

## Re: Monitoring temperature with acpi (sysctls)

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*Source:* <http://unix.derkeiler.com/Mailing-Lists/FreeBSD/stable/2006-07/msg00560.html>

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- *From:* "O. Hartmann" <[ohartman@xxxxxxxxxxxxxxxxxxxx](mailto:ohartman@xxxxxxxxxxxxxxxxxxxx)>
  - *Date:* Sat, 29 Jul 2006 01:03:07 +0200
- 

John Baldwin wrote:

On Thursday 27 July 2006 02:25, Mike Jakubik wrote:

Jiawei Ye wrote:

On 7/27/06, Mike Jakubik <[mikej@xxxxxxxxxx](mailto:mikej@xxxxxxxxxx)> wrote:

I don't want to spend \$50 extra per system, just so i can read the temperature, and not even use any of the IPMI functions. I need a simple and scriptable way to get the values, acpi sysctls are ideal for this.

What about using SMBus? Is it available on your system?  
xmbmon reads temperatures off the SMBus IIRC.

I tried that, unfortunately it does not work. All i want to know is if this a shortcoming of freebsd or the motherboard, if its the later, i will contact the manufacturer.

If ACPI doesn't include the sysctl's that's due to your BIOS, not FreeBSD. You can verify by doing an acpidump and seeing if you have any thermal zones listed in your ASL.

This is a 'acpidump -d' of my BIOS, mainboard ASUS A8N32-SLI Deluxe, latest BIOS, V1205 as seen on ASUS homepage. Please see attachment.

Oliver /\*

\* Intel ACPI Component Architecture

\* AML Disassembler version 20041119

\*

\* Disassembly of /tmp/acpidump.nhd4SF, Fri Jul 28 23:00:44 2006

\*/

DefinitionBlock ("DSDT.aml", "DSDT", 1, "A0371", "A0371001", 1)

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```
{
Name (DP80, 0x1080)
Name (DP90, 0x90)
Name (SPIO, 0x2E)
Name (IOPB, 0x0C00)
Name (IOPL, 0x10)
Name (IOEB, 0x0D00)
Name (IOEL, 0x10)
Name (IOGB, 0x0A20)
Name (IOGL, 0x10)
Name (IODB, 0x0A30)
Name (IODL, 0x10)
Name (IO1B, 0x0A20)
Name (IO1L, 0x08)
Name (IO3B, 0x0D00)
Name (IO3L, 0x80)
Name (PMBS, 0x0500)
Name (PMLN, 0x0100)
Name (SCBS, 0x0800)
Name (SCLN, 0x0100)
Name (ACBS, 0x0900)
Name (ACLN, 0x0100)
Name (SCIO, 0x0800)
Name (SCTL, 0x0590)
Name (EXTS, 0x00)
Name (APIC, 0x01)
Name (ABWV, 0xAB)
Name (PCIB, 0xE0000000)
Name (PCIL, 0x10000000)
Name (SMBS, 0x0700)
OperationRegion (BIOS, SystemMemory, 0x7FFBE064, 0xFF)
Field (BIOS, ByteAcc, NoLock, Preserve)
{
SS1, 1,
SS2, 1,
SS3, 1,
SS4, 1,
Offset (0x01),
IOST, 16,
TOPM, 32,
ROMS, 32,
MG1B, 32,
MG1L, 32,
MG2B, 32,
MG2L, 32,
Offset (0x1C),
CPB0, 32,
CPB1, 32,
CPB2, 32,
CPB3, 32,
ASSB, 8,
```

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```
AOTB, 8,  
AAXB, 32  
}
```

```
Method (RRIO, 4, NotSerialized)  
{  
Store ("RRIO", Debug)  
}
```

```
Method (RDMA, 3, NotSerialized)  
{  
Store ("rDMA", Debug)  
}
```

```
Name (PICM, 0x00)  
Method (_PIC, 1, NotSerialized)  
{  
If (Arg0)  
{  
Store (0xAA, DBG8)  
}  
Else  
{  
Store (0xAC, DBG8)  
}  
}
```

```
Store (Arg0, PICM)  
}
```

```
Name (OSVR, Ones)  
Method (OSFL, 0, NotSerialized)  
{  
If (LNot (LEqual (OSVR, Ones)))  
{  
Return (OSVR)  
}  
}
```

```
If (LEqual (PICM, 0x00))  
{  
Store (0xAC, DBG8)  
}
```

```
Store (0x01, OSVR)  
If (CondRefOf (\_OSI, Local1))  
{  
If (\_OSI ("Windows 2001"))  
{  
Store (0x00, OSVR)  
}  
}  
Else
```

## Re: Monitoring temperature with acpi (sysctls)

```
{
If (MCTH (\_OS, "Microsoft Windows NT"))
{
Store (0x04, OSVR)
}
Else
{
If (MCTH (\_OS, "Microsoft WindowsME: Millennium Edition"))
{
Store (0x02, OSVR)
}

If (MCTH (\_OS, "Linux"))
{
Store (0x03, OSVR)
}
}
}

Return (OSVR)
}

Method (MCTH, 2, NotSerialized)
{
If (LLess (SizeOf (Arg0), SizeOf (Arg1)))
{
Return (Zero)
}

Add (SizeOf (Arg0), 0x01, Local0)
Name (BUF0, Buffer (Local0) {})
Name (BUF1, Buffer (Local0) {})
Store (Arg0, BUF0)
Store (Arg1, BUF1)
While (Local0)
{
Decrement (Local0)
If (LNot (LEqual (DerefOf (Index (BUF0, Local0)), DerefOf (Index (BUF1, Local0))))
{
Return (Zero)
}
}
}

Return (One)
}

Name (PRWP, Package (0x02)
{
Zero,
Zero
}))
```

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```
Method (GPRW, 2, NotSerialized)
{
  Store (Arg0, Index (PRWP, 0x00))
  Store (ShiftLeft (SS1, 0x01), Local0)
  Or (Local0, ShiftLeft (SS2, 0x02), Local0)
  Or (Local0, ShiftLeft (SS3, 0x03), Local0)
  Or (Local0, ShiftLeft (SS4, 0x04), Local0)
  If (And (ShiftLeft (0x01, Arg1), Local0))
  {
    Store (Arg1, Index (PRWP, 0x01))
  }
  Else
  {
    ShiftRight (Local0, 0x01, Local0)
    If (LOr (LEqual (OSFL (), 0x01), LEqual (OSFL (), 0x02)))
    {
      FindSetLeftBit (Local0, Index (PRWP, 0x01))
    }
    Else
    {
      FindSetRightBit (Local0, Index (PRWP, 0x01))
    }
  }

  Return (PRWP)
}

Name (WAKP, Package (0x02)
{
  Zero,
  Zero
})
OperationRegion (DEB0, SystemIO, DP80, 0x01)
Field (DEB0, ByteAcc, NoLock, Preserve)
{
  DBG8, 8
}

OperationRegion (DEB1, SystemIO, DP90, 0x02)
Field (DEB1, WordAcc, NoLock, Preserve)
{
  DBG9, 16
}

Scope (\_SB)
{
  Name (PR00, Package (0x20)
  {
    Package (0x04)
    {
      0x000AFFFF,
```

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```
0x00,  
LSMB,  
0x00  
},
```

```
Package (0x04)  
{  
0x000BFFFF,  
0x00,  
LUB0,  
0x00  
},
```

```
Package (0x04)  
{  
0x000BFFFF,  
0x01,  
LUB2,  
0x00  
},
```

```
Package (0x04)  
{  
0x0013FFFF,  
0x00,  
LMAC,  
0x00  
},
```

```
Package (0x04)  
{  
0x0010FFFF,  
0x00,  
LSA0,  
0x00  
},
```

```
Package (0x04)  
{  
0x0011FFFF,  
0x00,  
LSA1,  
0x00  
},
```

```
Package (0x04)  
{  
0x000DFFFF,  
0x00,  
LACI,  
0x00
```

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},

Package (0x04)

```
{  
0x000DFFFF,  
0x01,  
LMC9,  
0x00  
},
```

Package (0x04)

```
{  
0x0002FFFF,  
0x00,  
LNKB,  
0x00  
},
```

Package (0x04)

```
{  
0x0002FFFF,  
0x01,  
LNKC,  
0x00  
},
```

Package (0x04)

```
{  
0x0002FFFF,  
0x02,  
LNKD,  
0x00  
},
```

Package (0x04)

```
{  
0x0002FFFF,  
0x03,  
LNKA,  
0x00  
},
```

Package (0x04)

```
{  
0x0003FFFF,  
0x00,  
LNKA,  
0x00  
},
```

Package (0x04)

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```
{  
0x0003FFFF,  
0x01,  
LNKB,  
0x00  
},
```

```
Package (0x04)  
{  
0x0003FFFF,  
0x02,  
LNKC,  
0x00  
},
```

```
Package (0x04)  
{  
0x0003FFFF,  
0x03,  
LNKD,  
0x00  
},
```

```
Package (0x04)  
{  
0x0004FFFF,  
0x00,  
LNKA,  
0x00  
},
```

```
Package (0x04)  
{  
0x0004FFFF,  
0x01,  
LNKB,  
0x00  
},
```

```
Package (0x04)  
{  
0x0004FFFF,  
0x02,  
LNKC,  
0x00  
},
```

```
Package (0x04)  
{  
0x0004FFFF,  
0x03,
```

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```
LNKD,  
0x00  
},
```

```
Package (0x04)  
{  
0x0017FFFF,  
0x00,  
LNKB,  
0x00  
},
```

```
Package (0x04)  
{  
0x0017FFFF,  
0x01,  
LNKC,  
0x00  
},
```

```
Package (0x04)  
{  
0x0017FFFF,  
0x02,  
LNKD,  
0x00  
},
```

```
Package (0x04)  
{  
0x0017FFFF,  
0x03,  
LNKA,  
0x00  
},
```

```
Package (0x04)  
{  
0x0016FFFF,  
0x00,  
LNKC,  
0x00  
},
```

```
Package (0x04)  
{  
0x0016FFFF,  
0x01,  
LNKD,  
0x00  
},
```

Re: Monitoring temperature with acpi (sysctls)

```
Package (0x04)
{
0x0016FFFF,
0x02,
LNKA,
0x00
},
```

```
Package (0x04)
{
0x0016FFFF,
0x03,
LNKB,
0x00
},
```

```
Package (0x04)
{
0x0015FFFF,
0x00,
LNKD,
0x00
},
```

```
Package (0x04)
{
0x0015FFFF,
0x01,
LNKA,
0x00
},
```

```
Package (0x04)
{
0x0015FFFF,
0x02,
LNKB,
0x00
},
```

```
Package (0x04)
{
0x0015FFFF,
0x03,
LNKC,
0x00
}
```

```
})
Name (AR00, Package (0x20)
{
```

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```
Package (0x04)
{
0x000AFFFF,
0x00,
LSMB,
0x00
},
```

```
Package (0x04)
{
0x000BFFFF,
0x00,
LUB0,
0x00
},
```

```
Package (0x04)
{
0x000BFFFF,
0x01,
LUB2,
0x00
},
```

```
Package (0x04)
{
0x0013FFFF,
0x00,
LMAC,
0x00
},
```

```
Package (0x04)
{
0x0010FFFF,
0x00,
LSA0,
0x00
},
```

```
Package (0x04)
{
0x0011FFFF,
0x00,
LSA1,
0x00
},
```

```
Package (0x04)
{
0x000DFFFF,
```

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```
0x00,  
LACI,  
0x00  
},
```

```
Package (0x04)  
{  
0x000DFFFF,  
0x01,  
LMC9,  
0x00  
},
```

```
Package (0x04)  
{  
0x0002FFFF,  
0x00,  
LNKB,  
0x00  
},
```

```
Package (0x04)  
{  
0x0002FFFF,  
0x01,  
LNKC,  
0x00  
},
```

```
Package (0x04)  
{  
0x0002FFFF,  
0x02,  
LNKD,  
0x00  
},
```

```
Package (0x04)  
{  
0x0002FFFF,  
0x03,  
LNKA,  
0x00  
},
```

```
Package (0x04)  
{  
0x0003FFFF,  
0x00,  
LNKA,  
0x00
```

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},

Package (0x04)

```
{  
0x0003FFFF,  
0x01,  
LNKB,  
0x00  
},
```

Package (0x04)

```
{  
0x0003FFFF,  
0x02,  
LNKC,  
0x00  
},
```

Package (0x04)

```
{  
0x0003FFFF,  
0x03,  
LNKD,  
0x00  
},
```

Package (0x04)

```
{  
0x0004FFFF,  
0x00,  
LNKA,  
0x00  
},
```

Package (0x04)

```
{  
0x0004FFFF,  
0x01,  
LNKB,  
0x00  
},
```

Package (0x04)

```
{  
0x0004FFFF,  
0x02,  
LNKC,  
0x00  
},
```

Package (0x04)

Re: Monitoring temperature with acpi (sysctls)

```
{  
0x0004FFFF,  
0x03,  
LNKD,  
0x00  
},
```

Package (0x04)

```
{  
0x0017FFFF,  
0x00,  
LNKB,  
0x00  
},
```

Package (0x04)

```
{  
0x0017FFFF,  
0x01,  
LNKC,  
0x00  
},
```

Package (0x04)

```
{  
0x0017FFFF,  
0x02,  
LNKD,  
0x00  
},
```

Package (0x04)

```
{  
0x0017FFFF,  
0x03,  
LNKA,  
0x00  
},
```

Package (0x04)

```
{  
0x0016FFFF,  
0x00,  
LNKC,  
0x00  
},
```

Package (0x04)

```
{  
0x0016FFFF,  
0x01,
```

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```
LNKD,  
0x00  
},
```

```
Package (0x04)  
{  
0x0016FFFF,  
0x02,  
LNKA,  
0x00  
},
```

```
Package (0x04)  
{  
0x0016FFFF,  
0x03,  
LNKB,  
0x00  
},
```

```
Package (0x04)  
{  
0x0015FFFF,  
0x00,  
LNKD,  
0x00  
},
```

```
Package (0x04)  
{  
0x0015FFFF,  
0x01,  
LNKA,  
0x00  
},
```

```
Package (0x04)  
{  
0x0015FFFF,  
0x02,  
LNKB,  
0x00  
},
```

```
Package (0x04)  
{  
0x0015FFFF,  
0x03,  
LNKC,  
0x00  
}
```

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```
})  
Name (PR01, Package (0x0D))  
{  
Package (0x04)  
{  
0x000BFFFF,  
0x00,  
LNKA,  
0x00  
},
```

```
Package (0x04)  
{  
0x0006FFFF,  
0x00,  
LNKA,  
0x00  
},
```

```
Package (0x04)  
{  
0x0006FFFF,  
0x01,  
LNKB,  
0x00  
},
```

```
Package (0x04)  
{  
0x0006FFFF,  
0x02,  
LNKC,  
0x00  
},
```

```
Package (0x04)  
{  
0x0006FFFF,  
0x03,  
LNKD,  
0x00  
},
```

```
Package (0x04)  
{  
0x0007FFFF,  
0x00,  
LNKB,  
0x00  
},
```

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```
Package (0x04)
{
0x0007FFFF,
0x01,
LNKC,
0x00
},
```

```
Package (0x04)
{
0x0007FFFF,
0x02,
LNKD,
0x00
},
```

```
Package (0x04)
{
0x0007FFFF,
0x03,
LNKA,
0x00
},
```

```
Package (0x04)
{
0x0008FFFF,
0x00,
LNKC,
0x00
},
```

```
Package (0x04)
{
0x0008FFFF,
0x01,
LNKD,
0x00
},
```

```
Package (0x04)
{
0x0008FFFF,
0x02,
LNKA,
0x00
},
```

```
Package (0x04)
{
0x0008FFFF,
```

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```
0x03,  
LNKB,  
0x00  
}  
})  
Name (AR01, Package (0x0D))
```

```
{  
Package (0x04)  
{  
0x000BFFFF,  
0x00,  
LNKA,  
0x00  
},
```

```
Package (0x04)  
{  
0x0006FFFF,  
0x00,  
LNKA,  
0x00  
},
```

```
Package (0x04)  
{  
0x0006FFFF,  
0x01,  
LNKB,  
0x00  
},
```

```
Package (0x04)  
{  
0x0006FFFF,  
0x02,  
LNKC,  
0x00  
},
```

```
Package (0x04)  
{  
0x0006FFFF,  
0x03,  
LNKD,  
0x00  
},
```

```
Package (0x04)  
{  
0x0007FFFF,  
0x00,
```

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```
LNKB,  
0x00  
},
```

```
Package (0x04)  
{  
0x0007FFFF,  
0x01,  
LNKC,  
0x00  
},
```

```
Package (0x04)  
{  
0x0007FFFF,  
0x02,  
LNKD,  
0x00  
},
```

```
Package (0x04)  
{  
0x0007FFFF,  
0x03,  
LNKA,  
0x00  
},
```

```
Package (0x04)  
{  
0x0008FFFF,  
0x00,  
LNKC,  
0x00  
},
```

```
Package (0x04)  
{  
0x0008FFFF,  
0x01,  
LNKD,  
0x00  
},
```

```
Package (0x04)  
{  
0x0008FFFF,  
0x02,  
LNKA,  
0x00  
},
```

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Package (0x04)

```
{  
0x0008FFFF,  
0x03,  
LNKB,  
0x00  
}  
})
```

Name (PR02, Package (0x04))

```
{  
Package (0x04)  
{  
0xFFFF,  
0x00,  
LNKB,  
0x00  
},  
}
```

Package (0x04)

```
{  
0xFFFF,  
0x01,  
LNKC,  
0x00  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x02,  
LNKD,  
0x00  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x03,  
LNKA,  
0x00  
}  
})
```

Name (AR02, Package (0x04))

```
{  
Package (0x04)  
{  
0xFFFF,  
0x00,  
LNKB,  
0x00  
}
```

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},

Package (0x04)

```
{  
0xFFFF,  
0x01,  
LNKC,  
0x00  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x02,  
LNKD,  
0x00  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x03,  
LNKA,  
0x00  
}  
})
```

Name (PR03, Package (0x04))

```
{  
Package (0x04)  
{  
0xFFFF,  
0x00,  
LNKA,  
0x00  
},  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x01,  
LNKB,  
0x00  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x02,  
LNKC,  
0x00  
},
```

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Package (0x04)

```
{  
0xFFFF,  
0x03,  
LNKD,  
0x00  
}  
})
```

Name (AR03, Package (0x04))

```
{  
Package (0x04)  
{  
0xFFFF,  
0x00,  
LNKA,  
0x00  
},  
}
```

Package (0x04)

```
{  
0xFFFF,  
0x01,  
LNKB,  
0x00  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x02,  
LNKC,  
0x00  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x03,  
LNKD,  
0x00  
}  
})
```

Name (PR04, Package (0x04))

```
{  
Package (0x04)  
{  
0xFFFF,  
0x00,  
LNKA,  
0x00  
}
```

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},

Package (0x04)

```
{  
0xFFFF,  
0x01,  
LNKB,  
0x00  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x02,  
LNKC,  
0x00  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x03,  
LNKD,  
0x00  
}  
})
```

Name (AR04, Package (0x04))

```
{  
Package (0x04)  
{  
0xFFFF,  
0x00,  
LNKA,  
0x00  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x01,  
LNKB,  
0x00  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x02,  
LNKC,  
0x00  
},
```

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Package (0x04)

```
{  
0xFFFF,  
0x03,  
LNKD,  
0x00  
}
```

Name (PR05, Package (0x04))

```
{  
Package (0x04)  
{  
0xFFFF,  
0x00,  
LNKB,  
0x00  
},  
}
```

Package (0x04)

```
{  
0xFFFF,  
0x01,  
LNKC,  
0x00  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x02,  
LNKD,  
0x00  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x03,  
LNKA,  
0x00  
}
```

Name (AR05, Package (0x04))

```
{  
Package (0x04)  
{  
0xFFFF,  
0x00,  
LNKB,  
0x00  
}
```

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},

Package (0x04)

```
{  
0xFFFF,  
0x01,  
LNKC,  
0x00  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x02,  
LNKD,  
0x00  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x03,  
LNKA,  
0x00  
}  
})
```

Name (PR06, Package (0x04))

```
{  
Package (0x04)  
{  
0xFFFF,  
0x00,  
LNKC,  
0x00  
},  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x01,  
LNKD,  
0x00  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x02,  
LNKA,  
0x00  
},
```

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Package (0x04)

```
{  
0xFFFF,  
0x03,  
LNKB,  
0x00  
}  
})
```

Name (AR06, Package (0x04))

```
{  
Package (0x04)  
{  
0xFFFF,  
0x00,  
LNKC,  
0x00  
},  
}
```

Package (0x04)

```
{  
0xFFFF,  
0x01,  
LNKD,  
0x00  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x02,  
LNKA,  
0x00  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x03,  
LNKB,  
0x00  
}  
})
```

Name (PR07, Package (0x04))

```
{  
Package (0x04)  
{  
0xFFFF,  
0x00,  
LNKD,  
0x00  
}
```

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},

Package (0x04)

```
{  
0xFFFF,  
0x01,  
LNKA,  
0x00  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x02,  
LNKB,  
0x00  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x03,  
LNKC,  
0x00  
}  
})
```

Name (AR07, Package (0x04))

```
{  
Package (0x04)  
{  
0xFFFF,  
0x00,  
LNKD,  
0x00  
},  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x01,  
LNKA,  
0x00  
},
```

Package (0x04)

```
{  
0xFFFF,  
0x02,  
LNKB,  
0x00  
},
```

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```
Package (0x04)
{
0xFFFF,
0x03,
LNKC,
0x00
}
})
Name (PRSA, ResourceTemplate ()
{
IRQ (Level, ActiveLow, Shared) {5,7,10,14,15}
})
Alias (PRSA, PRSB)
Alias (PRSA, PRSC)
Alias (PRSA, PRSD)
Alias (PRSA, RSMB)
Alias (PRSA, RSB2)
Name (RSA1, ResourceTemplate ()
{
IRQ (Level, ActiveLow, Shared) {11}
})
Alias (RSA1, RSA0)
Alias (PRSA, RSB0)
Alias (PRSA, RSAC)
Alias (PRSA, RSCI)
Alias (PRSA, RSC9)
Alias (PRSA, RSTA)
Name (RSIR, ResourceTemplate ()
{
Interrupt (ResourceConsumer, Level, ActiveLow, Shared)
{
0x00000010,
0x00000011,
0x00000012,
0x00000013,
}
})
Name (RSII, ResourceTemplate ()
{
Interrupt (ResourceConsumer, Level, ActiveLow, Shared)
{
0x00000014,
0x00000015,
0x00000016,
0x00000017,
}
})
Device (PCI0)
{
Name (_HID, EisaId ("PNP0A03"))
```

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```
Name (_ADR, 0x00180000)
Method (^BN00, 0, NotSerialized)
{
Return (0x00)
}
```

```
Method (_BBN, 0, NotSerialized)
{
Return (BN00 ())
}
```

```
Name (_UID, 0x00)
Method (_PRT, 0, NotSerialized)
{
If (PICM)
{
Return (AR00)
}
}
```

```
Return (PR00)
}
```

```
Device (NB2N)
{
Name (_ADR, 0x00)
Method (NPTS, 1, NotSerialized)
{
}
```

```
Method (NWAK, 1, NotSerialized)
{
}
}
```

```
Device (PCLK)
{
Name (_ADR, 0x02)
}
```

```
Device (SBRG)
{
Name (_ADR, 0x000A0000)
Method (SPTS, 1, NotSerialized)
{
Store (Arg0, \_SB.PCI0.IDE0.PTS0)
Store (\_SB.PCI0.IDE0.ID20, \_SB.PCI0.IDE0.SID0)
Store (\_SB.PCI0.IDE0.IDTS, \_SB.PCI0.IDE0.SID1)
Store (\_SB.PCI0.IDE0.IDTP, \_SB.PCI0.IDE0.SID2)
Store (\_SB.PCI0.IDE0.ID22, \_SB.PCI0.IDE0.SID3)
Store (\_SB.PCI0.IDE0.UMSS, \_SB.PCI0.IDE0.SID4)
Store (\_SB.PCI0.IDE0.UMSP, \_SB.PCI0.IDE0.SID5)
}
```

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```
Store (One, PS1S)
Store (One, PS1E)
Store (One, \_SB.SLPS)
}
```

```
Method (SWAK, 1, NotSerialized)
{
Store (Zero, \_SB.SLPS)
Store (Zero, PS1E)
Store (0x02, S1CT)
Store (0x02, S3CT)
Store (0x02, S4CT)
Store (0x02, S5CT)
}
```

```
OperationRegion (SMIE, SystemIO, SCIO, 0x08)
Field (SMIE, ByteAcc, NoLock, Preserve)
{
, 15,
PS1S, 1,
, 31,
PS1E, 1,
Offset (0x08)
}
```

```
OperationRegion (SXCT, SystemIO, SCTL, 0x10)
Field (SXCT, ByteAcc, NoLock, Preserve)
{
S1CT, 2,
Offset (0x04),
S3CT, 2,
Offset (0x08),
S4CT, 2,
Offset (0x0C),
S5CT, 2,
Offset (0x10)
}
```

```
Scope (\_SB)
{
Name (SLPS, 0x00)
Device (SLPB)
{
Name (_HID, EisaId ("PNP0C0E"))
Method (_STA, 0, NotSerialized)
{
If (EXTS)
{
Return (0x0F)
}
}
}
```

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```
Return (0x00)
}
```

```
Method (SBEV, 0, NotSerialized)
{
If (SLPS)
{
Notify (SLPB, 0x02)
}
Else
{
Notify (SLPB, 0x80)
}
}
```

```
Method (\_GPE._L01, 0, NotSerialized)
{
\_SB.SLPB.SBEV ()
}
```

```
Method (_PRW, 0, NotSerialized)
{
Return (Package (0x02)
{
0x01,
0x04
}))
}
}
```

```
Scope (PCI0)
{
Method (_S3D, 0, NotSerialized)
{
If (LEqual (OSFL (), 0x02))
{
Return (0x02)
}
Else
{
Return (0x03)
}
}
}
```

```
Name (_S1D, 0x01)
Name (NATA, Package (0x01)
{
0x00100000
}))
Device (NVRB)
{
```

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```
Name (_HID, "NVRAIDBUS")
Method (_STA, 0, NotSerialized)
{
If (And (CPB0, 0x01))
{
Return (0x0F)
}
Else
{
Return (0x00)
}
}
```

```
Name (_CRS, ResourceTemplate ()
{
IO (Decode16, 0x04D2, 0x04D2, 0x01, 0x01)
})
}
}
```

```
Device (PIC)
{
Name (_HID, EisaId ("PNP0000"))
Name (_CRS, ResourceTemplate ()
{
IO (Decode16, 0x0020, 0x0020, 0x00, 0x02)
IO (Decode16, 0x00A0, 0x00A0, 0x00, 0x02)
IRQNoFlags () {2}
})
}
```

```
Device (DMAD)
{
Name (_HID, EisaId ("PNP0200"))
Name (_CRS, ResourceTemplate ()
{
DMA (Compatibility, BusMaster, Transfer8) {4}
IO (Decode16, 0x0000, 0x0000, 0x00, 0x10)
IO (Decode16, 0x0081, 0x0081, 0x00, 0x03)
IO (Decode16, 0x0087, 0x0087, 0x00, 0x01)
IO (Decode16, 0x0089, 0x0089, 0x00, 0x03)
IO (Decode16, 0x008F, 0x008F, 0x00, 0x01)
IO (Decode16, 0x00C0, 0x00C0, 0x00, 0x20)
})
}
```

```
Device (TMR)
{
Name (_HID, EisaId ("PNP0100"))
Name (_CRS, ResourceTemplate ()
```

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```
{  
IO (Decode16, 0x0040, 0x0040, 0x00, 0x04)  
IRQNoFlags () {0}  
})  
}
```

Device (RTC0)

```
{  
Name (_HID, EisaId ("PNP0B00"))  
Name (_CRS, ResourceTemplate ()  
{  
IO (Decode16, 0x0070, 0x0070, 0x00, 0x02)  
IRQNoFlags () {8}  
})  
}
```

Device (SPKR)

```
{  
Name (_HID, EisaId ("PNP0800"))  
Name (_CRS, ResourceTemplate ()  
{  
IO (Decode16, 0x0061, 0x0061, 0x00, 0x01)  
})  
}
```

Device (COPR)

```
{  
Name (_HID, EisaId ("PNP0C04"))  
Name (_CRS, ResourceTemplate ()  
{  
IO (Decode16, 0x00F0, 0x00F0, 0x00, 0x10)  
IRQNoFlags () {13}  
})  
}
```

Device (FDC)

```
{  
Name (_HID, EisaId ("PNP0700"))  
Method (_FDE, 0, NotSerialized)  
{  
Name (FDEP, Package (0x05)  
{  
0x00,  
0x00,  
0x02,  
0x02,  
0x02  
})  
}  
If (_STA ())  
{  
Store (0x01, Index (FDEP, 0x00))  
}
```

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}

Return (FDEP)

}

Method (\_STA, 0, NotSerialized)

{

Return (DSTA (0x03))

}

Method (\_DIS, 0, NotSerialized)

{

DCNT (0x03, 0x00)

}

Method (\_CRS, 0, NotSerialized)

{

DCRS (0x03, 0x01)

Store (IRQM, IRQE)

Store (DMAM, DMAE)

Store (IO11, IO21)

Store (IO12, IO22)

Store (0x06, LEN2)

Add (IO21, 0x07, IO31)

Store (IO31, IO32)

Store (0x01, LEN3)

Return (CRS2)

}

Method (\_SRS, 1, NotSerialized)

{

DSRS (Arg0, 0x03)

CreateWordField (Arg0, 0x11, IRQE)

CreateByteField (Arg0, 0x14, DMAE)

ENFG (CGLD (0x03))

If (IRQE)

{

FindSetRightBit (IRQE, Local0)

Subtract (Local0, 0x01, INTR)

}

Else

{

Store (0x00, INTR)

}

If (DMAE)

{

FindSetRightBit (DMAE, Local0)

Subtract (Local0, 0x01, DMCH)

}

Else

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```
{
Store (0x04, DMCH)
}

EXFG ()
}

Name (_PRS, ResourceTemplate ()
{
StartDependentFn (0x00, 0x00)
{
IO (Decode16, 0x03F0, 0x03F0, 0x01, 0x06)
IO (Decode16, 0x03F7, 0x03F7, 0x01, 0x01)
IRQNoFlags () {6}
DMA (Compatibility, NotBusMaster, Transfer8) {2}
}
StartDependentFnNoPri ()
{
IO (Decode16, 0x03F0, 0x03F0, 0x01, 0x06)
IO (Decode16, 0x03F7, 0x03F7, 0x01, 0x01)
IRQNoFlags () {3,4,5,6,7,10,11,12}
DMA (Compatibility, NotBusMaster, Transfer8) {0,1,2,3}
}
StartDependentFnNoPri ()
{
IO (Decode16, 0x0370, 0x0370, 0x01, 0x06)
IO (Decode16, 0x0377, 0x0377, 0x01, 0x01)
IRQNoFlags () {3,4,5,6,7,10,11,12}
DMA (Compatibility, NotBusMaster, Transfer8) {0,1,2,3}
}
EndDependentFn ()
})
}

Device (LPTE)
{
Method (_HID, 0, NotSerialized)
{
If (LPTM (0x02))
{
Return (0x0104D041)
}
Else
{
Return (0x0004D041)
}
}
}

Method (_STA, 0, NotSerialized)
{
Return (DSTA (0x02))
}
```

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}

Method (\_DIS, 0, NotSerialized)

```
{
DCNT (0x02, 0x00)
}
```

Method (\_CRS, 0, NotSerialized)

```
{
DCRS (0x02, 0x01)
If (LPTM (0x02))
{
Store (IRQM, IRQE)
Store (DMAM, DMAE)
Store (IO11, IO21)
Store (IO12, IO22)
Store (LEN1, LEN2)
Add (IO21, 0x0400, IO31)
Store (IO31, IO32)
Store (LEN2, LEN3)
Return (CRS2)
}
Else
{
Return (CRS1)
}
}
```

Method (\_SRS, 1, NotSerialized)

```
{
DSRS (Arg0, 0x02)
}
```

Method (\_PRS, 0, NotSerialized)

```
{
If (LPTM (0x02))
{
Return (EPPR)
}
Else
{
Return (LPPR)
}
}
```

Name (LPPR, ResourceTemplate ())

```
{
StartDependentFnNoPri ()
{
IO (Decode16, 0x0378, 0x0378, 0x01, 0x08)
IRQNoFlags () {3,4,5,6,7,10,11,12}
}
```

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```
DMA (Compatibility, NotBusMaster, Transfer8) {}
}
StartDependentFnNoPri ()
{
IO (Decode16, 0x0278, 0x0278, 0x01, 0x08)
IRQNoFlags () {3,4,5,6,7,10,11,12}
DMA (Compatibility, NotBusMaster, Transfer8) {}
}
StartDependentFnNoPri ()
{
IO (Decode16, 0x03BC, 0x03BC, 0x01, 0x04)
IRQNoFlags () {3,4,5,6,7,10,11,12}
DMA (Compatibility, NotBusMaster, Transfer8) {}
}
EndDependentFn ()
})
Name (EPPR, ResourceTemplate ()
{
StartDependentFn (0x00, 0x00)
{
IO (Decode16, 0x0378, 0x0378, 0x01, 0x08)
IO (Decode16, 0x0778, 0x0778, 0x01, 0x08)
IRQNoFlags () {7}
DMA (Compatibility, NotBusMaster, Transfer8) {3}
}
StartDependentFnNoPri ()
{
IO (Decode16, 0x0378, 0x0378, 0x01, 0x08)
IO (Decode16, 0x0778, 0x0778, 0x01, 0x08)
IRQNoFlags () {3,4,5,6,7,10,11,12}
DMA (Compatibility, NotBusMaster, Transfer8) {0,1,2,3}
}
StartDependentFnNoPri ()
{
IO (Decode16, 0x0278, 0x0278, 0x01, 0x08)
IO (Decode16, 0x0678, 0x0678, 0x01, 0x08)
IRQNoFlags () {3,4,5,6,7,10,11,12}
DMA (Compatibility, NotBusMaster, Transfer8) {0,1,2,3}
}
StartDependentFnNoPri ()
{
IO (Decode16, 0x03BC, 0x03BC, 0x01, 0x04)
IO (Decode16, 0x07BC, 0x07BC, 0x01, 0x04)
IRQNoFlags () {3,4,5,6,7,10,11,12}
DMA (Compatibility, NotBusMaster, Transfer8) {0,1,2,3}
}
EndDependentFn ()
})
}
```

Device (GAME)

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```
{
Name (_HID, EisaId ("PNPB02F"))
Method (_STA, 0, NotSerialized)
{
Return (DSTA (0x08))
}

Method (_DIS, 0, NotSerialized)
{
DCNT (0x08, 0x00)
}

Name (GMCR, ResourceTemplate ()
{
IO (Decode16, 0x0000, 0x0000, 0x08, 0x08)
})
Method (_CRS, 0, NotSerialized)
{
CreateWordField (GMCR, 0x02, IOGL)
CreateWordField (GMCR, 0x04, IOGH)
ENFG (CGLD (0x08))
ShiftLeft (IOAH, 0x08, IOGL)
Or (IOAL, IOGL, IOGL)
Store (IOGL, IOGH)
CreateByteField (GMCR, 0x06, IOAL)
Store (0x01, IOAL)
EXFG ()
Return (GMCR)
}

Method (_SRS, 1, NotSerialized)
{
CreateWordField (Arg0, 0x02, IO11)
ENFG (CGLD (0x08))
And (IO11, 0xFF, IOAL)
ShiftRight (IO11, 0x08, IOAH)
DCNT (0x08, 0x01)
EXFG ()
}

Name (_PRS, ResourceTemplate ()
{
StartDependentFn (0x00, 0x00)
{
IO (Decode16, 0x0201, 0x0201, 0x01, 0x08)
}
EndDependentFn ()
})
}

Device (MIDI)
```

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```
{
Name (_HID, EisaId ("PNPB006"))
Method (_STA, 0, NotSerialized)
{
Return (DSTA (0x05))
}

Method (_DIS, 0, NotSerialized)
{
DCNT (0x05, 0x00)
}

Name (MDCR, ResourceTemplate ()
{
IO (Decode16, 0x0000, 0x0000, 0x01, 0x02)
IRQNoFlags () {5}
})
Method (_CRS, 0, NotSerialized)
{
CreateWordField (MDCR, 0x02, IOML)
CreateWordField (MDCR, 0x04, IOMH)
CreateWordField (MDCR, 0x09, IRQM)
ENFG (CGLD (0x05))
ShiftLeft (IOAH, 0x08, IOML)
Or (IOAL, IOML, IOML)
Store (IOML, IOMH)
If (INTR)
{
ShiftLeft (0x01, INTR, IRQM)
}
Else
{
Store (0x00, IRQM)
}

EXFG ()
Return (MDCR)
}

Method (_SRS, 1, NotSerialized)
{
CreateWordField (Arg0, 0x02, IO11)
CreateWordField (Arg0, 0x09, IRQM)
ENFG (CGLD (0x05))
And (IO11, 0xFF, IOAL)
ShiftRight (IO11, 0x08, IOAH)
If (IRQM)
{
FindSetRightBit (IRQM, Local0)
Subtract (Local0, 0x01, INTR)
}
}
```



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```
Memory32Fixed (ReadOnly, 0xFEE01000, 0x000FF000)  
Memory32Fixed (ReadOnly, 0xFEFFF000, 0x00001000)  
Memory32Fixed (ReadWrite, 0xFFB00000, 0x004F0000)  
Memory32Fixed (ReadOnly, 0xFFFF0000, 0x00100000)
```

```
)  
Method (_CRS, 0, NotSerialized)  
{  
  CreateWordField (CRS, 0x7A, GP00)  
  CreateWordField (CRS, 0x7C, GP01)  
  CreateByteField (CRS, 0x7F, GP0L)  
  CreateWordField (CRS, 0x82, GP10)  
  CreateWordField (CRS, 0x84, GP11)  
  CreateByteField (CRS, 0x87, GP1L)  
  Store (PMBS, GP00)  
  Store (PMBS, GP01)  
  If (LNot (LLess (PMLN, 0x0100)))  
  {  
    ShiftRight (PMLN, 0x01, GP0L)  
    Add (GP00, GP0L, GP10)  
    Add (GP01, GP0L, GP11)  
    Subtract (PMLN, GP0L, GP1L)  
  }  
  Else  
  {  
    Store (PMLN, GP0L)  
  }  
}
```

```
If (SCBS)  
{  
  CreateWordField (CRS, 0x8A, SC00)  
  CreateWordField (CRS, 0x8C, SC01)  
  CreateByteField (CRS, 0x8F, SC0L)  
  CreateWordField (CRS, 0x92, SC10)  
  CreateWordField (CRS, 0x94, SC11)  
  CreateByteField (CRS, 0x97, SC1L)  
  Store (SCBS, SC00)  
  Store (SCBS, SC01)  
  If (LNot (LLess (SCLN, 0x0100)))  
  {  
    ShiftRight (SCLN, 0x01, SC0L)  
    Add (SC00, SC0L, SC10)  
    Add (SC01, SC0L, SC11)  
    Subtract (SCLN, SC0L, SC1L)  
  }  
  Else  
  {  
    Store (SCLN, SC0L)  
  }  
}
```

```
If (ACBS)
```

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```
{
CreateWordField (CRS, 0x9A, AC00)
CreateWordField (CRS, 0x9C, AC01)
CreateByteField (CRS, 0x9F, AC0L)
CreateWordField (CRS, 0xA2, AC10)
CreateWordField (CRS, 0xA4, AC11)
CreateByteField (CRS, 0xA7, AC1L)
Store (ACBS, AC00)
Store (ACBS, AC01)
If (LNot (LLess (ACLN, 0x0100)))
{
ShiftRight (ACLN, 0x01, AC0L)
Add (AC00, AC0L, AC10)
Add (AC01, AC0L, AC11)
Subtract (ACLN, AC0L, AC1L)
}
Else
{
Store (ACLN, AC0L)
}
}

Return (CRS)
}
}

Scope (\_SB.PCI0.SBRG)
{
Device (ASOC)
{
Name (_HID, "ATK0110")
Name (_UID, 0x01010110)
Method (_STA, 0, NotSerialized)
{
Return (0x0F)
}
}
}

OperationRegion (\_SB.PCI0.SBRG.LPDC, PCI_Config, 0xA0, 0x06)
Field (\_SB.PCI0.SBRG.LPDC, ByteAcc, NoLock, Preserve)
{
S3F8, 1,
S2F8, 1,
, 3,
S2E8, 1,
, 1,
S3E8, 1,
, 4,
M300, 1,
, 2,
```

Re: Monitoring temperature with acpi (sysctls)

```
M330, 1,  
, 4,  
FDC0, 1,  
Offset (0x03),  
P378, 1,  
P278, 1,  
P3BC, 1,  
Offset (0x04),  
G200, 8,  
G208, 8  
}
```

```
Method (RRIO, 4, NotSerialized)
```

```
{  
If (LOr (LEqual (Arg0, 0x00), LEqual (Arg0, 0x01)))  
{  
If (LEqual (Arg2, 0x03F8))  
{  
Store (Arg1, S3F8)  
}  
}
```

```
If (LEqual (Arg2, 0x02F8))  
{  
Store (Arg1, S2F8)  
}
```

```
If (LEqual (Arg2, 0x03E8))  
{  
Store (Arg1, S3E8)  
}
```

```
If (LEqual (Arg2, 0x02E8))  
{  
Store (Arg1, S2E8)  
}  
}
```

```
If (LEqual (Arg0, 0x02))  
{  
If (LEqual (Arg2, 0x0378))  
{  
Store (Arg1, P378)  
}  
}
```

```
If (LEqual (Arg2, 0x0278))  
{  
Store (Arg1, P278)  
}
```

```
If (LEqual (Arg2, 0x03BC))  
{
```

Re: Monitoring temperature with acpi (sysctls)

```
Store (Arg1, P3BC)
}
}
```

```
If (LEqual (Arg0, 0x03))
{
Store (Arg1, FDC0)
}
```

```
If (LEqual (Arg0, 0x05))
{
If (LEqual (Arg2, 0x0330))
{
Store (Arg1, M330)
}
```

```
If (LEqual (Arg2, 0x0300))
{
Store (Arg1, M300)
}
}
```

```
If (LEqual (Arg0, 0x08))
{
Store (Zero, Local0)
If (Arg1)
{
Store (0xFF, Local0)
}
```

```
If (LEqual (Arg2, 0x0200))
{
Store (Local0, G200)
}
```

```
If (LEqual (Arg2, 0x0208))
{
Store (Local0, G208)
}
}
}
```

```
Method (RDMA, 3, NotSerialized)
{
}
```

```
Scope (\)
{
OperationRegion (\RAMW, SystemMemory, Subtract (TOPM, 0x00010000), 0x00010000)
Field (\RAMW, ByteAcc, NoLock, Preserve)
{
```

Re: Monitoring temperature with acpi (sysctls)

```
PAR0, 32,  
PAR1, 32  
}
```

Operati