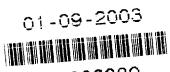
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Form PFONANCE SECTION RECORDATION FO (Rev. 10/02) TRADEMA	RM COVER SHEET RKS ONLY U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office
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To the Honorable Commissioner of Patents and Trademarks:	Please record the attached original documents or copy thereof.
1. Name of conveying party(ies): Quantum Corporation 501 Sycamore Drive Milpitas, California 95035 Individual(s) General Partnership Corporation-State 12 - 30 - 02 12 - 30 - 02	2. Name and address of receiving party(ies) Name: KEYBANK NATIONAL ASSOCIATION Internal Address: Street Address: 831 South Park Center Boulevard City: Boise State: ID Zip: 83705
Other	Individual(s) citizenship
Additional name(s) of conveying party(ies) attached? Yes No	Association
3. Nature of conveyance: Assignment Merger Security Agreement Change of Name Other Execution Date:	Limited Partnership Corporation-State Other Administrative Agent If assignee is not domiciled in the United States, a domestic representative designation is attached: (Designations must be a separate document from assignment) Additional name(s) & address(es) attached? Yes No
4. Application number(s) or registration number(s):	
A. Trademark Application No.(s)	B. Trademark Registration No.(s) 926,161; 1,749,927
	1,089,619; 2,075,239; 2,126,108; 2,373,379
Additional number(s) a	ttached 🗸 Yes 🔝 No
Name and address of party to whom correspondence concerning document should be mailed: Name: Doyle B. Johnson	6. Total number of applications and registrations involved:
Internal Address: Crosby Heafey Roach & May	7. Total fee (37 CFR 3.41)\$_400.00 Enclosed Authorized to be charged to deposit account
Street Address: Two Embarcadero Center	8. Deposit account number:
Suite 2000	03-3821 (Attaney Palet #
City: San Francisco State: CA Zip: 94111	27440.00020]
	E THIS SPACE
9. Signature. Doyle B Johnson Name of Person Signing	Bignature 12-23:2002 Date 19
Mail documents to be recorded wit	h required cover sheet information to:
	Trademarks, Box Assignments n, D.C. 20231
01 FC:8521 40.00 CH 02 FC:8522 225.00 CH	

Recordation Form Cover Sheet TRADEMARKS ONLY

Continuation of Box 4.B. Trademark Registration No.(s): 2,386,775;

2,392,749; 2,434,568, 2,496,768

INTELLECTUAL PROPERTY SECURITY AGREEMENT (Short Form)

This Intellectual Property Security Agreement (Short Form) (the "IP Security Agreement (Short Form)") is made as of December 17, 2002 by and between QUANTUM CORPORATION, a Delaware corporation ("Grantor"), and KEYBANK NATIONAL ASSOCIATION as Administrative Agent ("KeyBank" or "Agent") for the parties identified as Lenders (collectively with KeyBank in its capacity as Lender, the "Lenders") under that certain Credit Agreement of even date among Grantor, KeyBank and the Lenders (the "Credit Agreement").

RECITALS

- 1. Concurrently herewith Grantor is entering into the Credit Agreement.
- 2. Grantor owns all of the copyrights, patents, trademarks, tradenames and other intellectual property assets specifically identified in <u>Exhibits A, B, C</u> and <u>D</u>. In addition Grantor owns or has rights in other copyrights, patents, trademarks and tradenames and other intellectual property assets. (All of the forgoing assets are referred to as the "<u>Intellectual Property Assets</u>").
- 3. Pursuant to the Credit Agreement, Grantor has granted to Agent and to the Lenders a security interest in all right title and interest of Grantor in all Intellectual Property Assets, together with any reissue, continuation, continuation-in-part or extension thereof and all proceeds thereof, including any and all causes of action which may exist by reason of infringement thereof for the full term of all patents and copyrights, to secure the prompt payment performance and observance of the Obligations (as defined in the Credit Agreement).
- 4. It is a prerequisite to the Lenders' entering into the Credit Agreement that Grantor enter into this IP Security Agreement (Short Form) and grant to the Agent for itself and for the ratable benefit of the Lenders, the security interest hereafter provided to secure the Obligations (as defined in the Credit Agreement).
- 5. Grantor as owner of the assets encumbered hereby, desires to enter into this IP Security Agreement (Short Form) to secure payment and performance of the Obligations (as defined in the Credit Agreement).

AGREEMENT

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, the parties hereto agree as follows:

Grantor does hereby further grant to Agent a security interest in all of Grantor's right, title and interest in, to and under all of its Intellectual Property Assets (including without limitation those copyrights, patents, trademarks, mask works and domain names listed on Exhibits A, B, C and D hereto), and including without limitation all proceeds thereof (including, without limitation, license royalties and proceeds of infringement suits), the right to sue for past, present and future infringements, all rights corresponding thereto throughout the world and all re-issues, divisions continuations, renewals, extensions and continuations-in-part thereof.

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Such security interest is granted to Agent as collateral security for the prompt and complete payment when due of all Obligations (as defined in the Credit Agreement).

Grantor does hereby further acknowledge, affirm and agree that the rights and remedies of the Agent with respect to the security interest in the Intellectual Property Assets granted hereby are more fully set forth in that certain Intellectual Property Security Agreement by Grantor in favor of Agent, dated of even date herewith, the terms and provisions of which are hereby incorporated herein by reference as if fully set forth herein.

[Signature pages follow]

Address of Grantor: **GRANTOR:** 501 Sycamore Drive QUANTUM CORPORATION, a Delaware Milpitas, California 95035 corporation By: _____ Name: Title: By: _____ Name: Title: AGENT: KEYBANK NATIONAL ASSOCIATION By: Rolet W Bould Name: ROBERT W. BOSWELL

IN WITNESS WHEREOF, the parties hereto have executed this IP Security Agreement

on the day and year first above written.

Title: VICE PRESIDENT

Signature Page to Short Form IP Security Agreement

on the day and year first above written.	
Address of Grantor:	GRANTOR:
501 Sycamore Drive Milpitas, California 95035	QUANTUM CORPORATION, a Delaware corporation By: Michael J. Name: Michael J. handart Title: Execute the Present of Authority Office.
AGENT:	
KEYBANK NATIONAL ASSOCIATION	

Name: _______Title: ______

IN WITNESS WHEREOF, the parties hereto have executed this IP Security Agreement

Signature Page to Short Form IP Security Agreement

Exhibit "A" attached to that certain Intellectual Property Security Agreement (Short Form) dated December 17, 2002.

EXHIBIT "A" COPYRIGHTS

None

Exhibit A-1

EXHIBIT "B" PATENTS

U.S. Issued Patents

D 1	D-4	Patent	US Filing	6	
Docket #	Patent #	Date	Date	Serial #	Title
83-233F	4,321,632	3/23/1982	5/19/1980	06/148.055	POSITIONING SYSTEM & FORMATING SCHEME FOR MAGNETIC TAPE MEDIA
83-333	4,572,460	2/25/1986	2/13/1984	579,776	MEANS FOR PULLING TAPE FROM A REEL
92-0241	4,639,808	1/27/1987	9/26/1984	655,011	ASYMMETRICAL SHIELDS FOR CONTROLLING FEEDTHROUGH IN READ/WRITE HEADS
83-334	4,662,049	5/5/1987	2/13/1984	578,766	MECHANISM FOR JOINING TAPE LEADERS
83-334CIP1	4,720,913	1/26/1988	1/31/1986	824,189	MECHANISM FOR JOINING TAPE LEADERS
83-360-CONT1	4,809,110	2/28/1989	10/8/1987	106,935	NARROW CONTOUR HEAD ASSEMBLY
88-0223	4.864,198	9/5/1989	1/28/1988	149,495	METHOD OF AND APPARATUS FOR DRIVING THREE-PHASE D.C. BRUSHLESS MOTOR
87-107	4,918,548	4/17/1990	5/9/1988	06/191,617	CARTRIDGE LOADER
90-0032-us	5.055.959	10/8/1991	1/9/1990	07/462,562	TAPE HEAD WITH LOW SPACING LOSS PRODUCED BY NARROW AND WIDE WEAR REGIONS
91-0015	5.088,172	2/18/1992	11/29/1990	07/620,465	TAPE DRIVE ASSEMBLY WITH NON-SLIP TACHOMETER ROLLER
90-0358	5,105,322	4/14/1992	6/29/1990	545,926	TRANSVERSE POSITIONER FOR READ/WRITE HEAD
89-0117	5,136,592	8/4/1992	6/28/1989	07/373,323	ERROR DETECTION AND CORRECTION SYSTEM FOR LONG BURST ERRORS
91-0011	5,173,828	12/22/1992	11/29/1990	619,893	COMPACT MULTIPLE ROLLER TAPE GUIDE ASSEMBLE
H-1251-P	5.199,033	3/30/1993	5/10/1990	521,575	SOLID STATE MEMORY ARRAY USING ADDRESS BLOCK BIT SUBSTITUTION TO COMPENSATE FOR NON-FUNCTIONAL STORAGE CELLS
91-0015DIV1	5,199,168	4/6/1993	10/3/1991	770,603	NON-SLIP TACHOMETER ROLLER
91-0013	5,210,829	5/11/1993	12/12/1990	626.793	ADJUSTABLE THRESHOLD FOR BUFFER MANAGEMENT
91-0080-US	5,214,553	5/25/1993	4/29/1991	07/693,449	MAGNETIC CONTACT RECORDING HEAD FOR OPERATION WITH TAPES OF VARYING THICKNESS
Q02-1025-US1	5227935	7/13/1993		09/602262	TAPE DRIVE HAVING A SELECTIVELY

Exhibit B-1

Short Form Intellectual Property Security Agreement

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Docket #	Patent #	Patent Date	US Filing Date	Serial #	Title
					RETRACTABLE DRIVE HUB
90-0361	Des 337.760	7/27/1993	6/29/1990	546,060	COMBINED MEDIA CARTRIDGE LOADER AND ASSOCIATE MAGAZINE
90-0359	5,231,552	7/27/1993	6/29/1990	546,089	MAGAZINE AND RECEIVER FOR MEDIA CARTRIDGE LOADER
91-0107	5,263,030	11/16/1993	2/13/1991	654,499	METHOD AND APPARATUS FOR ENCODING DATA FOR STORAGE ON MAGNETIC TAPE
92-0309	5.289.328	2/22/1994	5/6/1992	888,941	METHOD AND APPARATUS FOR VARIABLE DENSITY READ-AFTER-WRITING ON MEGNETIC TAPE
91-0366	5,307,217	4/26/1994	6/24/1992	903.694	MAGNETIC HEAD FOR VERY HIGH TRACK DENSITY MAGNETIC RECORDING
93-0241	5,343,337	8/30/1994	9/17/1992	07/947,029	CONTROL CIRCUITRY FOR MAGNETORESISTIVE (MR) TAPE HEADS USING GROUP SELECT SWITCHES AND HEAD SELECT MULTIPLEXER
92-0534	5.343,426	8/30/1994	6/11/1992	07/897,164	DATA FORMATSER/CONVERTER FOR USE WITH SOLID-STATE DISK MEMORY USING STORAGE DEVICES WITH DEFECTS
Q02-1026-us1	5353179	10/4/1994	12/4/1992	986136	AUTO-LOADING OF TAPE CARTRIDGES
91-0033-C	5,359,610	10/25/1994	10/27/1992	967,958	ERROR DETECTION ENCODING SYSTEM
91-0068	5.392,288	2/21/1995	2/8/1991	07/652,870	ADDRESSING TECHNIQUE FOR A FAULT TOLERANT BLOCK STRUCTURE STORAGE DEVICE
91-0108-CONT	5,392.302	2/21/1995	12/6/1993	08/163.397	ADDRESS ERROR DETECTION TECHNIQUE FOR INCREASING THE RELIABILITY OF A STORAGE SUBSYSTEM
93-0363-US	5,414,585	5/9/1995	7/19/1993	08/094.272	ROTATING TAPE EDGE GUIDE
93-0362	5,426.551	6/20/1995	7/19/1993	08/094,413	MAGNETIC CONTACT HEAD HAVING A COMPOSITE WEAR SURFACE
Q00-1103-US1	5,429,470	7/4/1995	10/20/1992	08/964,020	INTER-SYSTEM TRANSPORT MECHANISM FOR USE WITH ROBOTIC DATA CARTRIDGE HANDLING SYSTEMS
94-0017	5.448,438	9/5/1995	11/9/1993	08/149,583	HEAD ACTUATOR HAVING SPRING LOADED SPLIT NUT
92-0384CONT1	5.459.742	10/17/1995	3/14/1994	08/212,334	SOLID-STATE DISK MEMORY USING STORAGE DEVICES WITH DEFECTS
93-0201	5,474,253	12/12/1995	10/12/1993	08/135,098	WEDGED REELS IN STREAMING TAPE DRIVES AND TAPE CARTRIDGES
93-0361CONT1	5,475,553	12/12/1995	9/13/1994	08/305,117	TAPE HEAD WITH SELF-REGULATING WEAR REGIONS
88-0321-CONΓ	5,513,326	4/30/1996	5/4/1995	08/434,797	SYSTEM FOR OPTIMIZING DATA TRANSFER

Short Form Intellectual Property Security Agreement

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	D	Patent	US Filing	6	77.4
Docket # Q02-1027-US1	5515213	5/7/1996	9/27/1993	Serial #	Title TAPE DRIVE MACHINE FOR SELECTIVELY READING A PLURALITY OF RECORDING TAPE CARTRIDGES
94-0225	5.523.904	6/4/1996	6/24/1994	08/265,529	LINEAR TAPE WRITE SERVO USING EMBEDDED AZIMUTH SERVO BLOCKS
94-0018	5,535,399	7/9/1996	9/30/1993	08/130,047	SOLID STATE DISK DRIVE
93-0357-USI	5.592.342	1/7/1997	5/23/1994	08/247,378	METHOD FOR PACKING VARIABLE SIZE USER DATA RECORDS INTO FIXED SIZE BLOCKS ON A STORAGE MEDIUM
Q95-1031-UST	5,608,584	3/4/1997	5/25/1995	08/450,753	RECOGNITION OF RECORDING MEDIA USING MULTIPLE HOLES
Q02-1029-US1	5652682	6/29/1997	11/2/1995	552220	APPARATUS FOR LOADING AND UNLOADING CARTRIDGES
Q96-1084-US1	5,671,389	9/23/1997	1/11/1996	08/584,598	ADAPTIVE COMPRESSION CACHING FOR TAPE RECORDING
Q97-1001-USI	5,680,278	10/21/1997	8/8/1996	08/694,951	APPARATUS FOR COMBINING LINEAR AND ROTATIONAL MOTION OF AN AZIMUTH READ/WRITE HEAD
Q96-1055-us1	5.760,995	6/2/1998	9/11/1996	08/710,033	A MULTI-DRIVE, MULTI-MAGAZINE MASS STORAGE AND RETRIEVAL UNIT FOR TAPE CARTRIDGES
Q96-1078-US1	5,769.346	6/23/1998	6/19/1996	08/666,854	TAPE BUCKLING MECHANISM FOR SINGLE REEL CARTRIDGE TAPE RECORDING
Q96-1058-D	D395,879	7/7/1998	1/10/1996	29/048,679	TAPE DRIVE BEZEL
Q95-1031-US2	5,790,337	8/4/1998	1/21/1997	08/785,916	TAPE CARTRIDGE QUALIFIED BY LOCATION, AND IDENTIFIED BY GEOMETRY, OF TYPE APERTURE
Q96-1106-US1	5,793,574	8/11/1998	9/10/1996	08/711,618	A TAPE HEAD ACTUATOR ASSEMBLY HAVING A SHOCK SUPPRESSION SLEEVE
Q97-1013-US1	5.803.388	9/8/1998	11/15/1996	08/749,598	TAPE REEL WITH FLANGE SECTIONS FOR UNIFORM TAPE STACKING
Q96-1074-us1	5,841,600	11/24/1998	1/11/1996	08/584,652	RANDOMLY ORDERED DATA BLOCK ENVELOPE TAPE FORMAT
Q97-1085-US1	5,857,634	1/12/1999	7/14/1997	08/892,500	TAKE-UP REEL LOCK
Q96-1077-us1	5.862,014	1/19/1999	1/11/1996	08/587,425	FLEX CIRCUIT HEAD MODULE WITHIN A TAPE DRIVE
Q96-1075-us1	5.867.339	2/2/1999	12/4/1996	08/760,794	FOUR CHANNEL AZIMUTH AND TWO CHANNEL NON-AZIMUTH READ-AFTER- WRITE LONGITUDINAL MAGNETIC HEAD
Q97-1076-US1	5.883,864	3/16/1999	2/24/1997	08/804,766	MEDIA LIBRARY HAVING LOCALLY VECTORED DRIVE ADDRESSING
Q97-1100-US1	5,894,425	4/13/1999	2/28/1997	08/807,925	

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Docket #	Patent #	Patent Date	US Filing Date	Serial#	Title
					WIRELESS SECONDARY INTERFACE FOR DATA STORAGE DEVICE
Q99-1069-us1	5.925,119	7/20/1999	3/28/1997	08/828,438	COMPUTER ARCHITECTURE FOR AUTOMATED STORAGE LIBRARY
Q99-1072-D	D413.592	9/7/1999	11/13/1998	29/096,532	TAPE CARTRIDGE
94-0226- CONT1	5,949,604	9/7/1999	6/11/1996	08/661,576	METHOD OF WRITING AND READING SERVO ON TRACKS HAVING A LONGITUDINAL GAP
Q99-1022-us1	5971310	10/26/1999	9/8/1998	09/149,759	POSITIVE ENGAGEMENT BUCKLING FOR A TAPE DRIVE AND CARTRIDGE
Q97-1030-US1	5.973.872	10/26/1999	1/23/1997	08/788.126	METHOD AND APPARATUS FOR A LOW COST MULTI-CHANNEL TAPE RECORDING HEAD
Q96-1075- DIV1	5,973,874	10/26/1999	10/23/1998	09/177,904	FOUR CHANNEL AZIMUTH AND TWO CHANNEL NON-AZIMUTH READ-AFTER- WRITE LONGITUDINAL MAGNETIC HEAD
Q97-1101-US1	5,973.891	10/26/1999	5/21/1997	08/861,076	DATA TRANSDUCER AND METHOD FOR WRITING DATA UTILIZING THE BOTTOM POLE AS THE TRAILING EDGE OF A THINFILM MAGNETIC TAPE WRITE HEAD
Q97-1015-US1	6018434	1/25/2000	1/14/1997	08/782,183	TAPE CARTRIDGE HAVING WRITTEN-IN- DEFECT SERVO PATTERNS FOR RAPID HEAD POSITION CALIBRATION
Q97-1103-US1	6.034.850	3/7/2000	6/3/1997	08/868,596	TWO-PART TAPE CARTRIDGE REEL LOCKING MECHANISM
Q95-1032-US2	6.040,964	3/21/2000	7/23/1997	08/899,082	METHOD AND APPARATUS FOR MULTIPLE CHANNEL HEAD ASSEMBLY
Q98-1071-usI	6062500	5/16/2000	6/1/1998	09/088,796	HIGH SPEED REEL
Q97-1110-USI	6067481	5/23/2000	11/12/1997	08/968,145	VIRTUAL MAGNETIC TAPE DRIVE LIBRARY SYSTEM
q99-1018-US1	6075678	6/13/2000	7/24/1998	09/121,924	PIVOTING LEVER CAM GUIDE TAPE HEAD POSITIONER
q99-1081-US1	6092754	7/25/2000	3/25/1999	09/276,330	BUCKLER FOR A TAPE DRIVE
Q98-1061-US1	6095445	8/1/2000	9/2/1998	09/145,861	CARTRIDGE BUCKLER FOR A TAPE DRIVE
Q96-1055- DIV1	6097566	8/1/2000	4/1/1998	09/053.672	A MULTI-DRIVE, MULTI-MAGAZINE MASS STORAGE AND RETRIEVAL UNIT FOR TAPE CARTRIDGES
Q99-1125-us1	6103365	8/15/2000	10/21/1998	09/176722	MAGNETIC TAPE
Q97-1083-US1	6108159	8/22/2000	7/14/1997	08/891,950	DATA TRACK EDGE FOLLOWER SERVO METHOD AND APPARATUS
Q97-1092-US1	6.128.717	10/3/2000	1/20/1998	09/009,622	STORAGE APPLICATION PROGRAMMING INTERFACE
Q96-1075- DIV2	6.130,804	10/10/2000	8/9/1999	09/370,459	FOUR CHANNEL AZIMUTH AND TWO CHANNEL NON-AZIMUTH READ-AFTER-

		Patent	US Filing		
Docket #	Patent #	Date	Date	Serial #	Title WRITE LONGITUDINAL MAGNETIC HEAD
					WRITE LONGITUDINAL MAGNETIC HEAD
Q98-1058-us1	6,141.174	10/31/2000	8/14/1998	09/135,411	METHOD OF READING OF RECORDED INFORMATION FROM A MAGNETIC TAPE THAT COMPENSATES FOR TRACK PITCH CHANGES
Q98-1024-us1	6,141,184	10/31/2000	4/23/1998	09/066,101	E DRIVE DATA STORAGE DEVICE HAVING PERPENDICULARITY ADJUSTED TAPE GUIDES
Q97-1084-US1	6148430	11/14/2000	5/15/1998	09/079,757	ENCODING APPARATUS FOR RAID-6 SYSTEM AND TAPE DRIVES
Q99-1021-US1	6157516	12/5/2000	11/13/1998	09/191,362	METHOD AND APPARATUS FOR PREVENTING ELECTROSTATIC DAMAGE TO THE READ/WRITE HEAD OF A TAPE DRIVE
Q99-1076-us1	6175470	1/16/2001	2/3/1999	09/244,238	STORAGE MEDUIM CARTRIDGE HAVING AN INTEGRAL KEY
Q98-1085-us1	6184806	2/6/2001	3/13/1998	09/042,243	A RATE 321/33 (D=0, K=6) RUN LENGTH LIMITED MODULATION CODE HAVING OPTIMIZED ERROR PROPAGATION
Q99-1048-US1	6188532	2/13/2001	9/8/1998	09/149,733	BACKWARD COMPATIBLE HEAD AND HEAD POSITIONING ASSEMBLY FOR A LINEAR TAPE DRIVE
Q00-1014-D	D438870	3/13/2001	1/26/2000	29/117622	TAPE CARTRIDGE
Q02-1016-US1	D439249	3/20/2001	4/28/2000	29/122,504	STORAGE DEVICE
Q98-1076-us1	6,236,340	5/22/2001	1/4/1999	09/225,259	MODULATION ENCODERS AND DECODERS
Q98-1054-us1	6241171	6/5/2001	3/26/1998	09/048,929	LEADERLESS TAPE DRIVE
q99-1056-us1	6,246,535	6/12/2001	11/13/1998	09/191,766	OPTICAL APPARATUS FOR TRACKING A MAGNETIC TAPE
Q00-1104-US1	6,267,313	7/31/2001	11/15/1999	09/440459	WIDE TAPE CARTRIDGE
Q99-1111-US1	6,267,325	7/31/2001	5/13/1999	09/311,651	TAPE SUPPORT
Q99-1123-us1	6271991	8/7/2001	6/11/1999	09/330,407	A TAPE CARTRIDGE
Q98-1046-US1	6,288,870	9/11/2001	1/13/1998	09/006,281	SELF-ALIGNED METAL FILM CORE MULTI- CHANNEL RECORDING HEAD FOR TAPE DRIVES
Q02-1024-US1	D448033	9/18/2001	10/19/2000	29/131,431	MEMORY STORAGE ASSEMBLY PANEL
Q02-1017-US1	6.304.439	10/16/2001	8/30/1999	09/385.809	DISK DRIVE SLED INSERTION AND REMOVAL SYSTEM
Q95-1056-US3	6,307.718	10/23/2001	4/9/1999	08/918,477	TAPE DRIVE HEAD POSITIONING DEVICE FOR ADJUSTING HEAD TILT AND AZIMUTH
Q00-1081-US1	6.311.915	11/6/2001	6/15/2000	09/595426	BUCKLER FOR A TAPE DRIVE
Q99-1127-us1	6,319,595	11/20/2001	9/12/2000	09/529,930	MAGNETIC TAPE

		Patent	US Filing	•	
Docket #	Patent #	Date	Date	Serial #	Title
Q99-1048-US2	6.331.920	12/18/2001	10/10/2000	09/685,418	BACKWARD COMPATIBLE HEAD AND HEAD POSITIONING ASSEMBLY FOR A LINEAR TAPE DRIVE
Q97-1103- DIV1	6.344,944	2/5/2002	9/13/1999	09/394,666	MINI-CARTRIDGE ADAPTER FOR ADAPTING A MINI-CARTRIDGE TO AN INDUSTRY STANDARD TAPE CARTRIDGE FORMAT
Q95-1056- DIVI	6,349,020	2/19/2002	10/10/2000	09/686485	HEAD TILTING MECHANISM FOR TAPE DRIVES
Q99-1049-US1	6,369,982	4/9/2002	9/8/1988	09/149.769	FLOATING TAPE HEAD HAVING SIDE WINGS FOR LONGITUDINAL AND AZIMUTH PLAYBACK WITH MINIMIZED TAPE WRAP ANGLE
Q99-1122-US1	6.375.063	4/23/2002	7/16/1999	09/354,825	MULTI-STEP STUD DESIGN AND METHOD FOR PRODUCING CLOSELY PACKED INTERCONNECTS IN MAGNETIC RECORDING HEADS
Q00-1043-us1	6,375.108	4/23/2002	7/13/2000	09/615,279	MULTI-LAYERED DRIVE LEADER FOR A TAPE DRIVE
Q01-1049-US1	6,380,873	4/30/2002	6/30/2000	09/608148	A METHOD FOR REDUCING RADIO FREQUENCY EMISSIONS ON HIGH-SPEED SERIAL BUSES
Q00-1084-US1	6,398,143	6/4/2002	9/26/2000	09/670857	DRIVE LEADER AND TAKE-UP REEL FOR A TAPE DRIVE
Q00-1051-US1	6424496	7/23/2002	6/14/2000	09/594,217	VARIABLE WIDTH FLAT TAPE HEAD FOR BI- DIRECTIONAL CONTACT RECORDING AND METHOD FOR MAKING THE SAME
Q99-1036-US1	6424499	7/23/2002	3/31/1999	09/283313	IMPROVED FLEXIBLE TRACE INTERCONNECT ARRAY FOR MULTI- CHANNEL TAPE HEAD
Q99-1040-US1	6427934	8/6/2002	11/12/1998	09/191,250	TAKE-UP REEL MINIMIZING PRINT THROUGH
Q00-1070-us1	6442661	8/27/2002	2/29/2000	09/515,416	SELF-TUNING MEMORY MANAGEMENT FOR COMPUTER SYSTEMS
Q00-1044-US1	6445533	9/3/2002	5/16/2000	09/573492	TRANSFER LINKAGE FOR A CARTRIDGE ADAPTER OF A TAPE DRIVE

Quantum Corporation U.S. Patents Pending

Docket #	US Filing Date	US Serial #	<u>Title</u>
Q96-1077-US2	12/3/1997	08/587,025	FLEX CIRCUIT HEAD MODULE WITHIN A TAPE DRIVE
Q98-1039-CIP	3/24/1998	09/046,723	MULTI-CHANNEL MAGNETIC TAPE SYSTEM HAVING OPTICAL TRACKING SERVO
Q99-1012-US1	9/11/1998	09/152,035	MASS STORAGE DEVICE WITH NETWORK INTERFACE
Q99-1082-US1	3/11/1999	09/266,396	STORAGE MEDIUM CARTRIDGE USE WITH A STORAGE MEDIUM CARTRIDGE GRIPPING ASSEMBLY
Q99-1036-CPA	3/31/1999	09/283313	IMPROVED FLEXIBLE TRACE INTERCONNECT ARRAY FOR MULTI-CHANNEL TAPE HEAD
Q99-1124-US1	6/11/1999	09/330,406	SYSTEMS AND METHODS FOR PROVIDING BEGINNING-OF TAPE AND END-OF-TAPE INDICATORS
Q00-1109-USI	8/9/1999	09/370,456	TAPE HEAD WITH SUPPORT BARS
Q00-1003-US1	9/30/1999	09/411,144	CARTRIDGE MAGAZINE FOR A TAPE LIBRARY
Q00-1015-US1	10/28/1999	09/429,379	CASTELLATION DESIGNS FOR IMPROVED LIFT-OFF OF PHOTORESIST IN THIN-FILM DEVICE PROCESSING AND A THIN-FILM DEVICE MADE THEREBY
Q00-1001-US1	1/12/2000	09/482148	TRANSPORT MECHANISM FOR A STORAGE SYSTEM
Q00-1022-US1	2/29/2000	09/515463	BUCKLE FOR A TAPE DRIVE AND A CARTRIDGE
Q00-1023-US1	5/2/2000	09/563105	APPARATUS AND SYSTEMS FOR LIFTING A TAPE DRIVE TRANSDUCER HEAD
Q00-1062-US1	5/23/2000	09/576735	METHOD AND APPARATUS FOR READ-AFTER-WRITE VERIFICATION WITH ERROR TOLERANCE
Q00-1106-US1	5/24/2000	09/577637	DATA STORAGE DEVICES FOR LARGE-SIZE DATA STRUCTURES
Q02-1028-US1	6/6/2000	09/588,217	DATA STORAGE UNIT INCORPORATING AN AUTOCHANGER FOR DATA STORAGE MEDIA STORED WITHIN A REMOVABLE MAGAZINE
Q00-1100-US1	6/7/2000	09/588,891	TRIPLE PUSH-PULL OPTICAL TRACKING SYSTEM
Q00-1071-US1	6/29/2000	09/607581	FAULT TOLERANT STORAGE DEVICE WITH CACHE
Q99-1126-US1	7/21/2000	09/530,005	MAGNETIC TAPE
Q00-1093-US1	10/2/2000	09/678900	MEDIA LIBRARY WITH FAILOVER CAPABILITY
Q00-1092-US1	10/16/2000	09/688723	AUTOMATED TAPE LIBRARY
Q01-1028-PROV	11/10/2000	60/247405	MULTI-PURPOSE WIDE MEDIA CARTRIDGES AND CARTRIDGE CHASSIS SUBASSEMBLIES
Q02-1010-US1	11/10/2000	09/710.645	AUTOMATED TAPE CARTRIDGE AUTOLOADER/LIBRARY SYSTEM
Q00-1061-US1	11/30/2000	09/727,838	ERASURE CORRECTION FOR ECC ENTITIES
Q01-1018-US1	3/28/2001	09/821,845	TAPE HEAD WITH TRANSDUCER SUPPORTS HAVING RAISED, WEAR-RESISTANT SURFACES AT EDGES OF

Exhibit B-7

Docket #	US Filing Date	US Serial#	<u>Title</u>
			SOFTER CORE
Q01-1052-US1	3/29/2001	09/822,192	REMOVABLE DISK STORAGE ARRAY EMULATING TAPE LIBRARY HAVING BACKUP AND ARCHIVE CAPABILITY
Q00-1094-US1	3/31/2001	09/823,859	DATA STORAGE MEDIA LIBRARY WITH SCALABLE THROUGHPUT RATE FOR DATA ROUTING AND PROTOCOL CONVERSION
Q02-1009-US1	5/17/2001	09/860.773	TAPE CARTRIDGE PICKER FOR AN AUTOMATED TAPE CARTRIDGE AUTOLOADER/LIBRARY SYSTEM
Q01-1064-US1	5/24/2001	09/865,215	MAGNETIC TRACK FOLLOWING SERVO ALGORITHM USING SIGNAL QUALITY
Q99-1056-US2	6/7/2001	09/876,616	OPTICAL APPARATUS FOR TRACKING A MAGNETIC TAPE
Q01-1019-US1	6/22/2001	09/888093	OPTICAL RECORDING ARTICLE
Q02-1013-US1	6/22/2001	09/891,870	CARTRIDGE PICKER STOP/COMPRESSION PAD FOR A TAPE CARTRIDGE PICKER
Q00-1098-US1	6/27/2001	09/892599	SPATIAL FILTERING OF LASER GHOSTS
Q02-1010-DIV1	6/27/2001	09/893.328	TAPE CARTRIDGE TRANSPORT MAGAZINE FOR AN AUTOMATED TAPE CARTRIDGE AUTOLOADER/LIBRARY SYSTEM
Q02-1011-US1	6/28/2001	09/896,907	SINGLE CARTRIDGE INTERFACE FOR AN AUTOMATED TAPE CARTRIDGE AUTOLOADER/LIBRARY SYSTEM
Q02-1012-US1	6/29/2001	09/895,816	CARTRIDGE STOP/COMPRESSION PAD FOR A TAPE CARTRIDGE PICKER
Q02-1014-US1	7/9/2001	09/902,433	POINT-TO-POINT PROTOCOL
Q01-1022-US1	7/11/2001	09/903438	ROTARY MAGAZINE TAPE LIBRARY SYSTEM
Q99-1127-US2	7/17/2001	09/907,475	MAGNETIC TAPE
Q01-1028-US1	7/30/2001	09/918,149	MULTI-PURPOSE WIDE MEDIA CARTRIDGES AND CARTRIDGE CHASSIS SUBASSEMBLIES
Q01-1094-US1	8/3/2001	09/923,293	BACKWARD COMPATIBLE TAPE SUPPORT
Q00-1027-US1	8/14/2001	09/930,120	TAPE GUIDE FOR REDUCING LATERAL TAPE MOVEMENT
Q99-1049-US2	8/17/2001	09/932,311	FLOATING TAPE HEAD HAVING SIDE WINGS FOR LONGITUDINAL AND AZIMUTH PLAYBACK WITH MINIMIZED TAPE WRAP ANGLE
Q01-1020-US1	8/20/2001	09/933920	OPTICAL AND OPTICAL TO MAGNETIC ALIGNMENT IN A LINEAR TAPE DRIVE USING LGMR
Q01-1030-US1	9/5/2001	09/946583	MAGNETIC SERVO OF A RECORDING HEAD
Q01-1042-US1	9/14/2001	09/953,060	PROGRAMMABLE WRITE EQUALIZATION CIRCUIT
Q00-1132-US2	10/11/2001	09/975,343	MAGNETIC TAPE
Q01-1037-US1	10/19/2001	10/029,112	MULTI RECEIVER TAPE CARTRIDGE TRANSPORT SYSTEM

Docket #	US Filing Date	US Serial #	<u>Title</u>
Q01-1002-US1	10/23/2001	10/001,735	USING NAS APPLIANCE TO BUILD A NON-CONVENTIONAL DISTRIBUTED VIDEO SERVER
Q01-1026-US1	10/23/2001	10/003,495	MODULE AND UNIFIED NETWORK BACKPLANE INTERFACE FOR LOCAL NETWORKS
Q01-1058-US1	11/7/2001	10/037,083	DESIGN AND FABRICATION OF HIGH PRECISION TARGETS FOR OPTICAL SENSOR TO MAGNETIC READ WRITE HEAD STATIC ALIGNMENT FOR TAPE DRIVES
Q02-1001-US1	1/9/2002	10/043597	ENHANCED READ MARGINING USING DITHER ENHANCED WRITE MARGINALIZATION FOR MASS DATA STORAGE APPLICATIONS
Q02-1032-US1	2/5/2002	10/072437	EMULATED BACKUP TAPE DRIVE USING DATA COMPRESSION
Q02-1034-US1	2/5/2002	10/072,561	THERMAL COOLING SYSTEM FOR DENSITY PACKED STORAGE DEVICES
Q02-1035-US1	2/5/2002	10/072560	QUICK RELEASE FASTENING SYSTEM FOR STORAGE DEVICES
Q02-1037-US1	2/5/2002	10/072,527	STORAGE SYSTEM UTILIZING AN ACTIVE SUBSET OF DRIVES DURING DATA STORAGE AND RETRIEVAL OPERATIONS
Q02-1033-US1	2/8/2002	10/071860	METHOD FOR ATTACHING MORE THAN TWO DISK DEVICES TO AN IDE BUS
Q02-1031-US1	2/13/2002	10/075,121	USE OF THE UNIVERSAL SERIAL BUS AS AN INTERNAL ARCHITECTURE WITHIN AN IDE DISK ARRAY
Q02-1048-P	3/14/2002	60/364,330	TAPE MEDIA VERSION DETECTION
Q02-1002-US1	3/25/2002	09/890898	METHOD OF WRITING SERVO SIGNAL ON MAGNETIC TAPE
Q02-1003-US1	3/25/2002	09/890996	METHOD OF WRITING SERVO SIGNAL ON MAGNETIC TAPE
Q02-1055-CIP	4/9/2002	10/119,539	AN ERGONOMIC TEST APPARATUS FOR THE OPERATOR- ASSISTED TESTING OF ELECTRONIC DEVICES
Q00-1051-CIP	4/23/2002	10/128,100	VARIABLE WIDTH FLAT TAPE HEAD FOR BI-DIRECTIONAL CONTACT RECORDING AND METHOD FOR MAKING THE SAME
Q02-1007-US1	4/24/2002	10/131,052	DUAL BACKCOAT WITH MAGNETIC SERVO TRACKS
Q00-1087-US1	5/7/2002	10/140098	OPTICAL SERVO TRACK IDENTIFICATION ON TAPE STORAGE MEDIA
Q00-1132-US3	5/16/2002	10/147451	MAGNETIC TAPE
Q98-1039-CONT	5/16/2002	10/147450	MULTI-CHANNEL MAGNETIC TAPE SYSTEM HAVING OPTICAL TRACKING SERVO
Q99-1116-US2	5/16/2002	10/147337	MAGNETIC TAPE
Q99-1126-US2	5/16/2002	10/147449	MAGNETIC TAPE

Docket #	US Filing Date	US Serial #	<u>Title</u>
Q02-1050-US1	5/17/2002	10/150676	MAGNETIC TAPE HEAD WITH THINFILM THERMOSENSORS FOR HEAD-MEDIA INTERFACE TEMPERATURE MONITORING
Q98-1039-CONT2	5/22/2002	10/153767	MULTI-CHANNEL MAGNETIC TAPE SYSTEM HAVING OPTICAL TRACKING SERVO
Q02-1040-US1	6/5/2002	10/165253	METHOD TO PROTECT THE MAGNETIC HEAD FROM THE LEADERS AND BUCKLE DURING LOAD AND UNLOAD OF TAPE. METHOD INCORPORATES HEAD CLEANING INTO THE SAME OPERATION
Q99-1126-US3	6/13/2002	10/170830	MAGNETIC TAPE
Q99-1116-US3	6/14/2002	10/171859	MAGNETIC TAPE
Q00-1001-DIV1	6/25/2002	10/183,787	TRANSPORT MECHANISM FOR A STORAGE SYSTEM
Q02-1042-US1	6/25/2002	10/183329	METHOD OF PRODUCING FLUX GUIDES IN MAGNETIC RECORDING HEADS
Q02-1049-US1	6/25/2002	10/183232	CARTRIDGE HOUSEING FOR INHIBITING DAMAGE TO RECORDING MEDIA
Q02-1043-D	6/28/2002		TAPE CARTRIDGE
Q02-1046-US1	7/3/2002	10/189810	REPLACEABLE MEMORY ELEMENT IN A SINGLE REEL TAPE CARTRIDGE
Q98-1039-CONT3	7/17/2002	10/198188	MULTI-CHANNEL MAGNETIC TAPE SYSTEM HAVING OPTICAL TRACKING SERVO
Q02-1045-US1	7/23/2002	10/202661	LEADER RELIABILITY IN A SINGLE REEL TAPE CARTRIDGE
Q02-1039-US1	8/19/2002		A METHOD OF PROTECTING SENSITIVE THIN FILM DEVICES FROM CORROSION AND ESD

Exhibit "C" attached to that certain Intellectual Property Security Agreement (Short Form) dated December 17, 2002.

EXHIBIT "C" TRADEMARKS

U.S. Registered Trademarks

Mark	Registration No.	Registration Date	Application No.	Filing Date
DLT TAPE & Design	2,373,379	8/1/00	75/399,623	12/3/97
DLTSTOR	2,126,108	12/30/97	75/040,553	1/4/96
LANVAULT	2,496,768	10/9/01	75/660,932	3/15/99
QUANTUM	2,075,239	7/1/97	75/052,261	2/1/96
QUANTUM	1,089,619	4/18/78	73/127,739	5/23/77
QUANTUM	2,434.568	3/13/01	75/608,837	12/7/98
QUANTUM	2,392,749	10/10/00	75/604.153	12/7/98
QUANTUM	926,161	12/28/71	72/327,773	5/20/69
QUANTUM (Stylized)	1,749,927	2/2/93	74/242,149	3/3/92
QUANTUM (Stylized)	2,386,775	9/19/00	75/387,699	11/10/97

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Exhibit "D" attached to that certain Intellectual Property Security Agreement (Short Form) dated December 17, 2002.

EXHIBIT D DOMAIN NAMES

The following is a true, correct and complete list of Domain Names owned or used by Quantum.

Dlt.Info

Dlt.Biz

Sdlt.Com

Sdlt.Info

Sdlt.Biz

Dlttape.Com

Dlttape.Info

Dlttape.Biz

Superdlt.Com

Superdlttape.Com

Superdlttape.Info

Superdlttape.Biz

Dltstorage.Com

Dlttapeaccess.Com

Quantum.Com

Quantum.Info

Qntm.Com

Exhibit D

Short Form Intellectual Property Security Agreement

RECORDED: 12/30/2002

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