



## UFS – Universal Flash Storage

### High Performance Mass Storage

Toshiba's Flash memories with an integrated controller provide error correction, wear leveling, bad-block management, etc. They have an interface compliant with JEDEC/UFS Version 2.1, eliminating the need for users to perform NAND-specific control. The new full duplex serial high speed interface offers superior performance.

#### FEATURES

- 32 GB – 256 GB
- BiCS Flash™ Technology (3D NAND)
- Conforms to JEDEC Version 2.1
- Integrated memory management:
  - Error correction code
  - Bad block management
  - Wear-leveling
  - Garbage collection
- Standard temperature range
- 153 ball BGA FBGA package
- High Speed Serial interface

#### ADVANTAGES

- High speed up to 1160 MB/sec
- Managed memory
- Package, interface, features, commands etc. are standard
- Utilizing high quality Toshiba BiCS Flash™ memory in combination with a Toshiba origin developed controller
- Produced in the world's largest, leading edge technology flash factory

#### CAPACITIES



#### BENEFITS

- Easy to integrate storage solution due to established standards
- Cost efficient design in
- Optimal relation between price, density and performance
- Reliable storage solution based on high quality NAND memory and optimized controller
- Extended production capacity to fulfil customers demand

#### APPLICATIONS

- Consumer Electronics
- Multimedia Applications
- Industrial Applications

#### SPECIFICATIONS

FEATURES	UFS – UNIVERSAL FLASH STORAGE
Density	32 GB – 256 GB
Technology	BiCS 3D NAND
JEDEC Version	2.1 (UniPro 1.6 / M-PHY 3.0)
Temperature	-25 °C to 85 °C
Package	153 ball FBGA (11.5 x 13 mm <sup>2</sup> )

#### UFS – PRODUCT LIST

DENSITY	PART NUMBER	TECHNOLOGY	JEDEC STANDARD	TEMPERATURE	PACKAGE
32 GB	THGAF8G8T23BAIL	BiCS 3D NAND	JEDEC 2.1	-25 °C to 85 °C	153FBGA 11.5 x 13
64 GB	THGAF8G9T43BAIR	BiCS 3D NAND	JEDEC 2.1	-25 °C to 85 °C	153FBGA 11.5 x 13
128 GB	THGAF8T0T43BAIR	BiCS 3D NAND	JEDEC 2.1	-25 °C to 85 °C	153FBGA 11.5 x 13
256 GB	THGAF8T1T83BAIR	BiCS 3D NAND	JEDEC 2.1	-25 °C to 85 °C	153FBGA 11.5 x 13