



L6363

PRML READ/WRITE CHANNEL

PRODUCT PREVIEW

■ SIGNAL PROCESSING

- PR4 signal equalization and loops
- 8th order optimized low pass filter with programmable cut-off frequency and boost
- single flash 6-bit ADC
- 5-TAP programmable/self-adaptive digital FIR for signal equalization
- Programmable/self-adaptive Offset and MR Head Asymmetry compensation for signal equalization
- Timing and Gain loops for optimum data recovery
- Encoder scheme:
 - Rate 304/338 with Local ECC (16/17 without Local ECC)
- Detector scheme:
 - Media Noise Terminator™ Detector
 - Optional Local ECC Post Processing scheme
- 8-bit NRZ interface to disk controller
- Thermal Asperity detection/compensation and Erasure Flag

■ WRITE

- 2 level Write Precomp for Non Linear Transition Shift compensation
- Asynchronous and Synchronous Direct Write for disk/head characterization

■ SERVO

- Digital Synchronous Servo with data rates up to 75MHz (8x Oversampling)
- Internal Burst and Grey Code detection
- Repeatable Run Out Support



■ CHANNEL QUALITY MONITOR

- Fast read parameters optimization for minimum BER
- Advanced Disk Surface Defect Scan

■ QUALITY AND RELIABILITY

- BIST for analog front-end and digital back-end
- Iddq and I/O pins mapping

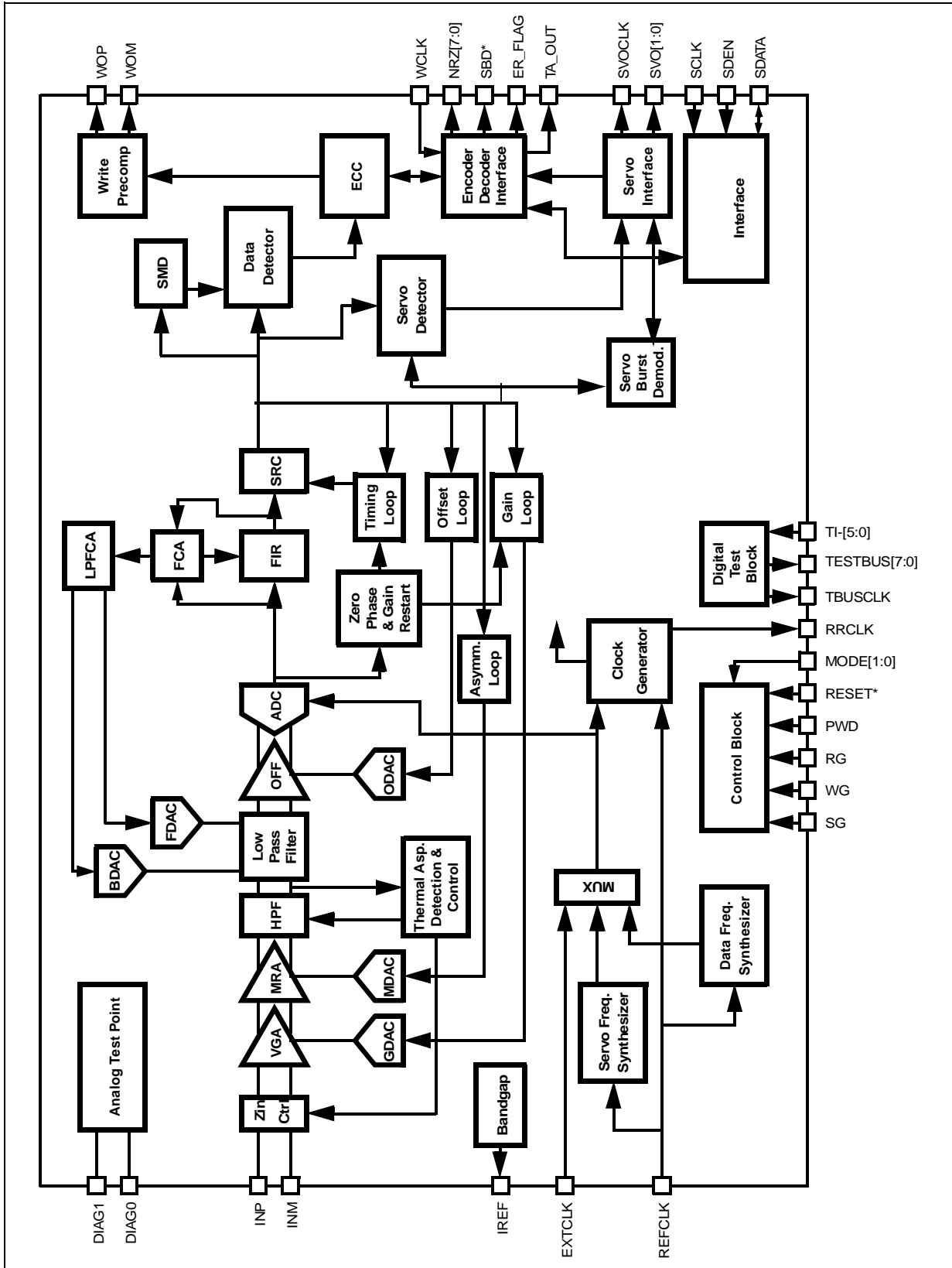
■ POWER SUPPLY AND CONTROL

- 2.5V Analog and 1.8V Digital supply; 1.8V to 3.3V supply for I/O pins
- Advanced Power Management features

DESCRIPTION

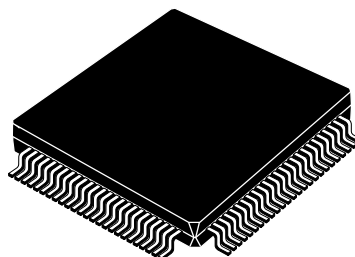
L6363 is a 0.18µm CMOS PRML R/W channel supporting data rates up to 750Mb/sec with Servo Demodulation, Clock Synthesis, Channel Quality Monitor for channel optimization and Disk Surface Defect Scan capability

Figure 1. Block Diagram

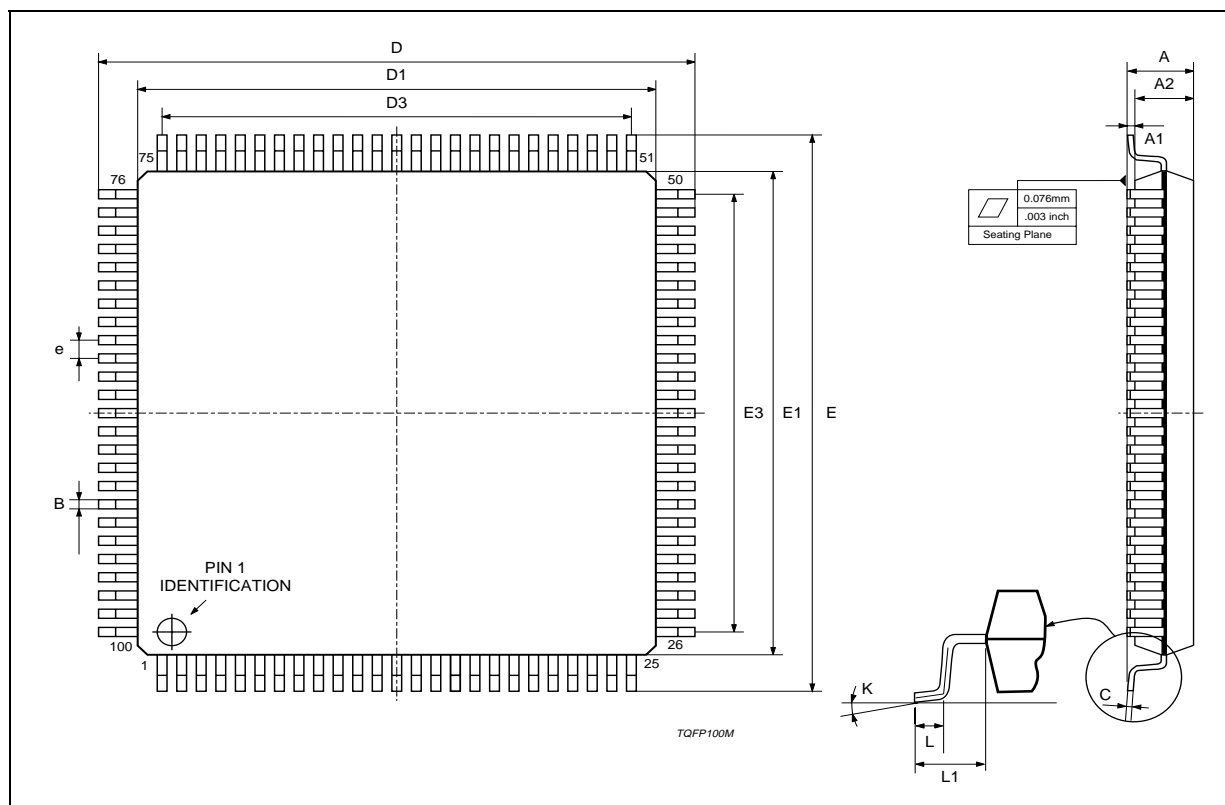


DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A			1.60			0.063
A1	0.05		0.15	0.002		0.006
A2	1.35	1.40	1.45	0.053	0.055	0.057
B	0.17	0.22	0.27	0.007	0.009	0.011
C	0.09		0.20	0.003		0.008
D		16.00			0.630	
D1		14.00			0.551	
D3		12.00			0.472	
e		0.50			0.019	
E		16.00			0.630	
E1		14.00			0.551	
E3		12.00			0.472	
L	0.45	0.60	0.75	0.018	0.024	0.030
L1		1.00			0.0393	
K	3.5°(min.), 7°(max.)					

OUTLINE AND MECHANICAL DATA



TQFP100



Information furnished is believed to be accurate and reliable. However, STMicroelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of STMicroelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. STMicroelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of STMicroelectronics.

The ST logo is a registered trademark of STMicroelectronics
© 2001 STMicroelectronics - All Rights Reserved

STMicroelectronics GROUP OF COMPANIES
Australia - Brazil - China - Finland - France - Germany - Hong Kong - India - Italy - Japan - Malaysia - Malta - Morocco - Singapore - Spain
- Sweden - Switzerland - United Kingdom - U.S.A.
<http://www.st.com>