 17201. Plaintiffs bring this
17 action by, for and on behalf of the general public and the public interest of the State of California.

18 84. Plaintiffs are, and at all times relevant to this action have been, residents of the city
19 and county of San Francisco, California.

20 85. Defendants have solicited more potential customers for Flash Memory Cards and
21 Flash Memory Drives and sold more Flash Memory Cards and Flash Memory Drives in
22 California than in any other state in the United States.

23 86. Plaintiffs purchased the Flash Memory Cards and Flash Memory Drives in San
24 Francisco, California, Marin City, California and the Bay Area. They did so after receiving
25 marketing material sent to them at their residences and after doing research on the Internet.

26 87. At least half of the Defendants have their principal places of business in
27 California. No other state hosts the principal places of business of more than one third of
28 Defendants.

1 88. At least 60% of Defendants are citizens of California. No other state is the place
2 of citizenship of more than 20% of Defendants.

3 89. The injuries, damages and/or harm upon which this action is based, occurred or
4 arose out of activities engaged in by Defendants within, and affecting, the State of California.

5 90. Defendants have engaged, and continue to engage, in substantial and continuous
6 business practices in the State of California, including in the City and County of San Francisco.

7 91. As such, Plaintiffs allege that jurisdiction and venue is proper in this Court.

8 **IV. CLASS ALLEGATIONS**

9 92. Plaintiffs bring this action against Defendants on behalf of themselves and all
10 others similarly situated, as a class action pursuant to section 382 of the California Code of Civil
11 Procedure. The class or classes that Plaintiffs seek to represent are composed of and defined as
12 follows:

13 All persons who, or at any time within the four years preceding the filing of this
14 Action, purchased any Flash Memory Card and/or Flash Memory Drive that was
15 manufactured, distributed, marketed or sold by a named Defendant.

16 For purposes of this Third Amended Class Action Complaint, phrase “Class Members” shall refer
17 collectively to all members of these classes, including the named Plaintiffs.

18 93. This action has been brought and may properly be maintained as a class action
19 against the Defendants pursuant to the provisions of California Code of Civil Procedure section
20 382 because there is a well-defined community of interest in the litigation and the proposed class
21 is easily ascertainable:

22 94. Numerosity: Plaintiffs do not know the exact size of the class, but it is estimated
23 that the class is composed of more than 10,000,000 persons. Furthermore, even if subclasses
24 need to be created for the consumers of one or more product(s) or one or more Class
25 Defendant(s), it is estimated that each subclass would have thousands if not tens of thousands of
26 members. The persons in the class are so numerous that the joinder of all such persons is
27 impracticable and the disposition of their claims in a class action rather than in individual actions
28 will benefit the parties and the courts.

1 95. Common Questions Predominate: This action involves common questions of law
2 and fact to the potential class because each Class Member's claim derives from the same
3 allegedly false, misleading, deceptive and/or unfair representations, in advertising and labeling of
4 Flash Memory Cards and Flash Memory Drives, that those products have more storage capacity
5 than they actually do. The common questions of law and fact involved predominate over
6 questions that affect only one product, one Class Defendant, or individual Class Members. Thus,
7 proof of a common or single set of facts will establish the right of each member of the class to
8 recover. Among the questions of law and fact common to the class are:

9 a. Whether each Defendant's advertising and labeling of their Flash Memory Cards
10 and Flash Memory Drives is false, deceptive, misleading and/or unfair.

11 b. Whether each Defendant's breached their contract with the Plaintiffs and those
12 similarly situated.

13 c. Whether each Defendant violated the California Consumers Legal Remedies Act.

14 d. The scope of injunctive relief that should be imposed against Defendants to
15 prevent such conduct in the future.

16 96. Typicality: Plaintiffs' claims are typical of the class because they purchased Flash
17 Memory Cards and Flash Memory Drives manufactured by Defendants in a typical retail
18 consumer process, and those products were advertised, were labeled, and operated in substantially
19 the same fashion as those purchased by all Class Members. Thus, Plaintiffs and Class Members
20 sustained the same injuries and damages arising out of Defendants' conduct in violation of
21 California law and other similar statutes nationwide. The injuries and damages of each Class
22 Member were caused directly by Defendants' wrongful conduct in violation of law as alleged
23 herein.

24 97. Adequacy: Plaintiffs will fairly and adequately protect the interests of all Class
25 Members because it is in their best interests to prosecute the claims alleged herein to obtain full
26 compensation due to them for the illegal conduct of which they complain. Plaintiffs also have no
27 interests that conflict with or are antagonistic to the interests of Class Members. Plaintiffs have
28 retained highly competent and experienced class action attorneys to represent their interests and

1 that of the class. No conflict of interest exists between Plaintiffs and Class Members hereby,
2 because all questions of law and fact regarding liability of Defendants are common to Class
3 Members and predominate over any individual issues that may exist, such that by prevailing on
4 their own claim, Plaintiffs necessarily will establish Defendants' liability to all Class Members.
5 Plaintiffs and their counsel have the necessary financial resources to adequately and vigorously
6 litigate this class action, and Plaintiffs and counsel are aware of their fiduciary responsibilities to
7 the Class Members and are determined to diligently discharge those duties by vigorously seeking
8 the maximum possible recovery for Class Members.

9 98. Superiority: There is no plain, speedy, or adequate remedy other than by
10 maintenance of this class action. The prosecution of individual remedies by members of the class
11 will tend to establish inconsistent standards of conduct for the Defendants and result in the
12 impairment of Class Members' rights and the disposition of their interests through actions to
13 which they were not parties. Class action treatment will permit a large number of similarly
14 situated persons to prosecute their common claims in a single forum simultaneously, efficiently,
15 and without the unnecessary duplication of effort and expense that numerous individual actions
16 would engender. Furthermore, as the damages suffered by each individual member of the class
17 may be relatively small, the expenses and burden of individual litigation would make it difficult
18 or impossible for individual members of the class to redress the wrongs done to them, while an
19 important public interest will be served by addressing the matter as a class action.

20 99. Plaintiffs are unaware of any difficulties that are likely to be encountered in the
21 management of this action that would preclude its maintenance as a class action.

22 **V. PRIVATE ATTORNEY GENERAL ALLEGATIONS**

23 100. Plaintiffs bring this action against all Defendants on behalf of themselves, those
24 similarly situated in the general public, under Business and Professions Code sections 17200 et
25 seq., seeking equitable and injunctive relief for the unfair trade practices described herein.

26 **VI. BASIS FOR ALLEGATIONS**

27 101. All prior paragraphs of this Third Amended Class Action Complaint are alleged on
28 the basis of information and belief, with the exception of paragraphs 1-2 and 33-37.

1 **VII. CAUSES OF ACTION**

2 **PLAINTIFFS' FIRST CAUSE OF ACTION**

3 **(Against All Defendants)**

4 **(False, Deceptive and/or Misleading Advertising, Business and Professions Code § 17500, et**
5 **seq.)**

6 102. Plaintiffs reallege and incorporate by reference paragraphs 1 through 101,
7 inclusive, of this Third Amended Class Action Complaint as if set forth herein.

8 103. Plaintiffs bring this cause of action on behalf of themselves, Class Members and
9 the general public against the Defendants except Dane Elec Corp USA and on behalf of
10 themselves and the general public against Dane Elec Corp USA.

11 104. Beginning at an exact date unknown to Plaintiffs, but within three (3) years
12 preceding the filing of this Third Amended Class Action Complaint, Defendants have made, and
13 continue to make, untrue, false, deceptive or misleading statements and material omissions in
14 connection with the advertising, sale and marketing of their Flash Memory Cards and Flash
15 Memory Drives throughout the Nation, the State of California and the City of San Francisco.

16 105. Defendants have made, and continue to make untrue, false, deceptive or
17 misleading statements and misrepresentations, misstatements and material omissions regarding
18 the storage capacity of their Flash Memory Cards and Flash Memory Drives. Namely,
19 Defendants have made, and continue to make, misrepresentations (of material omission and
20 commission) that those Flash Memory Cards and Flash Memory Drives have files storage or
21 memory capacities substantially larger than their actual (usable) capacities.

22 106. At all times mentioned herein, Defendants knew, or by the exercise of reasonable
23 care, should have known that these and other statements and omissions were false, deceptive,
24 untrue or misleading.

25 107. By engaging in the foregoing acts and practices with the intent to induce Plaintiffs,
26 Class Members and members of the general public to purchase their Flash Memory Cards and
27 Flash Memory Drives, in lieu of other products including those of their competitors, Defendants
28 have committed, and continue to commit, false, deceptive and misleading advertising, as defined
by the California Business and Professions Code, section 17500, *et seq.*

1 108. The Plaintiffs, Class Members and general public are likely to be deceived by
2 Defendants' practices set forth above.

3 109. Plaintiffs, Class Members and other California residents are in current and ongoing
4 need of protection from the untrue, false, deceptive or misleading advertisements of Defendants.

5 110. The aforementioned practices, which Defendants have used, and continue to use,
6 to their significant financial gain, also constitute unlawful competition and provide an unlawful
7 advantage over Defendants' competitors as well as injury to Plaintiffs, Class Members and the
8 general public.

9 111. Plaintiffs are informed and believe, and thereupon allege, that the general public is
10 likely to be deceived by Defendants' practices set forth above.

11 112. Plaintiffs seek, on behalf of the general public and those similarly situated, full
12 restitution and disgorgement of monies, as necessary and according to proof, to restore any and
13 all monies acquired by Defendants by means of the unfair and/or deceptive trade practices
14 complained of herein.

15 113. Plaintiffs seek, on behalf of the general public and those similarly situated, an
16 injunction to prohibit Defendants from continuing to engage in the unfair trade practices
17 complained of herein. The restitution includes all amounts, paid and unpaid, obtained by
18 Defendants using the tactics described herein, including interest thereon. The acts complained of
19 herein occurred, at least in part, within three (3) years preceding the filing of this Class Action
20 Complaint.

21 114. Plaintiffs, those similarly situated and other members of the general public are
22 further entitled to and do seek both a declaration that the above-described trade practices are
23 unfair, unlawful and/or fraudulent and injunctive relief restraining Defendants from engaging in
24 any of such deceptive, unfair and/or unlawful trade practices in the future. Such misconduct by
25 Defendants, unless and until enjoined and restrained by order of this Court, will continue to cause
26 injury in fact to the general public and the loss of money and property in that the Defendants will
27 continue to violate these California laws, unless specifically ordered to comply with the same.
28 This expectation of future violations will require current and future customers to repeatedly and

1 continuously seek legal redress in order to recoup monies paid to Defendants to which
2 Defendants are not entitled. Plaintiffs, those similarly situated and/or other consumers have no
3 other adequate remedy at law to ensure future compliance with the California Business and
4 Professions Code alleged to have been violated herein.

5 115. As a direct and proximate result of such actions, Plaintiffs, members of the general
6 public and/or others similarly situated have suffered, and continue to suffer, injury in fact and
7 have lost money and or property as a result of such deceptive, unfair and/or unlawful trade
8 practices and unfair competition in an amount which will be proven at trial, but which is in excess
9 of the jurisdictional minimum of this Court.

10 116. As a direct and proximate result of such actions, Defendants have enjoyed, and
11 continue to enjoy, significant financial gain in an amount which will be proven at trial, but which
12 is in excess of the jurisdictional minimum of this Court.

13 **PLAINTIFFS' SECOND CAUSE OF ACTION**

14 **(Against All Defendants)**

15 **(Unfair, Unlawful and Deceptive Trade Practices, Business and Professions Code § 17200,
16 *et seq.*)**

17 117. Plaintiffs reallege and incorporate by reference paragraphs 1 through 116,
18 inclusive, of this Third Amended Class Action Complaint as if set forth herein.

19 118. Plaintiffs bring this cause of action on behalf of themselves, Class Members and
20 the general public against the Defendants except Dane Elec Corp USA and on behalf of
21 themselves and the general public against Dane Elec Corp USA.

22 119. Beginning at an exact date unknown to Plaintiffs, but within four (4) years
23 preceding the filing of this Third Amended Class Action Complaint, and at all times mentioned
24 herein, Defendants have engaged, and continue to engage, in unfair, unlawful and deceptive trade
25 practices in California by engaging in the misrepresentation, false, misleading and/or deceptive
26 advertising and marketing outlined above.

27 120. Beginning at an exact date unknown to Plaintiffs, but within four (4) years
28 preceding the filing of this Third Amended Class Action Complaint, and at all times mentioned
herein, Defendants have engaged, and continue to engage, in unfair, unlawful and/or deceptive

1 trade practices in California by falsely, deceptively and/or unfairly claiming that their Flash
2 Memory Cards and Flash Memory Drives have, and had, storage capacities larger than they
3 actually do and did.

4 121. Defendants knowingly and intentionally misrepresent the storage capacity of their
5 Flash Memory Cards and Flash Memory Drives.

6 122. The Plaintiffs, Class Members and general public are likely to be deceived by
7 Defendants' practices set forth above.

8 123. Defendants engage in these unfair practices to increase their profits on the Flash
9 Memory Cards and Flash Memory Drives that they sell as well as to force consumers to purchase
10 memory storage upgrades or new Flash Memory Cards and Flash Memory Drives at an additional
11 charge. As such, Defendants have engaged in unlawful trade practices, as defined and prohibited
12 by section 17200, et seq. of the California Business and Professions Code.

13 124. Defendants purposely fail to disclose, in their advertising and marketing, the way
14 in which they determine the storage capacity of their Flash Memory Cards and Flash Memory
15 Drives or that such (useable) storage may actually be less.

16 125. The aforementioned practices, which Defendants have used, and continue to use,
17 to their significant financial gain, also constitute unlawful competition and provide an unlawful
18 advantage over Defendants' competitors as well as injury to the general public.

19 126. Plaintiffs are informed and believe, and thereupon allege, that the general public is
20 likely to be deceived by Defendants' practices set forth above.

21 127. Plaintiffs seek, on behalf of the general public and those similarly situated, full
22 restitution and disgorgement of monies, as necessary and according to proof, to restore any and
23 all monies acquired by Defendants by means of the unfair and/or deceptive trade practices
24 complained of herein.

25 128. Plaintiffs seek, on behalf of the general public and those similarly situated, an
26 injunction to prohibit Defendants from continuing to engage in the unfair trade practices
27 complained of herein. The restitution includes all amounts, paid and unpaid, obtained by
28 Defendants using the tactics described herein, including interest thereon. The acts complained of

1 herein occurred, at least in part, within four (4) years preceding the filing of the Complaint in this
2 Action and/or this Class Action Complaint.

3 129. Plaintiffs, those similarly situated and other members of the general public are
4 further entitled to and do seek both a declaration that the above-described trade practices are
5 unfair, unlawful and/or fraudulent and injunctive relief restraining Defendants from engaging in
6 any of such deceptive, unfair and/or unlawful trade practices in the future. Such misconduct by
7 Defendants, unless and until enjoined and restrained by order of this Court, will continue to cause
8 injury in fact to the general public and the loss of money and property in that the Defendants will
9 continue to violate these California laws, unless specifically ordered to comply with the same.
10 This expectation of future violations will require current and future customers to repeatedly and
11 continuously seek legal redress in order to recoup monies paid to Defendants to which
12 Defendants are not entitled. Plaintiffs, those similarly situated and/or other consumers have no
13 other adequate remedy at law to ensure future compliance with the California Business and
14 Professions Code alleged to have been violated herein.

15 130. As a direct and proximate result of such actions, Plaintiffs, members of the general
16 public and/or others similarly situated have suffered, and continue to suffer, injury in fact and
17 have lost money and or property as a result of such deceptive, unfair and/or unlawful trade
18 practices and unfair competition in an amount which will be proven at trial, but which is in excess
19 of the jurisdictional minimum of this Court.

20 131. As a direct and proximate result of such actions, Defendants have enjoyed, and
21 continue to enjoy, significant financial gain in an amount which will be proven at trial, but which
22 is in excess of the jurisdictional minimum of this Court.

23 **PLAINTIFFS' THIRD CAUSE OF ACTION**
24 **(Against The Defendants Except Dane Elec Corp. USA)**
25 **(Breach of Contract)**

26 132. Plaintiffs reallege and incorporate by this reference paragraphs 1 through 131,
27 inclusive, of this Third Amended Class Action Complaint as if set forth herein.

28 133. Plaintiffs bring this cause of action against the Defendants on behalf of themselves

1 and Class Members who purchased a Flash Memory Card and/or Flash Memory Drive from those
2 Defendants.

3 134. On or about August 20, 2001, Plaintiff Vroegh and Defendant P.N.Y entered into a
4 contract or agreement in which Plaintiff Vroegh agreed to purchase and Defendant P.N.Y agreed
5 to sell to Plaintiff Vroegh a Smart Media Card having a specified number of megabytes of file
6 storage capacity. The terms of this contract can be ascertained from the written documents
7 described in this Third Amended Class Action Complaint, in particular the representations on the
8 Smart Media Card packaging and on P.N.Y.'s website, as well as implied from P.N.Y.'s conduct
9 described herein, including its knowledge and use of the term "megabyte." Plaintiff Vroegh
10 performed all conditions, covenants and promises required under this contract. Specifically, on or
11 about August 20, 2001, Plaintiff Vroegh paid P.N.Y's retailer Best Buy \$49.99 plus tax. In
12 violation of the contract, P.N.Y provided Plaintiff Vroegh with a Smart Media Card that had
13 fewer megabytes of actual storage capacity than promised.

14 135. On or about December 03, 2002, Plaintiff Vroegh and Defendant SanDisk entered
15 into a contract or agreement in which Plaintiff Vroegh agreed to purchase and Defendant SanDisk
16 agreed to sell to Plaintiff Vroegh a 64MB SmartMedia Card having a specified number of
17 megabytes of file storage capacity. The terms of this contract can be ascertained from the written
18 documents described herein, including the representations on the Smart Media Card packaging
19 and on SanDisk's website, as well as implied from SanDisk's conduct described in this Third
20 Amended Class Action Complaint, in particular its knowledge and use of the term "megabyte."
21 Plaintiff Vroegh performed all conditions, covenants and promises required under this contract.
22 Specifically, on or about December 03, 2002, Plaintiff Vroegh paid SanDisk's retailer CompUSA
23 \$29.99 plus tax. In violation of the contract, SanDisk provided Plaintiff Vroegh with a
24 SmartMedia Card that had fewer megabytes of actual storage capacity than promised.

25 136. On or about July 15, 2002, Plaintiff Vroegh and Defendant Lexar entered into a
26 contract or agreement in which Plaintiff Vroegh agreed to purchase and Defendant Lexar agreed
27 to sell to Plaintiff Vroegh a CompactFlash Card having a specified number of megabytes of file
28 storage capacity. The terms of this contract can be ascertained from the written documents

1 described in this Third Amended Class Action Complaint, in particular the representations on the
2 CompactFlash Card packaging and on Lexar's website, as well as implied from Lexar's conduct
3 described herein, including its knowledge and use of the term "megabyte." Plaintiff Vroegh
4 performed all conditions, covenants and promises required under this contract. Specifically, on or
5 about July 15, 2002, Plaintiff Vroegh paid Lexar's retailer Ritz Camera \$54.99 plus tax. In
6 violation of the contract, Lexar provided Plaintiff Vroegh with a CompactFlash Card that had
7 fewer megabytes of actual storage capacity than promised.

8 137. On or about December 18, 2004, Plaintiff Vroegh and Defendant Kodak entered
9 into a contract or agreement in which Plaintiff Vroegh agreed to purchase and Defendant Kodak
10 agreed to sell to Plaintiff Vroegh a Kodak EasyShare CX7530 digital camera having a specified
11 number of megabytes of file storage capacity. The terms of this contract can be ascertained from
12 the written documents described in this Third Amended Class Action Complaint, in particular the
13 representations on the digital camera packaging and on Kodak's website, as well as implied from
14 Kodak's conduct described herein, including its knowledge and use of the term "megabyte."
15 Plaintiff Vroegh performed all conditions, covenants and promises required under this contract.
16 Specifically, on or about December 18, 2004, Plaintiff Vroegh paid Kodak's retailer Best Buy
17 \$279.99 plus tax. In violation of the contract, Kodak provided Plaintiff Vroegh with a digital
18 camera that had fewer megabytes of actual storage capacity than promised.

19 138. On or about January 13, 2005, Plaintiff Witthoff and Defendant FujiFilm entered
20 into a contract or agreement in which Plaintiff Witthoff agreed to purchase and Defendant
21 FujiFilm agreed to sell to Plaintiff Witthoff a FujiFilm USB Drive having a specified number of
22 megabytes of file storage capacity. The terms of this contract can be ascertained from the written
23 documents described in this Third Amended Class Action Complaint, in particular the
24 representations on the USB Drive packaging and on FujiFilm's website, as well as implied from
25 FujiFilm's conduct described herein, including its knowledge and use of the term "megabyte."
26 Plaintiff Witthoff performed all conditions, covenants and promises required under this contract.
27 Specifically, on or about January 13, 2005, Plaintiff Witthoff paid FujiFilm's retailer
28 Amazon.com \$93.87. In violation of the contract, FujiFilm provided Plaintiff Witthoff with a

1 digital camera that had fewer megabytes of actual storage capacity than promised.

2 139. Each of the Class Members entered into a contract or agreement with the
3 Defendants to purchase Flash Memory Cards and/or Flash Memory Drives, which contracts
4 contained substantially the same terms and conditions as the contract described herein between
5 the Defendants and Plaintiffs. The terms and conditions of those contracts can be ascertained
6 from the written documents described in this Third Amended Class Action Complaint, in
7 particular the representations on the packaging of Flash Memory Cards and Flash Memory Drives
8 and on Defendants' website, as well as implied from Defendants' conduct described herein,
9 including their knowledge and use of the terms "megabyte" and "gigabyte." Each of the Class
10 Members performed all conditions, covenants and promises required under his or her contract.
11 Defendants violated the contracts by providing Class Members less storage capacity than
12 promised.

13 140. As a direct and proximate result of each of the breaches alleged herein, Plaintiffs
14 and Class Members have suffered, and continue to suffer, damages in an amount which will be
15 proven at trial, but which are in excess of the jurisdictional minimum of this Court.

16 **PLAINTIFFS' FOURTH CAUSE OF ACTION**
17 **(Against The Defendants Except Dane Elec Corp. USA, Fuji Photo Film USA, Inc. and**
18 **Kodak)**
19 **(Fraud, Deceit and/or Misrepresentation)**

20 141. Plaintiffs reallege and incorporate by reference paragraphs 1 through 140,
21 inclusive, of this Third Amended Class Action Complaint as if set forth herein.

22 142. Plaintiffs bring this cause of action against the Defendants except Dane Elec Corp
23 USA, Fuji Photo Film USA, Inc. and Eastman Kodak Company on behalf of themselves and
24 Class Members who purchased a Flash Memory Card and/or Flash Memory Drive from those
25 Defendants.

26 143. On or about August 8, 2001, July 15, 2002, December 3, 2002, December 18,
27 2004, January 13, 2005 and on numerous occasions since and prior to those occasions,
28 Defendants have made misrepresentations regarding the file storage capacity of their Flash
Memory Cards and Flash Memory Drives as stated herein.

1 144. Defendants made such misrepresentations with full knowledge that such
2 statements were, and are, in fact, fraudulent, misrepresentative, false and/or deceptive.

3 145. In addition to the affirmative misrepresentation and willful deception described in
4 the preceding paragraph, Defendants have intentionally deceived, and continue to deceive,
5 Plaintiffs and Class Members in order to profit as well as to compel them to purchase additional
6 Flash Memory Cards and Flash Memory Drives sold by them.

7 146. These aforementioned misrepresentations or fraudulent, deceptive, or false
8 statements and omissions concerned material facts that were essential to the analysis undertaken
9 by Plaintiffs and Class Members regarding whether to purchase a Flash Memory Card or Flash
10 Memory Drive.

11 147. Plaintiffs and Class Members would have acted differently had they not been
12 misled, but instead been informed of the true storage capacities of the Flash Memory Card or
13 Flash Memory Drive that he and they purchased.

14 148. Defendants each had a duty, including a fiduciary duty, to inform Plaintiffs and
15 Class Members of the true storage capacity of the Flash Memory Cards and Flash Memory Drives
16 that they were offering for sale. In not so informing Plaintiffs and Class Members, Defendants
17 breached these duties. Defendants also gained financially from, and as a result of, their breaches.

18 149. By and through such fraudulent statements, misrepresentations and/or omissions,
19 Defendants intended to induce Plaintiffs and Class Members to alter their position to their injury.

20 150. Plaintiffs and Class Members justifiably and reasonably relied on Defendants'
21 misrepresentations, and, as such, were damaged by Defendants.

22 151. As a direct and proximate result of Defendants' misrepresentations, Plaintiffs and
23 Class Members at a minimum have suffered damages in an amount which at least equals the
24 value of the missing storage capacity, as described above. The exact amount of this amount will
25 be proven at trial, but is in excess of the jurisdictional minimum of this Court.

26 **PLAINTIFFS' FIFTH CAUSE OF ACTION**
27 **(Against The Defendants Except Dane Elec Corp. USA)**
28 **(Violation of the Consumers Legal Remedies Act, California Civil Code § 1750, *et seq.*)**

1 152. Plaintiffs reallege and incorporate by reference paragraphs 1 through 151, inclusive,
2 of this Third Amended Class Action Complaint as set forth herein.

3 153. This cause of action is brought pursuant to the California Consumers Legal
4 Remedies Act, California Civil Code § 1750, *et seq.* (“CLRA”).

5 154. Defendants actions, representations and conduct has violated, and continues to
6 violate the CLRA, because they extend to transactions that are intended to result, or which have
7 resulted, in the sale or lease of goods or services to consumers.

8 155. Plaintiffs and other Class Members are “consumers” as that term is defined by the
9 CLRA in California Civil Code § 1761(d).

10 156. The Flash Memory Card and/or Flash Memory Drive that Plaintiffs (and others
11 similarly situated Class Members) purchased, and now own, from Defendants was a “good”
12 within the meaning of California Civil Code § 1761(a).

13 157. By engaging in the actions, representations and conduct set forth in this Third
14 Amended Class Action Complaint, Defendants have violated, and continue to violate, §
15 1770(a)(5) of the CLRA by “[r]epresenting that [their] goods have sponsorship, approval,
16 characteristics, ingredients, uses, benefits, or quantities which they do not have.” Additionally,
17 Defendants have violated the CLRA by representing that their products are of a particular
18 standard, quality, or grade that they are not, and by advertising, as set forth above, their products
19 with an intent to sell them with a certain accessible storage capacity when such products do not
20 provide that storage capacity to the end user or consumer. (See California Civil Code §§
21 1770(a)(5) and (7), respectively.)

22 158. On the 9th and 15th of March 2004, December 21, 2004 and January 21, 2005,
23 pursuant to California Civil Code § 1782(a), Plaintiffs served Defendants with notice regarding
24 their unlawful practices and a demand to correct, repair, replace or otherwise rectify such
25 unlawful practices. Defendants did not respond and/or otherwise take corrective action.

26 159. Pursuant to California Civil Code § 1780(a)(3), Plaintiffs, on behalf of themselves
27 and similarly situated Class Members, seeks compensatory damages, punitive damages and
28 restitution of any ill-gotten gains due to Defendants’ acts and practices. Plaintiffs also request

1 that this Court award them their costs and reasonable attorneys' fees pursuant to California Civil
2 Code § 1780(d). Plaintiffs further requests that this Court enjoin Defendants from continuing to
3 employ the unlawful methods, acts and practices alleged herein pursuant to California Civil Code
4 § 1780(a)(2). If Defendants are not restrained from engaging in these types of practices in the
5 future, Plaintiffs, Class Members and other members of the general public will continue to suffer
6 harm.

7 **VIII. PRAYER FOR RELIEF**

8 WHEREFORE, Plaintiffs pray for judgment as follows:

9 A. On Causes of Action Number 1 and 2 against all Defendants:

- 10 1. For restitution and disgorgement pursuant to, without limitation, the
11 California Business & Professions Code §§ 17200, *et seq.* and
12 17500, *et seq.*; and
13 2. For injunctive relief pursuant to, without limitation, the California
14 Business & Professions Code §§ 17200, *et seq.* and 17500, *et seq.*;

15 B. On Cause of Action Number 3 against Defendants named therein: An
16 award of compensatory damages, the amount of which is to be determined
17 at trial;

18 C. On Cause of Action Number 4 against Defendants named therein:

- 19 1. An award of compensatory damages, the amount of which is to be
20 determined at trial; and
21 2. For punitive damages according to proof;

22 D. On Cause of Action Number 5 against Defendants named therein:

- 23 1. For the greater of actual or compensatory damages according to
24 proof or \$1000 pursuant to California Civil Code section 1780; and
25 2. For restitution and injunctive relief pursuant to California Civil
26 Code section 1780; and
27 3. For punitive damages according to proof pursuant to California
28 Civil Code section 1780; and

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4. For any Class Member who is a senior citizen or a disabled person,
an award of five thousand dollars (\$5,000);

E. On All causes of action against all Defendants:

- 1. For reasonable attorneys’ fees according to proof pursuant to,
without limitation, the California Code of Civil Procedure § 1021.5;
and
- 2. For costs of suit incurred; and
- 3. For such further relief as this Court may deem just and proper.

Dated: March 9, 2005

Respectfully Submitted,
ADAM GUTRIDE
SETH A. SAFIER

Seth A. Safier, Esq.
Attorneys for Plaintiffs

EXHIBIT 1



- Home page
- The group
- Memory activity
- Financial information
- Press
- Dane-Elec Configurator
- Products
 - DRAM Memory
 - FLASH Memory
 - Readers, adapters and memory keys
- Xs Online Services
- Support

THE DANE-ELEC MEMORY FLASH CARDS



Xs CARD

The new Xs type I memory cards with **128MB, 256MB, 512MB and 1GB capacity** (standard thickness compatible with digital cameras using CompactFlash™ cards) equipped with NAND technology are now available. As their name implies, these cards are fast enough to allow all professional and amateur photographers to take instant shots since the cards can **write data at 22X**. In the same way, these cards will enable written date to be read at a **transfer rate of 44X**. Other speeds will become available as Flash technology evolves.



SMART MEDIA

The extremely small (the third of a credit card) Dane-Elec SmartMedia™ memory cards are used in all portables, such as voice recorders, walkman MP3 and other digital devices. Of a storage capacity in perpetual evolution (to date of 16 to 128MB), Dane-Elec SmartMedia™ memory cards will help you to quickly transfer your data simply and without deterioration of your information in time.

 [Data sheet](#)



COMPACT FLASH

Dane-Elec's CompactFlash™ card is a non-volatile memory extension. This card is generally designed for digital cameras, palmtops and personal digital assistant, cellular phones, audio and voice recorders, MP3 player, notebooks via a PCMCIA adapter and other digital applications.

 [Data sheet](#)



SECURE DIGITAL

The physical characteristics of these cards are their weight, 0.07 ounces, their size, one sixth of a credit card (32 mm x 24 mm x 2.1 mm) particularly lends them to communicating mobile markets: personal assistants/PDA, MP3 drivers, Mobile phones, also to digital equipment such as cameras and videos. DANE-ELEC's Secure Digital™ range comprises 6 cards with 16, 32, 64, 128, 256 and 512 MB of memory capacity. Their rate of data-transfer varies between 2 and 4 MB per second. Compared to the Multi Media Card™ composed of 7 connexion pins, the Secure Digital™ card is composed of 9 connexion pins. This new organisation allows faster transfer of data with the



MULTI MEDIA CARD

The extremely small (the quarter of a credit card) Dane-Elec MultiMedia™ memory card is used in virtually all portables, such as audio recorders, walkmans MP3, mobile

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- [Financial information](#)
- [Press](#)
- [Dane-Elec Configurator](#)
- [Products](#)
 - [DRAM Memory](#)
 - [FLASH Memory](#)
 - [Readers, adapters and memory keys](#)
- [Xs Online Services](#)
- [Support](#)

THE COMPLETE RANGE OF THE DANE-ELEC MEMORY MODULES

DRAM MEMORY MODULES



PC266-333 UNBUFFERED/REGISTERED DDR MODULES

The DIMM unbuffered or registered PC266/333 DDR modules, manufactured by DANE-ELEC MEMORY, are made up with 8 to 18 dies. The capacity of those dies are 128, 256 and 512 Mb depending upon the module organization.

The power supply is 2,5V. The clock frequencies of 100, 133, 167 and 200 MHz are equivalent to 200, 266, 333 and 400MHz, because the component responds on the leading and on the trailing edges of the clock. The dies are built into a 66 pin TSOP2 packaging.

The module is equipped with an EEPROM memory that contains the module characteristics (organisation dynamic parameters). The registered DIMM have additional register circuits that process the address and command lines. Internal clock signals are generated by a PLL (Phase Locked Loop). The components are assembled on a 184 pin PCB.

 [Data sheet](#)

 [PC400 data sheet](#)



PC100-133 SDRAM SODIMM MODULES

The DANE-ELEC PC100/PC133 SDRAM SODIMM are high speed 3.3-volt Synchronous DRAM Modules composed eight x8 bits from 64Mbits up to 512Mbits Synchronous DRAMs in 54-pin TSOPII and 8-pin TSSOP 2K bit EEPROM on a 144-pin glass-epoxy printed circuit board. Two 0.22uF-decoupling capacitors per each SDRAM are mounted on the module.

 [Data sheet](#)



PC66 SDRAM SODIMM MODULES

 [French data sheet](#)



PC100-PC133 SDRAM Unbuffered DIMM MODULES

The DANE-ELEC PC100/PC133 SDRAM Unbuffered DIMM are high speed 3.3-volt Synchronous DRAM Modules composed sixteen 8Mx8 bit Synchronous DRAMs in 54-pin TSOPII and 8-pin TSSOP 2K bit



PC66 SDRAM UNBUFFERED DIMM MODULES

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DANE-ELEC
Memory



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Removable Disk (F:) Properties




General AutoPlay Tools Hardware Sharing



Type: Removable Disk

File system: RAW

 Used space: 0 bytes 0 bytes

 Free space: 255,827,968 bytes 243 MB

Capacity: 255,827,968 bytes 243 MB



Drive F

OK Cancel Apply

FlashMemoryStore

THE FLASH MEMORY PROFESSIONALS

sales@FlashMemoryStore.com



Special Holiday Promotions:

- + Enter to Win \$1000 in Cameras & Memory!
- + Free Shipping on Purchases over \$200
- + 150% Holiday Delivery Guarantee!
- + 1GB IBM MicroDrive Sale - Only \$154.95!
- + xD Picture Card Sale - 128mb \$56
- + USB Flash Drive and Pen Drive Sale!
- + Secure Digital SD Cards on Sale

[Home](#) > [MultiMedia Card](#) > [Dane-Elec](#) > [128MB](#)



Dane-Elec 128mb MultiMedia Card BIG PRICE DROP! SAVE \$\$\$

Dane-Elec 128mb MultiMedia™ Cards (MMC)

The Dane-Elec Multimedia™ Card is highly integrated flash memory with serial and random access capability. Multimedia™ Card is very small, removable flash storage that is an ideal solution for portable battery powered devices such as audio players, organizers, palmtops, electronic books, encyclopedia and dictionaries.

Using very effective data compression schemes such as MPEG, the MultiMedia™ Card will deliver enough capacity for all kinds of multimedia data: software/programs, text, music, speech, images, video etc...

Main Features:

- ✕ 32, 64, 128 MB capacity
- ✕ Fast download time
- ✕ Lifetime guarantee
- ✕ Low power consumption
- ✕ Wide operating range for temperature

Part #: DA-MMC128
Retail Price: \$79.99
Our Price: \$46.95



MultiMedia™ Card System Standard Compatibility:

- ✕ System specification version 2.11 compliant
- ✕ SPI Interface supported
- ✕ Block and partial block read supported (Command classes 0 and 2)
- ✕ Stream read supported (Command class 1)
- ✕ Block write and erase supported (Command classes 4 and 5)
- ✕ Group write protection (Command classes 6)
- ✕ Stream write supported (Command classes 3)
- ✕ Password data access protection
- ✕ Small erase block size of 512 bytes, tagged erase supported
- ✕ Read block size programmable between 1 and 2048 bytes
- ✕ Up to 100,000 erase cycles per block

- ✕ Vcc =2.7 V to 3.6 V operation voltage required
- ✕ No external programming voltage required
- ✕ Damage free powered card insertion and removal
- ✕ 4kV ESD protection



MultiMedia™ Card Specifications

Part Number	Capacity (MB)
DA-MMC-128	128
DA-MMC-64	64
DA-MMC-32	32
DA-MMC-16	16

High Speed Serial Interface with Random Access:

- ✕ Read Speed: sustained: 13.7 Mbits/s (multi-block read) / burst (one block): 20 Mbit/s
- ✕ Write Speed: sustained: 3.2 Mbits/s (multi-block write to pre-erased sectors)
burst (one block): 20 Mbit/s
- ✕ Up to 10 stacked card (at 20 MHz, Vcc=2.7 to 3.6V)
- ✕ Access time: 256 μ s (max) (at 20 MHz, Vcc=2.7 to 3.6V, random byte access (Typical case without BCC error correction))
- Low Power Dissipation
- ✕ High Speed: 80 mW (max) (at 20 MHz, Vcc=2.7 V)
- ✕ Power save: 0.1 mW (max) (at 0 Hz, Vcc=2.7 V (in stby state))

Partial List of Compatible Devices:

AIWA MM-FX500	LG Electronics A1F MP3 Player
AIWA MM-FX500 MP3 Recorder	LG Electronics A2F MP3 Player
ATLM eTman 310	LG Electronics MP Free AHA-FD770
ATLM eTman 320	LG Electronics MP Free MF-FD330
AudioVox MPDJ Series MP-1000	LG Electronics MP Free MF-FD340
AudioVox MPDJ Series MP-2000	LG Electronics MP-Cion MP3 Phone
AudioVox MPDJ Series MP-3000	MacPower MP3-GO
Baromtec Music Man BMP-1000	Maycom Merit MP-100F
Baromtec Music Man MDM-H2	Maycom Merit MP-90
C-ONE Tech mpWOW	MC&T MP3 Player
Casio MP3 Watch WMP-1V	MIC Teen
Casio Handheld PCs	Milletech MP9
Casio EM-500	MPMan MP-M40

Casio Cassiopeia EM-500	MpMan MP-M41
Pocket PC	mPride MP3 Player
CMC MP3 Jumper	Multiport Zuum3
Compaq iPAQ PA-1	My Music DM701
Cowon Systems MP3 Player	Namsung Mp5th Ave.
Daiyoo Electronics MPECHO	Nike PSA Play 120
DY-1000	Nokia 9110 Communicator
Daiyoo Electronics MPECHO	Nokia 9210 Communicator
DY-2000	Opener's Hanzoom DMP-
Digitalway MPIO	2000
Digitra Systems MP Trio	Palm 500
Divacom MOMO D-210M	Palm 505
DNA Pocket Digital Audio	Palm 515
MP3 Player	Panasonic NC-C5
DnC Digital Audio Player	Panasonic NV-C3
DoCoMo PocketPet e-mail	Panasonic PV-DV200
Device	Panasonic PV-DV600
DSC M-Any MR-100	Panasonic PV-DV800
DSC POP3	Panasonic PV-DC3000J
Eblitz Audio Labs ET310	ipalm Digital Camera
Eblitz Audio Labs ET320	Panasonic NV-MPXS
Eblitz Audio Labs ET350	Printer
Eiger 2000	PenMan NETTI PN-2000
Ericsson HPM-10 MP3 Plug-in	Pine Labs D-music PMA
Fast Systems MP Player	6400
Franklin eBookman eBook	Pontis SP-503
FUBU Y2G Audio Player	Pontis SP-504
Fujitsu CuPlay FMP322MU	RCA k@Zoo
Gaon Mutizen	RCA/Thomson K@zoo
Gaon Titi@	RFC JazPiper
Grundig Mpaxx	Rockford Fosgate
Haitai Digital Audio Player	RFXMP3.8 Changer
HanGo Mpride HG-300FM	Saehan MPMan MP-M40
Hanyang MP3+CarAmp	Saehan MPMan MP-M41
Hyun Won DDR	Sanyo SSP-PD7
Hyun Won Micro	Scott Digital Audio Player
I&C MP Master AK-11W	Sharp VL-FD3
I&C MP Master IM-100	Sharp VL-MR1
I&C MP Master IM-110M	Siemens SL45 WAP
I&C MP Master IM-150M	Phone
I&C MP Master IM-300FM	SK Global EncoDeco ED-
I&C MP Master IM-320FM	H10
I&C MP Master IM-360FM	Sonus (Focus) MP-3
I&C MP Master IM-620H	Player
Headset	Sphere OmniPlayer
I-Jam IJ-100	Standard Telecom NiXXo
I-Jam Win-JAM WMA Player	MP3 Phone
Innogear MiniJam MP3 Player	Tawkwang MP3 Player
for Handspring	ED/HO
IO-Data Hyper-Hyde	Tecpoints itune
JVC DV2000 Digital Video	Telian MPDJ Series
Camcorder	Thomson VMD10
JVC GR-DVL 700	Thomson VMD20
JVC GR-DVL 815U	Thomson VMD9
JVC GR-DVL 9800U	Unitech Juli UP-303
JVC GR-DVM 70U	Unitech Juli UP-304
JVC GR-DVP3	Unitech Juli UP-305

JVC GR-DVX7 DVC
KB Gear JAMC@M 3.0
Camera
Kedcom MP300
Kedcom MP500
Kodak DX3215
Kodak DX3700
Konica KD-300Z
Koreamedia MP-CAP
KS Communications MP
Player

Unitech ROME UP-301
Wooju Tami WJ-2000
Wooju Tami WJ-2100
Yashica Finecam S3
Yelo DMP32
Yelo DMP64VR
ZipAudio ZMP-3000 MP3
Player
ZipLabs ZAPPEE MP3
Player
ZipMan ZMP-1000 MP3
Player

Part #: DA-MMC128
Retail Price: \$79.99
Our Price: \$46.95

Availability: **Ready to Ship!**

Qty:

[Add FlashMemoryStore.com to Your Favorites!](#)

Looking for Computer Memory at **DISCOUNT** Prices?

Visit our sister store at

www.Computer-Memory-Store.com

**SAME-DAY SHIPPING ON ALL ORDERS
RECEIVED BEFORE 6PM CENTRAL TIME!**

**\$4.95 FLAT RATE INSURED SHIPPING ON EVERY ORDER!
NO HIDDEN SHIPPING CHARGES!**

**\$4.95
FLAT RATE
SHIPPING**

**AIRBORNE
EXPRESS**

We ship *Airborne Express, FedEx*
and the *USPS*

so your order arrives **FAST** and **ON
TIME!!**

FedEx

**Canada & International Orders extra. See our
[International Ordering Information Page](#) for details.**



ALL products we sell come with a **LIFETIME WARRANTY**
provided by FlashMemoryStore.com and the manufacturer!
STOP paying for extended warranty plans when you get lifetime
support here for free!



Your 100% satisfaction is guaranteed with FlashMemoryStore.com!! If you are not 100% satisfied with your shopping experience here, please contact us. **Bottom line is if you are not satisfied, we are not satisfied!**



Order the wrong item? Not satisfied with the product? Change your mind? **Our 30-day "No Questions Asked" Money Back Guarantee gives you the protection that most online stores don't!**

Y! SHOPPING



All Major Credit Cards & PayPal Accepted!



**Got Questions?
We Have Answers.**

Our contact e-mail addresses:

Pre-Sale Questions:

sales@FlashMemoryStore.com

Order Status:

status@FlashMemoryStore.com

Questions regarding compatibility?

We can help! If you are unsure what memory card you need to purchase to upgrade your MP3 Player, Digital Camera, PDA or other device, please e-mail tech@FlashMemoryStore.com for an answer!

Remember: All our products sold come with a 30-day money back guarantee -AND- a **LIFETIME warranty!** If you need to return your product, swap it for another card, or if you simply changed your mind, please e-mail RMA@FlashMemoryStore.com to obtain an RMA number and instructions.



FlashMemoryStore.com
2516 Waukegan Road #335
Glenview, IL 60025

info@FlashMemoryStore.com

888-295-6064 (toll free sales only line)
847-919-4614 (fax)

Copyright 1998-2003, FlashMemoryStore.com

EXHIBIT 2

Removable Disk (G:) Properties



General

AutoPlay

Tools


Hardware

Sharing



Type: Removable Disk

File system: FAT

 Used space: 0 bytes 0 bytes

 Free space: 131,006,464 bytes 124 MB

Capacity: 131,006,464 bytes 124 MB



Drive G

OK

Cancel

Apply



Fujifilm Home : Consumer Products : Audio & Video Media : Consumer Audio Products

Consumer Audio Products

Audiocassettes, plus recordable and rewritable Compact Discs

- Consumer**
- Audio & Video Media
 - Consumer Video Products
 - Consumer Audio Products
 - Flash Memory Products
 - Recordable and Rewritable DVD
- Cameras
- Computer Products
- Digital Cameras
- Film
- One-Time-Use Cameras
- Photofinishing
- Professional
- Commercial



Audiocassettes

Fujifilm offers both normal bias and high bias audiocassettes in a wide range of pack sizes



Recordable Compact Discs

Fujifilm CD-R Audio discs, available in jewel case, sleeves or spindles, are perfect for today's high speed audio burners



Digital Audio Tape

For the true audio enthusiast, Fujifilm DAT products are the ideal solution



Rewritable Compact Discs

Fujifilm CD-RW Audio discs give you the freedom to create and recreate your own music mixes

Picture the Excitement with Fujifilm

Get the Picture with Fujifilm at Anheuser-Busch Adventure Parks.



[Learn More](#)

Fish, Photograph & Release

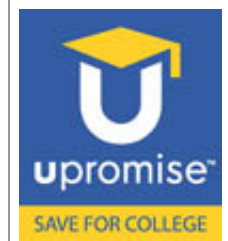
Fishing is a family adventure. That's why Fujifilm created the Fish, Photograph & Release program, which encourages kids to take a picture of their catch and release it back into the water.



[Learn More](#)

Fujifilm Partners with Upromise College Savings

Get 3% back on select Fujifilm products, including QuickSnap One-Time-Use Cameras, Consumer Film and Audio & Video products.



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Fujifilm Home : Consumer Products : Audio & Video Media :
Flash Memory Products : Fujifilm Secure Digital

Fujifilm Secure Digital

The ultra-compact memory card for a wide range of digital equipment.



Secure Digital

[Click for Detail Image](#)

Fujifilm Secure Digital (SD) cards feature compact size, high storage capacity and a write-protect feature to safeguard your images, music or data from accidental erasure. Secure Digital memory cards are used in personal digital assistants (PDA), digital cameras, wireless telecommunications devices and even home appliances. Fujifilm Secure Digital cards are the reliable choice for all your SD needs.

Key Features Include:

- Write-Protect Feature to Protect Against Accidental Erasures
- Ideal for Use with MP3 Players, PDAs and Other SD Compatible Devices
- Includes Plastic Storage Case
- Available in 32 MB and 64 MB Capacities -- 128 MB Coming Soon!

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Submit your priceless children's portrait and you could be eligible to win a trip for four to SeaWorld!



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USB Drive 2.0

High Speed 128MB, 256MB, 512MB, 1GB

USB Drive 1.1

Basic Speed 32MB, 64MB

Store your world in the palm of your hand!

The Fujifilm USB Drive lets you take all your important stuff with you no matter where you go. Big enough to hold your photos, documents, presentations, MP3s, videos and more yet small enough to fit in your pocket.

Best of all it's easy to use. Just plug it into any USB port and you're ready to go; no software, batteries or electricity is required. It's a disk and drive all-in-one so you can easily take your life from home to work to school... or wherever!

Safely store all your PC, Mac and Linux files on your Fujifilm USB Drive. When your Fujifilm USB Drive is full, just delete the files or back them up onto any of Fujifilm's high performance media such as Zip disks, CDs or DVD discs.

Big Capacity, Small Drive:

The Fujifilm USB Drive is a revolutionary way to save, share and store files. Big enough to hold hundreds of photos, documents, presentations, MP3s and more, yet small enough to fit in the palm of your hand. It's a disk and drive all-in-one, so transporting files from home to school to work or wherever...is now easier than ever.



Key Selling Points:

- **USB 2.0** - Read: 4MB/sec, Write: 3MB/sec
USB 1.1 - Read: 1MB/sec, Write: 0.85MB/sec
- **Powerful:** Up to 1GB of storage capacity
- **Simple:** Plug & Play
- **Multi Platform:** PC / Mac / Linux
- **Convenient:** No setup, software, cables, batteries or external power ⁽¹⁾⁽²⁾
- **Durable:** Secure Plastic Casing to keep important data safe
- **Backward compatible:** USB 2.0 is backward compatible with USB 1.1 connections
- **Password protect:** Save confidential files in a separate, private area
- **Fun:** Easy to store and share photos, data, music and video



Simple Outside, Smart Inside:

The Fujifilm USB Drive is simple to use. Take it anywhere. Plug it into any USB port and it's ready to go – a computer instantly recognizes it as a removable drive. No software ⁽¹⁾⁽²⁾, cables, batteries, or electricity is required, making it the most convenient removable storage solution on the market today. Plus, with cross-platform compatibility and transfer rates up to 4 MB/sec, files can be transferred from a PC to a Macintosh in a flash. With Fujifilm's Sentinel security software, confidential files can be saved in a private, password-protected area. Very smart.

Powerful:

Despite its small size and light weight, the Fujifilm USB Drive packs a lot of power. And it's available in 6 capacities!

Plug & Play:

Remove Cap...Insert Drive!
It's as easy as that.

For more information, please call 1-800-488-FUJI or visit us at www.fujifilmmediasource.com



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1-800-488-FUJI
www.fujifilmmediasource.com

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Specifications

		USB 1.1		USB 2.0			
USB Drive Distribution Box Specifications		32MB - 1.1 Box	64MB - 1.1 Box	128MB - 2.0 Box	256MB - 2.0 Box	512MB - 2.0 Box	1GB - 2.0 Box
BASIC SPECIFICATIONS	Product Code	25910332	25910364	25910348	25910346	25910342	25910310
	UPC Code	0-74101-76332-4	0-74101-76364-5	0-74101-76348-5	0-74101-76346-1	0-74101-76342-3	0-74101-76310-2
	Customer Order Quantity	5	5	5	5	5	5
UNIT INFORMATION	Unit Length	5.25"	5.25"	5.25"	5.25"	5.25"	5.25"
	Unit Width	1.375"	1.375"	1.375"	1.375"	1.375"	1.375"
	Unit Height	6.69"	6.69"	6.69"	6.69"	6.69"	6.69"
	Unit Weight	0.3 lbs.	0.3 lbs.	0.3 lbs.	0.3 lbs.	0.3 lbs.	0.3 lbs.
	Unit Cubic Ft	0.028'	0.028'	0.028'	0.028'	0.028'	0.028'
SUB CARTON	Units Per Inner Case	None	None	None	None	None	None
MASTER CARTON / OUTSIDE CASE INFORMATION	Master Carton UPC	200-74101-76332-8	200-74101-76364-9	200-74101-76348-9	200-74101-76346-5	200-74101-76342-7	200-74101-76310-6
	Master Carton Length	5.5"	5.5"	5.5"	5.5"	5.5"	5.5"
	Master Carton Width	7.25"	7.25"	7.25"	7.25"	7.25"	7.25"
	Master Carton Height	6.875"	6.875"	6.875"	6.875"	6.875"	6.875"
	Master Carton Weight	1.3 lbs.	1.3 lbs.	1.3 lbs.	1.3 lbs.	1.3 lbs.	1.3 lbs.
	Master Carton Cubic Ft.	0.16'	0.16'	0.16'	0.16'	0.16'	0.16'
	Units Per Master Carton	5	5	5	5	5	5

USB Drive Retail Clamshell Specifications		32MB - 1.1 Clamshell	64MB - 1.1 Clamshell	128MB - 2.0 Clamshell	256MB - 2.0 Clamshell	512MB - 2.0 Clamshell	1GB - 2.0 Clamshell
BASIC SPECIFICATIONS	Product Code	25910432	25910464	25910428	25910456	25910412	25910010
	UPC Code	0-74101-76032-3	0-74101-76064-4	0-74101-76428-4	0-74101-76456-7	0-74101-76412-3	0-74101-76010-1
	Customer Order Quantity	5	5	5	5	5	5
UNIT INFORMATION	Unit Length	6.00"	6.00"	6.00"	6.00"	6.00"	6.00"
	Unit Width	1.75"	1.75"	1.75"	1.75"	1.75"	1.75"
	Unit Height	8.00"	8.00"	8.00"	8.00"	8.00"	8.00"
	Unit Weight	0.3 lbs.	0.3 lbs.	0.3 lbs.	0.3 lbs.	0.3 lbs.	0.3 lbs.
	Unit Cubic Ft	0.049'	0.049'	0.049'	0.049'	0.049'	0.049'
SUB CARTON	Units Per Inner Case	None	None	None	None	None	None
MASTER CARTON / OUTSIDE CASE INFORMATION	Master Carton UPC	200-74101-76032-7	200-74101-76064-8	200-74101-76428-8	200-74101-76456-1	200-74101-76412-7	200-74101-76010-5
	Master Carton Length	7.25"	7.25"	7.25"	7.25"	7.25"	7.25"
	Master Carton Width	5.5"	5.5"	5.5"	5.5"	5.5"	5.5"
	Master Carton Height	6.875"	6.875"	6.875"	6.875"	6.875"	6.875"
	Master Carton Weight	1.3 lbs.	1.3 lbs.	1.3 lbs.	1.3 lbs.	1.3 lbs.	1.3 lbs.
	Master Carton Cubic Ft.	0.16'	0.16'	0.16'	0.16'	0.16'	0.16'
	Units Per Master Carton	5	5	5	5	5	5

Operating Systems

Fujifilm USB 2.0 - In high-speed (USB 2.0): Windows 2000, Windows ME, Windows XP, Mac OS 9.0 & higher, Linux 2.4.0 In full-speed (USB 1.1): Windows 98 Second Edition (1)
Fujifilm USB 1.1 - Windows 98 (1) Second Edition, Windows 2000, Windows ME, Windows XP, Mac OS 8.6 (2), Mac OS 9.0 & higher, Linux 2.4.0.

(1) Driver required for Windows 98

(2) Mac OS 8.6 USB Mass Storage Device driver/patch required

Note: A high-speed USB 2.0 driver is required for high-speed operation. Otherwise, Fujifilm USB 2.0 employs full-speed operation.



WHAT IS IT? HOW DOES IT WORK? SPECIFICATIONS



The Fujifilm USB Drive operates as a secure, reliable, r disk, using a standard Universal Serial Bus (USB) device interface. A computer immediately detects it, recognizes supplementary removable disk and assigning it a drive

The Fujifilm USB Drive supports complete and instant plug and play interoperability on the latest Windows®, and Linux® operating systems.*

Since the Fujifilm USB Drive has its own central processor (CPU), it can directly support and run multiple applications crossing the boundaries between a PC and a Macintosh

Fujifilm offers both 1.1 and 2.0 USB Drives. The 1.1 USB or Basic Speed USB Drive, complies with the original specification developed for USB and offers data transfer rates up to 12MB/s. The 2.0 USB Drive, also known as a High Speed Drive, contains a "next-generation" peripheral connector that enables increased data transfer rates, up to 480MB/s, as well as backward compatibility with existing USB 1.1 ports. Fujifilm USB Drives are available in 32MB and 64MB capacities. Fujifilm 2.0 USB Drives are available in 128MB, 256MB and 1GB capacities.

Product	Capacity	Read Speed	Write Speed
Fujifilm 1.1 USB Drive	32MB, 64MB	12MB/Sec	0.85MB/Sec
Fujifilm USB 2.0 Drive	128MB-1GB	480MB/Sec	360MB/Sec

Each Fujifilm USB Drive is guaranteed by our Lifetime Warranty

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* Driver required for Windows 98. USB Mass Storage Class driver/patch required Mac OS 8.6.





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Fujifilm USB Drive

A revolutionary way to save, share and store files. Big enough to hold hundreds of photos, documents, presentations, MP3s and more!



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Small enough to fit in the palm of your hand!

Removable storage device with cross- platform compatibility and transfer rates up to 1 MB/sec. Available in 32MB, 64MB, 128MB, 256MB and 512MB.

The Fujifilm USB Drive is easy to use. It simply plugs into any USB port and it's ready to go!

A computer instantly recognizes it as a removable drive. No software*, cables, batteries, or electricity is required, making it the most convenient removable storage solution on the market today.

For more information please visit [the Fujifilm USB web site](#)

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Fujifilm Flash Memory Drives

- Smart, reliable, removable data storage for business or personal use.
- Plug & Play in any USB Port
- Quickly Transfers Files
- Windows & Mac Compatible
- No Software Required*
- No External Power

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Fish, Photograph & Release

Fishing is a family adventure. That's why Fujifilm created the Fish, Photograph & Release program, which encourages kids to take a picture of their catch and release it back into the water.



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Picture the Excitement with Fujifilm

Get the Picture with Fujifilm at Anheuser-Busch Adventure



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- Available in 32, 64, 128, 256 and 512MB

*Windows 98 driver software included.

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Cool

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in four cool new c
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Fujifilm CompactFlash

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[Optical](#)

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- - Consumer Audio Products
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- - Computer Products
- - Digital Cameras
- - Film
- - QuickSnap One Time Use Cameras

Professional

Commercial



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Fujifilm CompactFlash memory cards are the perfect choice for a wide range of digital products. CompactFlash is the most widely used recording medium for today's digital cameras and is also used in a number of other portable electronic devices, including MP3 music players and Personal Digital Assistants (PDA). Fujifilm CompactFlash cards offer secure, non-volatile storage of your music, digital images and other important data.

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Visit our new Mall the latest Fujifilm camera accessories



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Features and Benefits:

- Interchangeable Between 3.3V and 5V Devices
- Complete PCMCIA-ATA Functionality and Compatibility
- Includes Plastic Storage Case
- Available in 16MB, 32MB, 64MB and 128MB Capacities

Children's Portrait Awards (For Consumers)

Submit your price children's portrait you could be eligit win a trip for four SeaWorld!

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USB Drive 2.0

High Speed 128MB, 256MB, 512MB, 1GB

USB Drive 1.1

Basic Speed 32MB, 64MB

Store your world in the palm of your hand!

The Fujifilm USB Drive lets you take all your important stuff with you no matter where you go. Big enough to hold your photos, documents, presentations, MP3s, videos and more yet small enough to fit in your pocket.

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Safely store all your PC, Mac and Linux files on your Fujifilm USB Drive. When your Fujifilm USB Drive is full, just delete the files or back them up onto any of Fujifilm's high performance media such as Zip disks, CDs or DVD discs.

Big Capacity, Small Drive:

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Key Selling Points:

- USB 2.0 - Read: 4MB/sec, Write: 3MB/sec
USB 1.1 - Read: 1MB/sec, Write: 0.85MB/sec
- Powerful: Up to 1GB of storage capacity
- Simple: Plug & Play
- Multi Platform: PC / Mac / Linux
- Convenient: No setup, software, cables, batteries or external power ⁽¹⁾⁽²⁾
- Durable: Secure Plastic Casing to keep important data safe
- Backward compatible: USB 2.0 is backward compatible with USB 1.1 connections
- Password protect: Save confidential files in a separate, private area
- Fun: Easy to store and share photos, data, music and video



Simple Outside, Smart Inside:

The Fujifilm USB Drive is simple to use. Take it anywhere. Plug it into any USB port and it's ready to go – a computer instantly recognizes it as a removable drive. No software ⁽¹⁾⁽²⁾, cables, batteries, or electricity is required, making it the most convenient removable storage solution on the market today. Plus, with cross-platform compatibility and transfer rates up to 4 MB/sec, files can be transferred from a PC to a Macintosh in a flash. With Fujifilm's Sentinel security software, confidential files can be saved in a private, password-protected area. Very smart.

Powerful:

Despite its small size and light weight, the Fujifilm USB Drive packs a lot of power. And it's available in 6 capacities!

Plug & Play:

Remove Cap...Insert Drive!
It's as easy as that.

For more information, please call 1-800-488-FUJI or visit us at www.fujifilmmediasource.com



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Specifications

		USB 1.1		USB 2.0			
USB Drive Distribution Box Specifications		32MB - 1.1 Box	64MB - 1.1 Box	128MB - 2.0 Box	256MB - 2.0 Box	512MB - 2.0 Box	1GB - 2.0 Box
BASIC SPECIFICATIONS	Product Code	25910332	25910364	25910348	25910346	25910342	25910310
	UPC Code	0-74101-76332-4	0-74101-76364-5	0-74101-76348-5	0-74101-76346-1	0-74101-76342-3	0-74101-76310-2
	Customer Order Quantity	5	5	5	5	5	5
UNIT INFORMATION	Unit Length	5.25"	5.25"	5.25"	5.25"	5.25"	5.25"
	Unit Width	1.375"	1.375"	1.375"	1.375"	1.375"	1.375"
	Unit Height	6.69"	6.69"	6.69"	6.69"	6.69"	6.69"
	Unit Weight	0.3 lbs.	0.3 lbs.	0.3 lbs.	0.3 lbs.	0.3 lbs.	0.3 lbs.
	Unit Cubic Ft	0.028'	0.028'	0.028'	0.028'	0.028'	0.028'
SUB CARTON	Units Per Inner Case	None	None	None	None	None	None
MASTER CARTON / OUTSIDE CASE INFORMATION	Master Carton UPC	200-74101-76332-8	200-74101-76364-9	200-74101-76348-9	200-74101-76346-5	200-74101-76342-7	200-74101-76310-6
	Master Carton Length	5.5"	5.5"	5.5"	5.5"	5.5"	5.5"
	Master Carton Width	7.25"	7.25"	7.25"	7.25"	7.25"	7.25"
	Master Carton Height	6.875"	6.875"	6.875"	6.875"	6.875"	6.875"
	Master Carton Weight	1.3 lbs.	1.3 lbs.	1.3 lbs.	1.3 lbs.	1.3 lbs.	1.3 lbs.
	Master Carton Cubic Ft.	0.16'	0.16'	0.16'	0.16'	0.16'	0.16'
	Units Per Master Carton	5	5	5	5	5	5

USB Drive Retail Clamshell Specifications		32MB - 1.1 Clamshell	64MB - 1.1 Clamshell	128MB - 2.0 Clamshell	256MB - 2.0 Clamshell	512MB - 2.0 Clamshell	1GB - 2.0 Clamshell
BASIC SPECIFICATIONS	Product Code	25910432	25910464	25910428	25910456	25910412	25910010
	UPC Code	0-74101-76032-3	0-74101-76064-4	0-74101-76428-4	0-74101-76456-7	0-74101-76412-3	0-74101-76010-1
	Customer Order Quantity	5	5	5	5	5	5
UNIT INFORMATION	Unit Length	6.00"	6.00"	6.00"	6.00"	6.00"	6.00"
	Unit Width	1.75"	1.75"	1.75"	1.75"	1.75"	1.75"
	Unit Height	8.00"	8.00"	8.00"	8.00"	8.00"	8.00"
	Unit Weight	0.3 lbs.	0.3 lbs.	0.3 lbs.	0.3 lbs.	0.3 lbs.	0.3 lbs.
	Unit Cubic Ft	0.049'	0.049'	0.049'	0.049'	0.049'	0.049'
SUB CARTON	Units Per Inner Case	None	None	None	None	None	None
MASTER CARTON / OUTSIDE CASE INFORMATION	Master Carton UPC	200-74101-76032-7	200-74101-76064-8	200-74101-76428-8	200-74101-76456-1	200-74101-76412-7	200-74101-76010-5
	Master Carton Length	7.25"	7.25"	7.25"	7.25"	7.25"	7.25"
	Master Carton Width	5.5"	5.5"	5.5"	5.5"	5.5"	5.5"
	Master Carton Height	6.875"	6.875"	6.875"	6.875"	6.875"	6.875"
	Master Carton Weight	1.3 lbs.	1.3 lbs.	1.3 lbs.	1.3 lbs.	1.3 lbs.	1.3 lbs.
	Master Carton Cubic Ft.	0.16'	0.16'	0.16'	0.16'	0.16'	0.16'
	Units Per Master Carton	5	5	5	5	5	5

Operating Systems

Fujifilm USB 2.0 - In high-speed (USB 2.0): Windows 2000, Windows ME, Windows XP, Mac OS 9.0 & higher, Linux 2.4.0 In full-speed (USB 1.1): Windows 98 Second Edition (1)
Fujifilm USB 1.1 - Windows 98 (1) Second Edition, Windows 2000, Windows ME, Windows XP, Mac OS 8.6 (2), Mac OS 9.0 & higher, Linux 2.4.0.

(1) Driver required for Windows 98

(2) Mac OS 8.6 USB Mass Storage Device driver/patch required

Note: A high-speed USB 2.0 driver is required for high-speed operation. Otherwise, Fujifilm USB 2.0 employs full-speed operation.

Removable Disk (F:) Properties




General AutoPlay Tools Hardware Sharing



Type: Removable Disk

File system: FAT

 Used space: 0 bytes 0 bytes

 Free space: 255,320,064 bytes 243 MB

Capacity: 255,320,064 bytes 243 MB



Drive F

OK

Cancel

Apply

EXHIBIT 3



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Chapter II, Digital Learning Center Glossary of Terms: Section M
Glossary

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M

Marquee

The outline of dots created by the selection tool on an image when an operator is performing a task such as cropping, cutting, drawing a mask, etc.

Mask

A defined area used to limit the effect of image-editing operations to certain regions of the image. In an electronic imaging system, masks are drawn manually (with a stylus or mouse) or created automatically--keyed to specific density levels or hue, saturation and luminance values in the image. It is similar to photographic lith masking in an enlarger.

Megabyte (MB)

An amount of computer memory consisting of about one million bytes. The actual value is 1,048,576 bytes.

Megapixel

[One million pixels or more](#). The more pixels that exist in an image the higher the resolution and therefore the greater the quality of the image. Many new Kodak cameras are equipped with megapixel sensors.

Modem (MODulator/DEModulator)

A device that converts digital computer data into signals for transmission over telephone lines.

Moire

A visible pattern that occurs when one or more halftone screens are misregistered in a color image.

Morphing

A special effect used in motion pictures and video to produce a smooth transformation from one object or shape to another.

Multimedia

This involves the combination of two or more media into a single presentation. For example, combining video, audio, photos, graphics and/or animations into a presentation.

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Glossary

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G

GIF File Format

Stands for Graphic Interchange Format, a raster oriented graphic file format developed by CompuServe to allow exchange of image files across multiple platforms.

Gigabyte (GB)

A measure of computer memory or disk space consisting of about one thousand million bytes (a thousand [megabytes](#)). The actual value is 1,073,741,824 bytes (1024 megabytes).

Gray Level

The brightness of a pixel. The value associated with a pixel representing it's lightness from black to white. Usually defined as a value from 0 to 255, with 0 being black and 255 being white.

Gray Scale

A term used to describe an image containing shades of gray as well as black and white.

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Removable Disk (F:) Properties




General AutoPlay Tools Hardware Sharing



Type: Removable Disk

File system: RAW

 Used space: 0 bytes 0 bytes

 Free space: 63,868,928 bytes 60.9 MB

Capacity: 63,868,928 bytes 60.9 MB



Drive F

OK

Cancel

Apply

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KODAK SD™ 256 MB Card

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Introducing KODAK SD™ Cards – the fastest growing memory card format in the industry. SD cards are compatible with a wide range of digital devices, including digital still cameras, digital camcorders, televisions, MP3 players, DVD players and PDA's. They also have advanced features such as data protection and increased capacity.

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- Item 8121337
- **MSRP (US\$) \$94.99**

Features

- Compatible with all MACINTOSH and MICROSOFT WINDOWS Systems
- Works with SD™ Card Readers and all laptops (adapter required)
- 5 year limited warranty

Compatibility

This accessory works with the following products:

- LS420
- DX3700
- CX7300
- DX6440
- DX4330
- CX4210
- CX7220
- CX6330
- DX4530
- LS753
- LS443
- LS633
- DX3215
- CX6230
- CX4200
- DX7630
- DX6490
- LS743

- CX4300
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KODAK COMPACTFLASH™ 64 MB Card

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Dramatically increase your storage capacity using a KODAK COMPACTFLASH™ card. Store, share, and manipulate files as you would on a hard drive or floppy disk. All cards are removable and reusable.

Our price (US\$): \$21.99

In stock | Item # 8750929
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Features

- Compatible with all APPLE MACINTOSH and MICROSOFT WINDOWS Systems
- Adapters allows card to be read by any PCMCIA Type II ATA card reader
- Preformatted for MICROSOFT MS-DOS/WINDOWS systems. Can be reformatted for MACINTOSH Systems
- Meets all COMPACTFLASH™ Association requirements
- 5 year limited warranty

Compatibility

This accessory works with the following products:

DC200	DC240	DC290	DC50	DX4900
DC210 plus	DC25	DC3200	DC5000	
DC210	DC260	DC3400	DX3500	
DC215	DC265	DC3800	DX3600	
DC220	DC280	DC4800	DX3900	

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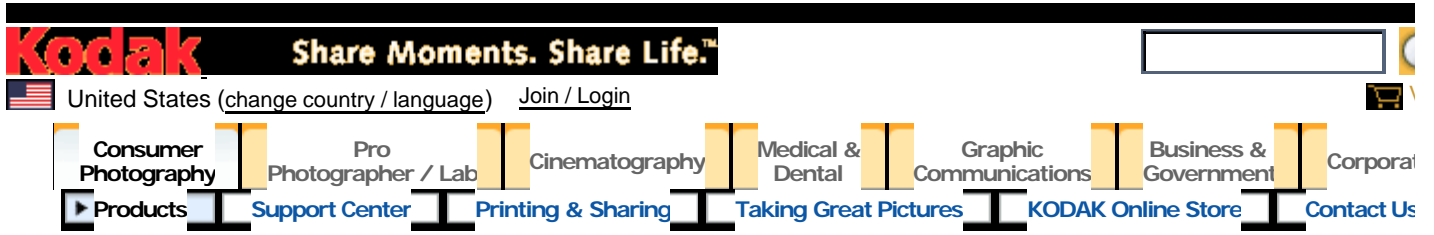


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The navigation bar features the Kodak logo and slogan "Share Moments. Share Life.™" on the left. To the right is a search input field. Below the slogan, there is a link for "United States (change country / language)" and a "Join / Login" link. A shopping cart icon is also present. The main navigation menu includes categories: Consumer Photography, Pro Photographer / Lab, Cinematography, Medical & Dental, Graphic Communications, Business & Government, and Corporate. Below these are secondary links: Products, Support Center, Printing & Sharing, Taking Great Pictures, KODAK Online Store, and Contact Us.

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EASYSHARE CX7530 Zoom Digital Camera Specifications

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Kodak EasyShare
system
CX7530

This page contains:
[Specifications](#)
[Package Contents](#)
[System Requirements](#)

[CX7530 Overview](#)
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Specifications

Standard Features

- CCD resolution** —1/2.5 inch type (5.36 M total pixels)
- image resolution** —5.0 MP (2560x1920 pixels)
- picture quality** 5.0 MP -- best (prints up to 20"x30")
- 4.4 MP -- best 3:2 (optimized ratio for 4"x6" prints)
- 3.1 MP -- better (prints up to 11"x14")
- 1.7 MP good (small prints)
- **zoom** 15X total zoom
- 3X optical zoom -- 5.6-16.8 mm (35 mm equivalent: 34-102 mm)
- 5X advanced digital zoom
- **aperture** —f/2.7-5.2 (wide); f/4.6-8.7 (tele)
- **shutter speed** —1/2 - 1/1400 seconds
- **viewfinder** —real image optical viewfinder
- **display** 1.8" (4.6 cm) high resolution (134K pixel) indoor/outdoor LCD display

Performance Features

- scene modes** —auto, portrait, landscape, night, close-up, sport, movie
- color modes** —color, black and white, sepia
- burst modes** —2.4 fps, up to 4 pictures
- click to capture** —0.6 seconds
- shot to shot** —1.3 seconds
- movie mode** —continuous MPEG-4 video with audio capture/playback
- **movie image resolution** —VGA (640x480 pixels) at 13 fps
- QVGA (320x240 pixels) at 20 fps
- **movie length** —limited by capacity of memory card or 5, 15, 30 second clip
- **movie file format** —Still: JPEG/EXIF v2.2.1; Video: QuickTime MOV (MPEG-4 compression)
- **auto focus** —TTL-AF; multi-zone, center-zone
- **focus distance** Standard -- 60 cm (23.6 in.) to infinity
- Landscape -- 10 m (32.8 ft.) to infinity
- Close-up wide -- 13-70 cm (5-28 in.)
- Close-up tele -- 22-70 cm (9-28 in.)
- **ISO equivalent** —80-160 (automatic) and 80, 100, 200, 400, 800 (manual)
- **white balance** —auto, daylight, tungsten, fluorescent
- **light metering method** —TTL-AE; selectable: multi-pattern, center-weighted, center
- **exposure control** —programmed AE

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—long time exposure	—0.7-4 seconds
—exposure compensation	—+/- 2.0 EV in 0.5 EV step increments
Ease of Use Features	
—flash mode	—auto, red-eye, fill, off
—flash range	—wide -- 0.6-3.6 m (2-11.8 ft.); tele -- 0.6-2.1 m (2-6.9 ft.)
—review mode	—1X-8X magnify with pan, slide show, multi-up, fast scroll, pr album
—favorites mode	—store up to 200 pictures on camera
—auto-orientation	—auto picture rotation
—software compatibility	—KODAK EASYSHARE Software —Dock compatibility -- KODAK EASYSHARE Camera and P Docks*
—PictBridge compatible	—print directly from camera
—storage	—32 MB internal memorySD/MMC card expansion slot
—self-timer	—10 seconds
Additional Features	
—power options	—optional KODAK EASYSHARE Docks with Ni-MH recharge battery back; 2 AA KODAK MAX Digital Camera Batteries; ; lithium or Ni-MH batteries or 1 CRV3 lithium battery; 3 volt
—lens protection	—built-in lens barrier
—tripod mount interface	—1/4 inch standard power input (3V DC), A/V output (NTSC or PAL, user selec KODAK Camera and Printer Dock interface, USB complian connector
—weight	—without batteries: 190 g (6.7 oz.)
—dimensions	—WxHxD: 102.5x65x38 mm (4.0x2.6x1.5 in.)
—warranty	—1 year

Package Contents

- KODAK EASYSHARE CX7530 Zoom Digital Camera
- KODAK MAX Digital Camera Batteries AA or equivalent
- Video out cable
- USB cable
- Wrist strap
- KODAK EASYSHARE Software
- Getting started kit
- Custom camera insert for optional KODAK EASYSHARE Camera and Printer Docks

System Requirements

Windows

- WINDOWS 98, 98SE, ME, 2000 SP1, or XP OS
- Internet Explorer 5.01 or higher
- 233 MHz processor or greater
- 64 MB RAM (128 MB RAM for WINDOWS XP OS)
- 200 MB hard drive disk space available
- CD-ROM drive
- Available USB port
- Color monitor, 800x600 pixels (16-bit or 24-bit recommended)

Macintosh

- MACINTOSH OS X 10.2.3, 10.3
- SAFARI 1.0 or higher
- 128 MB RAM
- 200 MB hard drive disk space ava
- CD-ROM drive
- Available USB port
- Color monitor, 1024x768 pixels (thousands or millions of colors recommended)



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EXHIBIT 4



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Take Pictures at the Speed of Life

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Secure Digital Cards

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Digital Accessories

Compatibility

Secure Digital Cards

[Click here for a capacity chart](#)

Great for Storing Pictures, Music and Data

Similar in size to MultiMediaCards, Lexar Media Secure Digital (SD) Cards are designed for use in many digital devices including digital cameras, MP3 players, PDAs, cellular phones and camcorders.



The Lexar Media SD Cards have an erasure-prevention switch to keep your data safe. When the switch is in the locked position, it will stop you from accidentally copying over or deleting data stored on your card. Now you know your data will be safe.

Reliability and durability are critical to ensure your data is there when you need it. All Lexar Media SD Cards are tested and manufactured to the highest quality standard to assure you there is no need to worry about lost or missing data. With the small size and solid-state design of the SD Cards, they are perfect for mobile applications and users.

5-year Limited Warranty

This product is backed by a 5-year limited customer-satisfaction warranty.



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SEARCH

Lexar Media 256 MB Secure Digital Card

Other products by [Lexar Media](#)

Price: \$69.99

Availability: Usually ships within 24 hours



Want it delivered Friday, April 16? Order it in the next 21 hours and 46 minutes, and choose **One-Day Shipping** at checkout. [See details.](#)



This item ships for **FREE** with **Super Saver Shipping**. [See details.](#)



Amazon.com = low prices. Did you find this item priced lower than \$69.99 somewhere else? [Let us know!](#)

19 used & new from \$59.98

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Features:

- Great for storing pictures, music, and data
- Small size and solid-state design makes it perfect for mobile applications
- Erasure-prevention switch keeps your data safe
- Reliable, durable, and manufactured to the highest quality standard
- 5-year limited warranty

Manufacturers, merchants, and enthusiasts: [Submit a product manual](#) for this item.

Shipping: [Amazon.com's shipping rates and policies](#)

Shipping: Currently, item can be shipped only within the U.S.

Shipping weight: 1.0 pounds.

Amazon.com Sales Rank: 791

ASIN: B00006HCCS

Item model number: SD256-231

Date first available at Amazon: July 30, 2002

Average Customer Review: Based on 22 reviews. [Write a review.](#)

Popular in: [Los Angeles, CA \(#17\)](#) , [University of California \(#16\)](#) . [See more](#)

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- [SanDisk 256 MB Secure Digital Card](#) by SanDisk ([Rate it](#)) **\$69.99**
- [SimpleTech STI-SD/256 256MB SecureDigital Card SD](#) by SimpleTech ([Rate it](#)) **\$79.99**
- [Viking 256 MB Secure Digital Card \(SD256M-P\)](#) by Viking Components ([Rate it](#)) **\$78.99**
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- **1 person recommended** [Panasonic 256 MB Secure Digital Card](#) instead of Lexar Media 256 MB Secure Digital Card

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Product Description

Amazon.com Product Description

Similar in size to MultiMediaCard memory cards, Lexar Media's 256 MB Secure Digital (SD) card is designed for use in digital devices such as digital cameras, MP3 players, PDAs, cellular phones, and camcorders. Lexar Media's SD cards feature an erasure-prevention switch that keeps your data safe. When the switch is locked, it will stop you from accidentally copying over or deleting data stored on your card.

All Lexar Media SD cards are tested and manufactured to the highest quality standard to assure you there is no need to worry about lost or missing data. With its small size and solid-state design, Lexar Media's SD cards are perfect for mobile applications and users. This product is backed by a five-year limited customer-satisfaction warranty.

From the Manufacturer

Lexar Media SD cards are the small, convenient, and durable solution for data storage use for a variety of digital applications. These small yet powerful media cards are designed to interface with an array of digital devices designed to support the SD card format--including PDAs, cellular phones, digital video recorders and digital cameras.

Product Description

Similar in size to MultiMediaCards, Lexar Media Secure Digital (SD) Cards are designed for use in many digital devices including digital cameras, MP3 players, PDAs, cellular phones and camcorders. The Lexar Media SD Cards have an erasure-prevention switch to keep your data safe. When the switch is in the locked position, it will stop you from accidentally copying over or deleting data stored on your card. Now you know your data will be safe. Reliability and durability are critical to ensure your data is there when you need it. All Lexar Media SD Cards are tested and manufactured to the highest quality standard to assure you there is no need to worry about lost or missing data. With the small size and solid-state design of the SD Cards, they are perfect for mobile applications and users. This product is backed by a 5-year Lexar limited customer-satisfaction warranty.

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Spotlight Reviews ([What's this?](#))

[Write an online review](#) and share your thoughts with other customers.

5 of 8 people found the following review helpful:

★★★★☆ **Works well; hoped it would be faster,** August 4, 2003

Reviewer: **pcweenie** from Leesburg, VA United States

I'm fairly happy with the Lexar 256 MB SD card. It works well in my 4 megapixel camera. I was hoping it would be faster than the 128 MB SimpleTech card I already had. It's not. Both seem dreadfully slow to record pictures and to read them back with unloading. My 3 MP camera is probably 2-3 times faster with its Compact Flash memory card.

Was this review helpful to you?

13 of 15 people found the following review helpful:

★★★★★ Lexar Media 256mb Secure Digital, May 18, 2003

Reviewer: **An electronics fan** from Eugene, OR United States

I recently got a Minolta F100 camera as a gift from my Employer. It came with a 16mb Toshiba SD memory card. I quickly realized that small memory card was not going to cut it. Looking around the web I found the Lexar Media 256mb on sale here at Amazon and purchased the card. The card has been great and really allows one to capture tons of pictures without the need of a computer to offload. I can store 255 images at 2272x1704 with standard compression. Enough for even the most ambitious vacation plans.

An amazing product at a great price! It's hard to believe a postage size card can hold 256mb of data. I look forward to cost effective 512mb and 1024mb cards in the future. One thing I know for sure is it will be a Lexar Media product.

Was this review helpful to you?

All Customer Reviews

Average Customer Review: **★★★★☆**

[Write an online review](#) and share your thoughts with other customers.

0 of 2 people found the following review helpful:

★★★★★ Worked in my Mustek DV4000, March 16, 2004

Reviewer: **rgathright (see more about me)** from Lake Charles, LA United States

No problems yet. I purchased memory for my Mustek DV4000 and memory worked fine.

Was this review helpful to you?

1 of 2 people found the following review helpful:

★★★★☆ Stopped working after 4 days, March 2, 2004

Reviewer: **Tyler** from Texas

After a couple of days of it working fine, it just crapped out. I was uploading songs to it when I got an error message. It wouldn't detect it when I tried to format it and did not detect it in the G drive. So I'm getting it replaced and hopefully the next one will be better. I guess the

previous poster was right, because it was made in Taiwan, not Japan. So I don't know, maybe the Japanese ones are fine, but I'd avoid the Taiwan ones. Which is what Amazon shipped me...

Was this review helpful to you?

1 of 1 people found the following review helpful:

★★★★☆ **Go with another brand**, February 19, 2004

Reviewer: [greg_hallock \(see more about me\)](#) from Menlo Park, California United States

While the lexar works fine, the write protect slider tends to become loose, and can cause you to be unable to write. While this can be fixed with a little tape, it is likely better just to get another brand.

Was this review helpful to you?

5 of 5 people found the following review helpful:

★★★★☆ **Read-only lock problem**, February 9, 2004

Reviewer: [Mette H. H. Hansen \(see more about me\)](#) from Denmark

I had the same problem as one of the other reviewers below: The read-only lock on the card I received also stuck out too far. Whenever I inserted the card in my Kodak dx6490 camera the lock was pushed back, and I got an error message saying that the card was protected. I tried to make the lock stick to the unlock position in every imaginable way, and finally reaching a point of desperation, I pushed the lock to the unlocked position and broke it off. That didn't work: The card still appears to be locked, and is entirely useless.

This situation got me stuck in Belize with nothing but the small internal memory of my camera, and I had to buy a couple of very overpriced 32MB cards while I was there.

I can't recommend buying this product at all.

Was this review helpful to you?

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- [Essential Accessories for Garmin iQue 3600 PDA/GPS](#): A list by [David Stoesz](#), PDA Guru
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	Our Price	You Save
Sabatier ChefStar 20-Piece Cutlery Block Set Unleash your culinary skills with this amazing knife set.	\$44.99	\$40.01 (47%)
Conair FB12N Ultra Massaging Footbath with Water Jet Treat those feet right with this massaging footbath with waterjet.	\$40.49	\$19.50 (33%)
Vitabath Moisturizing Bath & Shower Gelee, Spa Skin Therapy - 32 oz Experience luxurious cleansing lather and ocean-fresh fragrance.	\$24.29	\$2.70 (10%)
Depend Fitted Briefs, Large (36 Briefs) Absorbent disposable briefs with stay-dry liner.	\$24.29	\$2.70 (10%)
Carborite The Original Chocolate Bar For Low-Carb Dieters, Milk Chocolate - 24 ea Yummy chocolate flavor for low-carb dieters.	\$23.99	\$4.57 (16%)

[Citrucel Fiber Therapy for Regularity, Methylcellulose, Orange Flavor - 50 oz](#)

A smooth, nongritty therapeutic fiber derived from a natural source.

\$19.79

\$2.20
(10%)

[Rembrandt Plus Superior Bleaching System Refill Kit, 18 ml \(6 Bleaching Gel Syringes\)](#)

Pain-free bleaching for superior white teeth.

\$18.22

\$4.28
(19%)

[Viking 128 MB CompactFlash Card \(CF128M\)](#)

Optimized for use in PDAs, MP3 players, or digital cameras.


\$28.64

\$21.35
(43%)

SOLD OUT FOR TODAY [LitterMaid LM900 Self-Cleaning Litter Box](#)

Honestly, what could be cooler than a self-cleaning litter box?

\$159.99

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Removable Disk (H:) Properties



General

AutoPlay

Tools


Hardware

Sharing



Type: Removable Disk

File system: RAW

 Used space: 0 bytes 0 bytes

 Free space: 127,041,536 bytes 121 MB

Capacity: 127,041,536 bytes 121 MB



Drive H

OK

Cancel

Apply

LEXAR MEDIA (F:) Properties



General

AutoPlay

Tools

Hardware

Sharing



LEXAR MEDIA

Type: Removable Disk

File system: FAT

 Used space: 18,337,792 bytes 17.4 MB

 Free space: 45,924,352 bytes 43.7 MB

Capacity: 64,262,144 bytes 61.2 MB



Drive F

OK

Cancel

Apply

EXHIBIT 5

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SmartMedia™



OVERVIEW

PNY SmartMedia™ cards are specifically designed for use with digital still cameras, PDA's, MP3 players and other electronic products that use SmartMedia™ cards as standard or extended data storage. Compatible with today's most popular operating systems such as Windows 95/98, Windows 2000, OS/2 or MAC OS. PNY SmartMedia™ cards are the optimal storage upgrade for digital imaging, portable computing and multimedia systems. PNY SmartMedia™ cards can be written and reused thousands of times and have been optimized for speed, capacity and durability.

APPLICATIONS:

Digital Cameras

Maximize your storage capacity, resolution and speed. Never miss another shot!

MP3 Players

Enjoy extended listening of your favorite music files

Handheld PC's

Increase your storage capacity

Notebook Computers

Backup all important data files

FEATURES

- Available in 64, and 128MB capacities
- 100% compatible with digital cameras, handheld PC's, audio devices and notebooks designed for use with SmartMedia™
- Maximizes your storage capacity, resolution and speed
- High Performance, low power consumption, non-volatile storage
- Store, erase and reuse. PNY SmartMedia™ cards can be reused over and over without loss of quality
- PNY SmartMedia™ cards resist breakage and are not affected by extreme heat or cold
- Toll Free technical support number

Image Size

Camera Type	64 MB	128 MB	256 MB	512 MB	1 GB
2 Megapixel	200	401	805	1610	3145
3 Megapixel	136	274	584	1092	2365
4 Megapixel	110	220	443	874	1708
5 Megapixel	43	88	177	348	728
*Number of photos may vary by camera manufacturer					

Removable Disk (G:) Properties




General AutoPlay Tools Hardware Sharing



Type: Removable Disk

File system: RAW

 Used space: 114,688 bytes 112 KB

 Free space: 32,620,544 bytes 31.1 MB

Capacity: 32,735,232 bytes 31.2 MB



Drive G

OK

Cancel

Apply

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Desktop SDRAM Memory



OVERVIEW

PNY manufactures memory upgrades for Apple, Compaq, DELL, Gateway, HP, IBM and over 5000 different types of desktop systems. PC-133 or PC-100 Synchronous DIMMS For Pentium II/III, Celeron, K6-2, Athlon and PowerPC

Boost the performance of your desktop computer system to its maximum capability. PNY's memory upgrades will prove themselves to be an outstanding value both now and in the future.

CAPACITIES & CONFIGURATIONS

Memory Speed	Capacities
PC100	64MB - 1GB
PC133	64MB - 1GB

FEATURES

- Lifetime warranty
- Free 24-hour technical support
- Easy to install
- Built to Intel specifications
- Gold contacts

Important Announcement

PC133 Modules are NO LONGER backward compatible with PC100 Machines. To determine the correct memory upgrade for your machine, use the PNY memory configurator.

▶ Memory Configurator

The PNY Memory Configurator will help you easily determine the right memory for your Desktop, Notebook, Workstation or Server.

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Glossary

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▶ Letters A-L | ▶ Letters M - Z

Mb - Megabit

Used to define real and virtual storage - Equal to 1,048,576 bits

MB - Megabyte

Used to define real and virtual storage - Equal to 1,048,576 bytes

NS - Nanosecond

one billionth of a second.

PARITY BIT

a bit added to a group of bits to make the total number of 1's either even or odd. When recalculated by computer after transmission or storage of data, a change from even to odd or odd to even indicates an error.

PC100 SDRAM Memory

Intel Specification for SDRAM memory devices and modules that will reliably operate at a 100MHz Front Side Bus (FSB) frequency. PC-100 SDRAM memory is backward compatible to systems that use PC-66 SDRAM memory.

PC133 SDRAM Memory

Intel Specification for SDRAM memory devices and modules that will reliably operate at a 133MHz Front Side Bus (FSB) frequency. PC-133 SDRAM memory is backward compatible to systems that use either PC-100 or PC-66 SDRAM memory.

PCMCIA

Personal Computer Memory Card International Association. Group that sets the "industry standard" for credit card style devices.

QUAD-CAS

uses single x4 parity chips for each group of 8 DRAM chips on a 72-pin SIMM.

RAM - Random Access Memory

system memory in which programs and data are stored temporarily while the computer is operating. The more RAM your computer has, the more data it can store at one time and subsequently the more efficient your computer will operate.

RAS

Row Address Strobe - memory controller signal that tells the memory that it can read the row address signal.

SIMM

Single In-line Memory Module - consists of multiple DRAM chips mounted on a single circuit board for easy installation.

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EXHIBIT 6

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**SanDisk 64MB SmartMedia Card**Online Price: **\$29.99**Availability: **Backordered**

The SmartMedia card is a removable flash memory card that can be used in several different types of digital devices, including digital cameras, digital music players and digital voice recorders. Advanced Features Include: High transfer rate for fast copy/download, Multiple storage capacity, Unfazed by drastic weather conditions ranging from blistering heat to freezing cold.

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Removable Disk (G:) Properties



General

AutoPlay

Tools

Hardware

Sharing



Type: Removable Disk

File system: RAW

 Used space: 28,196,864 bytes 26.8 MB

 Free space: 37,289,984 bytes 35.5 MB

Capacity: 65,486,848 bytes 62.4 MB



Drive G

OK

Cancel

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EXHIBIT 7

Microsoft Knowledge Base Article - 121839

Determining Actual Disk Size: Why 1.44 MB Should Be 1.40 MB

[View products that this article applies to.](#)

This article was previously published under Q121839

SUMMARY

The 1.44-megabyte (MB) value associated with the 3.5-inch disk format does not represent

the actual size or free space of these disks. Although its size has been popularly called 1.44 MB, the correct size is actually 1.40 MB.

MORE INFORMATION

The correct size is determined by multiplying the number of tracks, sides, sectors per track, and 512 bytes per sector, then subtracting the bytes required to format the disk, and then dividing this figure by 1024. For a "1.44-MB" 3.5-inch floppy disk, there are

80 tracks
18 sectors per track
512 bytes per sector
2 sides

Multiplying the above gives you 1,474,560 bytes. This is the unformatted size.

To determine the number of bytes formatting requires, you need to know how many bytes are used for the boot sector, file allocation table (FAT), and root directory.

There is 1 sector used for the boot sector, which is 512 bytes; 18 sectors for the two FATs (9 sectors each), which is 9216 bytes (512 * 18 = 9216); and 14 sectors for the root directory, which is 7168 bytes.

NOTE: There are two ways to arrive at the 7168 number:

224 entries * 32 bytes per entry = 7168 bytes

-or-

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512 bytes per sector ($14 * 512 = 7168$ bytes)

Adding these figures gives you 16,896 bytes.

Subtracting the amount used for formatting from the total unformatted size gives you 1,457,664. ($1,474,560 - 16,896 = 1,457,664$ bytes)

Dividing the above figure by 1024 bytes generates 1440. ($1,474,560 / 1024 = 1440$ KB)

To convert to megabytes, divide by 1024. ($1440 \text{ KB} / 1024 = 1.406$ MB)

This formula works for 1.2-MB disks as well. The only variable is the number of sectors, which is 15, for the calculations with 1.2-MB disks.

From the calculations shown above, we can see that the 3.5-inch disk considered to have 1.44 MB free disk space actually has 1.40 MB, and the 5.25-inch disk considered to have 1.2 MB actually has 1.17 MB.

The misunderstanding comes from the incorrect calculation below:

$1440 \text{ KB} / 1000 = 1.44 \text{ MB}$

The calculation should be:

$1440 \text{ KB} / 1024 = 1.40 \text{ MB}$

There are 1024 bytes in a kilobyte, not 1000.

Note that in Windows 95, the properties for a blank, formatted 3.5-inch 1.44-MB disk show that there are 1.38 MB of free disk space.

The information in this article applies to:

- Microsoft MS-DOS operating system 3.1
- Microsoft MS-DOS operating system 3.2
- Microsoft MS-DOS operating system 3.21
- Microsoft MS-DOS operating system 3.3
- Microsoft MS-DOS operating system 3.3a
- Microsoft MS-DOS operating system 4.0
- Microsoft MS-DOS operating system 4.01
- Microsoft MS-DOS operating system 5.0
- Microsoft MS-DOS operating system 5.0a
- Microsoft MS-DOS operating system 6.0
- Microsoft MS-DOS operating system 6.2
- Microsoft MS-DOS operating system 6.21
- Microsoft MS-DOS operating system 6.22
- Microsoft Windows 3.1
- Microsoft Windows 3.11
- Microsoft Windows 95
- Microsoft Windows for Workgroups 3.11

Last Reviewed:	5/6/2003 (2.0)
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Keywords:	KB121839
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accessories



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Specifications

- **Memory:** Flash Memory 128MB x 2 (for a total of 256MB)
- **Actual Usable Capacity:** 123MB per side (for a total of 246MB)
- **Interface:** Memory Stick Interface (Serial)
- **Operating Voltage:** 2.7V-3.6V
- **Power Consumption:** 45 MA
- **Transfer Speed:** 20 Mbps
- **Minimum Write Speed:** 15 Mbps (when combined with Optimized Memory Stick PRO format-compatible devices)
- **Dimensions (Approx.):** 0.95" x 1.97" x 0.11" (24.5mm x 50mm x 2.8mm)

top of page ▲

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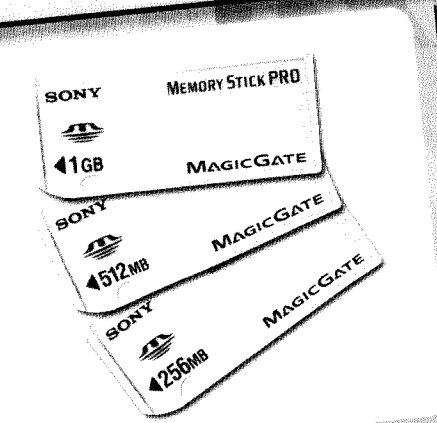
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Micro Vault™ with Memory Stick® USM-128B



€ 110.00

MEMORY STICK PRO



Memory Stick PRO™ Media*

- Increased capacity for high-resolution photography

**1 GB (940 MB available)
MSX-1G \$599.99**

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**256 MB (220 MB available)
MSX-256 \$119.99**

(Memory Stick media not eligible for 20% offer.)

Capacity, transfer speeds, and other Memory Stick PRO media features vary by and are dependent on the host hardware devices. See host device specifications for details.



High Grade Memory Stick™ Media Case MSAC-HGAB \$19.99

- New blue aluminum case, beautiful, high tech and durable
- Organizes up to eight Memory Stick™ digital media*
- Rugged shell assures protection of your media
- Small and compact design for easy portability

*Memory Stick digital media sold separately.

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I, Seth A. Safier, declare:

My business address is 6467 California, San Francisco, California. I am employed in the County of San Francisco, where this mailing occurs. I am over the age of 18 years and not a party to the within cause.

On March 10, 2005, I served the following documents:

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I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this document was executed on March 10, 2005, at San Francisco, California.

Seth A. Safier, Esq.