

Appendix D

MSL Include File

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This appendix contains a listing of the MSL include file that defines various structures, macros, and equates used by MSL drivers. This file should be included at the beginning of all MSL drivers.


```

;*****
; MSL Include File
;*****

;*****
; Global Structures
;*****

AESEventStructure          struc

    AESLink                dd        ?
    AESWakeUpDelayAmount   dd        ?
    AESWakeUpTime          dd        ?
    AESProcessToCall       dd        ?
    AESRTag                dd        ?
    AESOldLink             dd        ?
    MessageTimeoutTime     dw        ?
    AdapterTimeoutTime     dw        ?

AESEventStructure          ends

TimerDataStructure        struc

    TLink                  dd        ?
    TCallbackProcedure     dd        ?
    TCallbackEBXParameter  dd        ?
    TCallbackWaitTime     dd        ?
    TResourceTag           dd        ?
    TWorkWakeUpTime       dd        ?
    TSignature             dd        ?

TimerDataStructure        ends

IOConfigurationStructure  struc

    CLink                  dd        ?
    CFlags                 dw        ?
    CSlot                  dw        ?
    CIOPort0               dw        ?
    CIOLength0             dw        ?
    CIOPort1               dw        ?
    CIOLength1             dw        ?
    CMemoryDecode0        dd        ?
    CMemoryLength0        dw        ?
    CMemoryDecode1        dd        ?
    CMemoryLength1        dw        ?
    CInterrupt0           db        ?
    CInterrupt1           db        ?
    CDMAUsage0            db        ?
    CDMAUsage1            db        ?
    CIOResourceTag        dd        ?
    CConfiguration        dd        ?
    CCommandString        dd        ?
    CLogicalName           db        18 dup (?)
    CIOReserved           db        16 dup (?)

IOConfigurationStructure  ends

```

```

IOOptionStructure          struc
    NumberOfOptions      dd    ?
    OptionData            dd    ?
IOOptionStructure          ends
    
```

```

AdapterOptionStructure    struc
    IOSlot                dd    ?
    IOPort0               dd    ?
    IOLength0             dd    ?
    IOPort1               dd    ?
    IOLength1             dd    ?
    MemoryDecode0        dd    ?
    MemoryLength0        dd    ?
    MemoryDecode1        dd    ?
    MemoryLength1        dd    ?
    Interrupt0           dd    ?
    Interrupt1           dd    ?
    DMA0                  dd    ?
    DMA1                  dd    ?
AdapterOptionStructure    ends
    
```

```

;*****
; Global Macros
;*****
    
```

```

Message macro    MessageName, MessageString
                local  StringEnd, StringBegin

MessageName     db    StringEnd - StringBegin
StringBegin     db    MessageString
StringEnd       db    0

                endm
    
```

```

CPush  macro

        push    ebp
        push    ebx
        push    esi
        push    edi

        endm
    
```

```

CPop  macro

        pop     edi
        pop     esi
        pop     ebx
        pop     ebp

        endm
    
```

```

;*****
; Global Equates
;*****

AESProcessSignature      equ    'PSEA'
InterruptSignature       equ    'PTNI'
IORegistrationSignature  equ    'SROI'
MSLSignature            equ    'DLISM'
SetableParameterSignature equ    'MPTS'
TimerSignature          equ    'RMIT'

EOI                      equ    20h
InterruptCtrlRegister    equ    20h
InterruptMaskRegister    equ    21h
ATInterruptCtrlRegister  equ    0A0h
ATInterruptMaskRegister  equ    0A1h
CHAIN_SET_REAL_MODE      equ    4

BAD_COMMAND              equ    0FFFFFF81h

CR                      equ    0Dh
LF                      equ    0Ah
BELL                   equ    07h

TRUE                    equ    -1
FALSE                  equ    0

HARDWARE_ERROR         equ    0
TIME_OUT_ERROR         equ    1
OTHER_SERVER_DEAD_ERROR equ    2

ISA_BUS                equ    0
MICRO_CHANNEL_BUS      equ    1
EISA_BUS               equ    2

ParmOffset             equ    20
Parm0                  equ    ParmOffset + 0
Parm1                  equ    ParmOffset + 4
Parm2                  equ    ParmOffset + 8
Parm3                  equ    ParmOffset + 12
Parm4                  equ    ParmOffset + 16
Parm5                  equ    ParmOffset + 20
Parm6                  equ    ParmOffset + 24
Parm7                  equ    ParmOffset + 28
Parm8                  equ    ParmOffset + 32
Parm9                  equ    ParmOffset + 36
Parm10                 equ    ParmOffset + 40
Parm11                 equ    ParmOffset + 44
Parm12                 equ    ParmOffset + 48
Parm13                 equ    ParmOffset + 52
Parm14                 equ    ParmOffset + 56
Parm15                 equ    ParmOffset + 60
Parm16                 equ    ParmOffset + 64
Parm17                 equ    ParmOffset + 68
Parm18                 equ    ParmOffset + 72
Parm19                 equ    ParmOffset + 76
Parm20                 equ    ParmOffset + 80

```

```

NeedsIOSlotBit           equ      1h
NeedsIOPort0Bit         equ      2h
NeedsIOLength0Bit       equ      4h
NeedsIOPort1Bit         equ      8h
NeedsIOLength1Bit       equ     10h
NeedsMemoryDecode0Bit   equ     20h
NeedsMemoryLength0Bit   equ     40h
NeedsMemoryDecode1Bit   equ     80h
NeedsMemoryLength1Bit   equ    100h
NeedsInterrupt0Bit      equ    200h
NeedsInterrupt1Bit      equ    400h
NeedsDMA0Bit            equ    800h
NeedsDMA1Bit           equ   1000h

CAN_SET_NODE_ADDRESS    equ    40000000h
MUST_SET_NODE_ADDRESS   equ    80000000h

;*****
; define the CFlag bits
;*****

IODetachedBit           equ      1h
IOSharePort0Bit         equ      2h
IOSharePort1Bit         equ      4h
IOShareMemory0Bit       equ      8h
IOShareMemory1Bit       equ     10h
IOShareInterrupt0Bit    equ     20h
IOShareInterrupt1Bit    equ     40h
IOShareDMA0Bit          equ     80h
IOShareDMA1Bit          equ    100h

;*****
; The driver has its own command line info to put in the .NCF file
;*****

IOHasCommandLineInfo    equ      200h

;*****
; The driver doesn't want any of the default info put in the .NCF file
;*****

IODontDefaultCommandLine equ     400h

;*****
; define the mode flags
;*****

RealDriverBit           equ      1
DriverUsesDMABit        equ      2
DriverIs100PercentReliableBit equ  4
DriverSupportsMulticastBit equ  8
DriverSupportPromiscuousModeBit equ 10h
DriverNeedsPollingBit    equ     20h

;*****
; define the driver flags
;*****

OEMDriverBit           equ     8000h

```