Dillon Engineering, Inc.
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Dillon Engineering is the leading provider

of **Fast Fourier Transform (FFT) IP Cores** for any application. Expert FPGA logic design services for all your High Performance Embedded Computing (HPEC) needs.

FFT IP

VISIT OUR WEBSITE FOR A COMPLETE LISTING OF OUR FFT IP CORES, INCLUDING:

- PIPELINED - Continuous processing, single point per clock cycle. See Table for Xilinx FFT_PIPE Core build examples.

- ULTRALONG - Uses external memory for long transforms. Up to 64M points on SMT702 board.

- PARALLEL BUTTERFLY - Bank of butterflies execute a rank at a time for multiple I/O stream performance.

- PARALLEL/DUAL PARALLEL - Concurrent processing for extremely high performance, over 25GSps.

- MIXED-RADIX - For transform lengths with non-power of 2 factors.

- 2D/3D - Multi-dimensional FFT processing.

Xilinx FFT_PIPE Example Builds at 250MSps (using V5-LX110T-3)

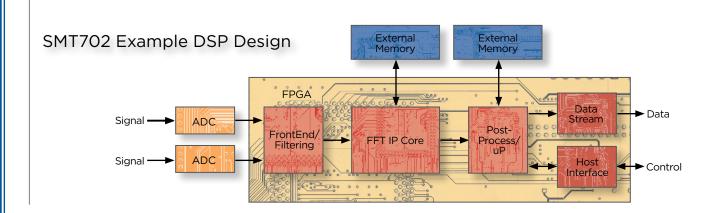| Data	Length	Slice FF (69,120)	Slice LUT (69,120)	BRAM (148)	DSP48E (64)
Fixed 16	1K	5020	6827	9	24
Fixed 16	8K	6529	8921	23	33
Float 32	1K	27403	33581	19	32
Float 32	8K	36592	44954	61	44

OUR FFT IP CORES ARE AVAILABLE WITH THE FOLLOWING:
- Any-width Fixed or Floating Point

- Per-transform selectable Forward/Inverse FFT

- Per-transform selectable FFT length

DESIGN SERVICES

LOGIC DESIGN SERVICES TO COMPLETE YOUR DSP APPLICATION:
- Front-end correlation/mixing. FIR and IIR filters. Windowing functions.

- Spectral post-processing. MicroBlaze and PowerPC application control.

- All our IP and logic deliveries include bit-accurate C/C++ Model (usable from MAT-LAB), Testbench, Datasets, and Data Generators.

SMT702 Example DSP Design