

Listing.txt

Function: Fifo_Get

```

0000 3b          [2]    PSHD
63:    if(PutI == GetI ){
0001 fc0000     [3]    LDD    PutI
0004 bc0000     [3]    CPD    GetI
0007 2603       [3/1]  BNE    *+5 ;abs = 000c
64:    return(FIFOFAIL); // Empty if PutI=GetI
0009 c7         [1]    CLRB
000a 2017       [3]    BRA    *+25 ;abs = 0023
65:    }
66:    *datapt = Fifo[GetI&(FIFOSIZE-1)];
000c f60000     [3]    LDAB   GetI:1
000f c41f       [1]    ANDB   #31
0011 ce0000     [2]    LDX    #Fifo
0014 a6e5       [3]    LDAA   B,X
0016 ee80       [3]    LDX    0,SP
0018 6a00       [2]    STAA   0,X
67:    GetI++; // Success, update
001a fe0000     [3]    LDX    GetI
001d 08         [1]    INX
001e 7e0000     [3]    STX    GetI
68:    return(FIFOSUCCESS);
0021 c601       [1]    LDAB   #1
0023 87         [1]    CLRA
69:    }
0024 30         [3]    PULX
0025 3d         [5]    RTS

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91:    while(Fifo_Get(&ForeData)==FIFOFAIL){
0022 cc0000     [2]    LDD    #ForeData
0025 160000     [4]    JSR    Fifo_Get
0028 0454f7     [3]    TBEQ   D,*-6 ;abs = 0022

```

50 cycles per call

$50/24 \times 10^6 = 2.08333333 \text{ us per call}$