PRELIMINARY SPECIFICATIONS

Transit Rugged SCSI Modules

TMS320PL

Rugged and Portable

Ideal for Storage Applications in:

- Military Systems
- Aerospace and Avionics
- Energy and Utilities
- Medical, Laboratory and Scientific Research
- Industrial Automation
- Real-Time Data Acquisition
- Control and Instrumentation
- Transportation Infrastructures

E-Disk® Altima™ Transit Rugged SCSI Modules

The future of storage is solid state, and BiTMICRO Networks, Inc. combines ruggedness and portability with the E-Disk® Altima™ Transit Rugged SCSI Module. Powered by BiTMICRO's proprietary EDSA™ flash I/O controller, the E-Disk® Altima™ Transit is a non-volatile SCSI storage solution in a rugged industry standard 5.25-inch half-height or low profile module. Ideal for applications requiring rapid, frequent swaps, BiTMICRO®'s HC (High Cycle) module brings frequent insertion/removal capabilities to your system. Patented SCSI Disconnect technology delivers true hot swap removal for your secure and rugged needs. Given today's critical national security and defense requirements, the powerful and user-customizable securErase® technology guarantees that sanitization of sensitive data is performed beyond retrieval. What's more, flash memory-based E-Disk® Altima™ SSDs boost system performance by eliminating seek time and latency for faster I/O and sustained transfer rates.

With no moving parts, the E-Disk® Altima™ Transit sets the bar for storage portability, reliability, durability and endurance in all types of operating environments. E-Disk® Altima™ Transit does not require device drivers for installation and operation, and boasts of random I/O rates of up to 30,000/sec, 320 MB/sec burst rate, sustained rates of up to 230 MB/sec, and capacities of up to 1.3 TB.

Increased High Speed Performance

- 320 MB/sec Burst Rate
- Up to 230 MB/sec Sustained Rate
- Up to 30,000 IOPS
- 30 to 100 µsec Access Time

Unparalleled Operational Capabilities

- Pure Solid State/Non-Volatile
- -40 to +80ºC
- > 100,000 Removal Cycles
- Shock Isolated Removable 3.5" E-Disk® Altima™ SCSI Drive Modules

Highest Storage Capacities

- Low Profile: 16 GB to 640 GB
- High Cycle: 16 GB to 1.3 TB

Data Security Features

- DataSentinel
- PowerGuard®
- securErase®
- Write Protect

Industry Standard SCSI Interface

- No Device Driver Required
- Completely Bootable
- Ultra320 SCSI Support
- User-selectable SCSI ID in Receiver, Drive Module remains autonomous

Compliance

- EMI: CE, FCC, AS/NZS
- Safety: TUV, UL
- EU RoHS 2002/95/EC
- China RoHS SJ/T 11363-2006

SPECIFICATIONS FOR e-disk® ALTIMA™ Transit Rugged SCSI Modules
Flash Disk and Solid State Disk Storage Solutions

Performance Specifications:

Burst Rate	320 MB/sec
Sustained Rate	Up to 230 MB/sec
I/O Transactions per Second	Up to 30,000 IOPS
Fully Associative Cache	Up to 256 MB

Environmental Specifications:

Operating Temperature	**Low Profile**	0 to +50 ºC
	High Cycle	-40 to +80 ºC
Humidity		5 to 95% (Non-Condensing)
Altitude		Up to 75,000 ft
Airflow		None Required

Power Requirements:

Input Voltage		5 VDC (± 5%)
Power Consumption	**Write**	TBD
	Read	TBD
	Idle	TBD

Reliability:

MTBF	>1.9 Million Hours at Bellcore Issue 6, Method I, Case 3
Bit Error Rate	$<10^{-27}$
Data Reliability	Built-in EDC/ECC Based on BCH Algorithm Corrects up to 9 Random Bit Errors per 528-Byte Block; Detects up to 10 Random Bit Errors
Data Integrity	10 years
Diagnostics	Built-In Power-Up Self Test Self-Monitoring Diagnostics Database

Endurance:

	16 GB	**32 GB**
Write Endurance	657 Years @ 100 GB/day Erase/Write Cycles	1,315 Years @ 100 GB/day Erase/Write Cycles
Read Endurance	Unlimited	

Compatibility/Compliance:

SCSI Compatibility	ANSI SCSI-3 Standard X3T10/142D ANSI SCSI-3 Standard X3T10/1302D ANSI SCSI-3 Standard X3T10/1365D
EMI Compliance	CE, FCC, AS/NZS Regulations
Safety Compliance	TUV and UL
Security Erase Compliance	NISPOM DoD 5220.22-M, NSA 130-2, Air Force AFSSI 5020, Army 380-19, IRIG-106

Physical Specifications:

Form Factor		5.25" High Cycle	4.75" Low Profile
Storage Capacity*		16 GB to 1.3 TB	16 GB to 640 GB
Receiver Dimension	**Width**	5.75 in (146 mm)	4.75 in (121 mm)
	Length	10.85 in (251 mm)[1]	7.65 in (194 mm)
	Height	1.98 in (50 mm)	1.50 in (38 mm)
Drive Module Dimension	**Width**	5.88 in (149 mm)	4.75 in (121 mm)
	Length	9.45 in (238 mm)[2]	7.15 in (182 mm)
	Height	2.00 in (51 mm)	1.40 in (36 mm)
Weight**	**Receiver**	12 oz (340 gm)	5.3 oz (150 gm)
	Drive Module	55 oz (1,540 gm)	28.6 oz (812 gm)
Connector		68-Pin Ultra320 SCSI	

1 GB = 1,024 Mbytes; 1 TB = 1,024 Gigabytes
***Weights are approximate. Drive module weights are without drives.*
1) Including maximum SCSI connector protrusion
2) Including maximum 1.25 in handle protrusion

Product Part Number:

Part Number Options	OTMS320P + **XXXXY** + **TGM** + **AFFC**
XXXX: Capacity* *Last digit denotes single decimal number* (e.g. 0160 =16.0GB, 0013 = 1.3TB)	High Cycle GB: 16, 32, 64, 128, 192, 384, 640, 896 TB: 1.1, 1.3
	Low Profile GB: 16, 32, 64, 128, 192, 384, 640
Y: Capacity Unit*	G: Gigabyte T: Terabyte
T: Temperature	C: Commercial (0 to 50 ºC)
	I: Industrial (-40 to +80 ºC)
G: PowerGuard®	N: No PowerGuard® Option
	1: Save Mode on Power Down
	2: Erase Mode on Power Down
	3: Standby Erase Mode on Power Down
M: Media Type	L: Large Block SLC NAND Flash
A: Casing	H: High Cycle Transit (1.7" high)
	L: Low Profile Transit (1.0" high)
FF: No. of Disks	01: One E-Disk Altima Drive
C: Coating	N: No Conformal Coating (default)
	A: Acrylic Conformal Coating
Example	**OTMS320P0013TI1LH01N**

1 GB = 1,024 Mbytes; 1 TB = 1,024 Gigabytes
Note: Please contact BiTMICRO Sales Representative for details on Receiver and Drive Module Options.

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