5.10 Design summary of the high-speed 2-D DWT structure . . . . . . . . . . . . 80
5.11 Hardware and time specifications of 1-D DWT architecture for 5/3 filter . 81
5.12 Hardware and time specifications of 1-D DWT architecture for 9/7 filter . 81
5.13 Hardware and time specifications of Two-input/ Two-output 2-D DWT ar-
chitecture . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 82
5.14 Hardware and time specifications of Four-input/ Four-output 2-D DWT ar-
chitecture . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 82
5.15 Hardware and time specifications of High-speed 2-D DWT architecture . 82
5.16 Comparison of 1-D DWT architectures for 9/7 filter. (\(T_m\): Multiplier delay,
\(T_a\): Adder delay, \(T_{fma}\): Fused multiply-add unit delay, \(T_{fadd}\): Floating point
adder delay, \(N \times N\): Image size) . . . . . . . . . . . . . . . . . . . . . . . . . 83
5.17 Comparison of 2-D DWT architectures for 9/7 filter. (\(T_m\): Multiplier delay,
\(T_a\): Adder delay, \(T_{fma}\): Fused multiply-add unit delay, \(T_{fadd}\): Floating point
adder delay, \(N \times N\): Image size) . . . . . . . . . . . . . . . . . . . . . . . . . 84
5.18 Comparison of 2-D DWT architectures for 5/3 filter. (\(T_m\): Multiplier delay,
\(T_a\): Adder delay, \(N \times N\): Image size) . . . . . . . . . . . . . . . . . . . . . . . . . 84
5.19 Design parameters of the proposed DWT architectures . . . . . . . . . . . 86
5.20 Memory requirement of the proposed DWT architectures . . . . . . . . . . 86
5.21 PDP estimation of two-input/ two-output 2-D DWT architecture . . . . . . 87
5.22 PDP estimation of high-speed 2-D DWT architecture . . . . . . . . . . . . 87
5.23 PSNR estimation for two-input/ two-output structure . . . . . . . . . . . . 88
5.24 PSNR estimation for four-input/ four-output 2-D DWT structure . . . . . . 88
5.25 PSNR estimation for high-speed 2-D DWT structure . . . . . . . . . . . . 88