

S0

 $x1^0$  $x2^0$ 

S1

S2

S3

S4

S5

S6

S7

S8

S9

S10

S11

R0 ←  $x1^0$ ;  
R1 ←  $x2^0$ ;

R2 ← R0 × 5; (Mul1)  
R3 ← R1 × 5; (Mul2)

R4 ← COS(R0); (Cordic1)    R8 ← SIN(R0); (Cordic1)  
R5 ← COS(R1); (Cordic2)    R9 ← SIN(R1); (Cordic2)  
R6 ← COS(R2); (Cordic3)    R10 ← SIN(R2); (Cordic3)  
R7 ← COS(R3); (Cordic4)    R11 ← SIN(R3); (Cordic4)

R2 ← R4 - R5; (Sub1)  
R3 ← R6 - R7; (Sub2)  
R12 ← R8 × 5; (Mul1)  
R4 ← R10 × 5; (Mul2)  
R5 ← R11 × 5; (Mul3)

R2 ← F10 - R2; (Sub1)  
R3 ← F20 - R3; (Sub2)  
R13 ← R9 × R4; (Mul1)  
R12 ← R11 × R12; (Mul2)

R13 ← R13 - R12; (Sub1)

R12 ← 1/R13; (Div1)

R5 ← R5 × R12; (Mul1)  
R6 ← R9 × R12; (Mul2)  
R7 ← R4 × R12; (Mul3)  
R8 ← R8 × R12; (Mul4)

R6 ← -1 × R6; (Inv1)  
R8 ← -1 × R8; (Inv1)

R5 ← R5 × R2; (Mul1)  
R6 ← R6 × R3; (Mul2)  
R7 ← R7 × R2; (Mul3)  
R8 ← R8 × R3; (Mul4)

R5 ← R5 + R6; (Add1)  
R6 ← R7 + R8; (Add2)

R0 ← R5 + R0; (Add1)  
R1 ← R6 + R1; (Add2)

