FPGA Specifications and Comparison

1 video = 24fps
1 frame = 480x320 pixels
1 pixel = 1-3b

goal: store 1s of video on FPGA:
1s * 24fps * (480 * 320) pixels/frame * 3 bytes/pixel = 11 Mb

Of the available boards with a system on a chip, these seem to be to specs:

Board	Manufacturer	Fabric memory	SDRAM memory	CPU memory
DE10-Standard	Altera	5.7 MB	64 MB	1 GB DDR3, MicroSD slot
Zynq-7045	Xilinx	19.2 MB	FPGA interface to 1 GB CPU DDR3 SDRAM	1 GB DDR3, SD slot
ZedBoard	Xilinx	4.9 MB	[unclear]	512 MB DDR3, 4GB SD card
Pynq-Z1	Xilinx	630 KB	None specified	512 MB DDR3, microSD slot

With more research, I'm sure the ZedBoard's SDRAM memory would be ascertainable, but it looks to be inferior to the Zynq-7045 (the ZedBoard is based on a Zynq-7020). The "technical specifications" page on the ZedBoard is rather lacking: http://zedboard.org/content/zedboard-0.

Of these boards, only the Zynq-7045 can contain the desired 1 second of video in block RAM. The other boards could manage using SDRAM or interfacing through the onboard SoC, but for a highly memory-constrained application, we want to give ourselves as much memory flexibility as possible. The main disadvantage of the board is that none of us have worked with the Xilinx toolchain before. However, neither have we worked with the SoC features of the Altera toolchain, and I've *heard* that Vivado has gotten much better.