

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    'DLSM'
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    0FFFFFFF81h

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

```