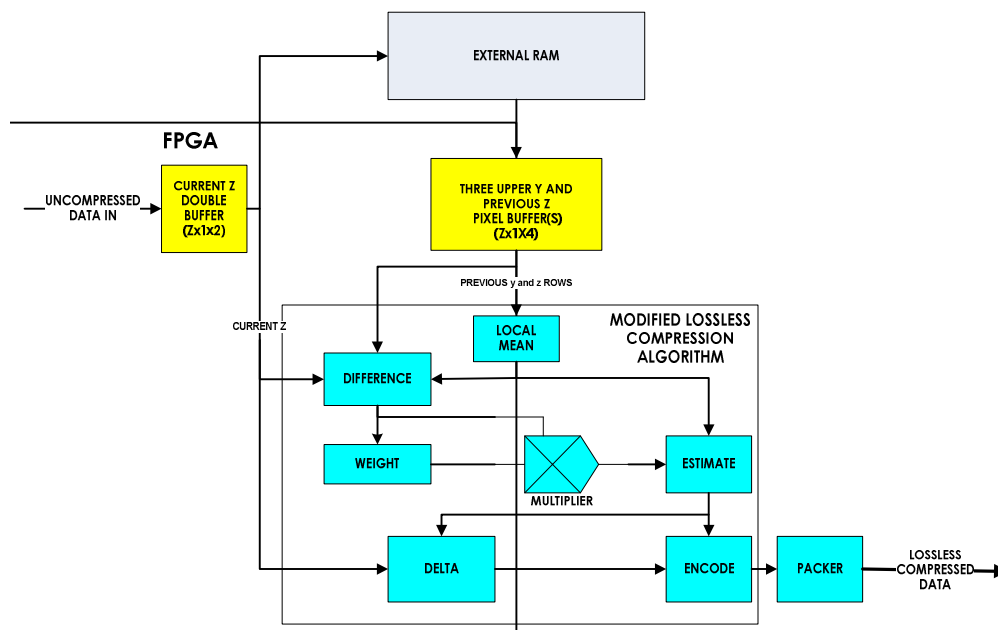


## FEATURES

- 1- Improves signature extraction, object recognition and feature classification capabilities by providing exact reconstructed data.
- 2- It utilizes the Adaptive filtering method to achieve a combination of low complexity and compression effectiveness that far exceeds state-of-the-art techniques currently in use.
- 3- Requires no training data or other specific information about the nature of the spectral bands for a fixed instrument dynamic range.
- 4- Low computational complexity suited for implementation in hardware.
- 5- Suited for data from push broom instruments appropriate for flight implementation.
- 6- The FPGA implementation achieves a throughput performance of 58 Msamples/sec with 12 or 14 bit pixel data.
- 7- Performance can be increased to over 100 Msamples/sec in a parallel implementation.

## BLOCK DIAGRAM



## UTILIZATION TABLE

FPGA	SLICE	SLICE F/F	4-INPUT LUT	FIFO/RAM16	DSP48
Virtex V/LX25	1362/10752 (12%)	1504/21504 (7%)	2227/21504 (10%)	17/72 (23%)	12/48 (25%)