- IPMI -

IPMB v1.0 Address Allocation

Document Revision 1.0

September 16, 1998

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Revision History

Date	Rev	Modifications
9/16/97	1.0	Initial release for IPMI v1.0

This document presents the allocation and use of I^{2}C slave addresses for devices on the IPMB (Intelligent Platform Management Bus). Address 20h is used as 'well known' fixed address. Address 20h is reserved for the system's primary management controller, also referred to as the BMC (baseboard management controller).

Note that most 'non-intelligent' IPMB devices can usually only be configured to one of eight possible slave addresses. This can lead to a shortage of addresses for that device type when accomodations are made for OEM use. For example, addresses 90h-9Fh are used by the Dallas Semiconductor DS1624 Temperature Sensor/EEPROM combo, and the DS1621 Temperature Sensor. *It is highly recommended that 'non-intelligent' I^{2}C devices be used on private I^{2}C busses behind management controllers whenever possible.*

KEY:

-   -   Reserved for I^{2}C & Access.bus specification functions.
-   B   Reserved for Board Set manufacturer use.
-   I   Defined by IPMI Group for Intelligent Platform Management Bus use.
-   c   chassis. Reserved for use by system integrator for chassis-specific functions. Not intended for board set or baseboard module.
-   a   For third-party add-ins. Note: add-ins should only use intelligent controllers capable of being configured to at least 8 different addresses in the 'O' range.

Addr	Use	Typical Device	Addr	Use	Typical Device	Addr	Use	Typical Device
00h	-	I^{2}C	50h	-	Access.Bus	A0h	B	SEEPROM
01h	-	I^{2}C	52h-6Ch	c		A2h	B	SEEPROM
02h	-	I^{2}C	6Eh	-	Access.Bus	A4h[2]	c	SEEPROM
04-0Eh	-	I^{2}C	70h	B	8574A	A6h[2]	c	SEEPROM
10h-1Eh	a		72h	B	8574A	A8h	B	SEEPROM
20h	I	IPMB uC (BMC)	74h[1]	c	8574A	AAh	B	SEEPROM
22h	B	uC (FPC, ICMB)	76h[1]	c	8574A	ACh	c	SEEPROM
24h	B	uC (PBC)	78h[1]	c	8574A	AEh	c	SEEPROM
26h	B		7Ah[1]	c	8574A	B0h-BEh	a	
28h	B	SM Card	7Ch[1]	c	8574A	C0-CEh	B	
2A-2Eh	B		7Eh[1]	c	8574A	D0h-DEh	a	
30h-3Eh	a		80h-8Eh	B		E0h-EEh	B	
40h	B	8574	90h	B	DS1624, DS1621, 8591	F0h-F6h	-	I^{2}C
42h	B	8574	92h	B	DS1624, DS1621, 8591	F8h-FEh	-	I^{2}C
44h	c	8574	94h[2]	B	DS1624, DS1621			
46h	c	8574	96h[2]	B	DS1624, DS1621			
48h	c	8574	98h[2]	c	DS1624, DS1621			
4Ah	c	8574	9Ah[2]	c	DS1624, DS1621			
4Ch	c	8574	9Ch	c	uC (pri. HSC), DS1624, DS1621			
4Eh	c	8574	9Eh	c	uC (pri. HSC), DS1624, DS1621			

Typical Device type(s) used at specified addresses. With the exception of the BMC, there is no requirement to use a particular address within a given range.

BMC =	baseboard management controller. This is the central management controller in the system, and the only device at a 'well known' fixed address.
FPC =	'front panel' controller
PBC =	processor board controller
HSC =	hot-swap drive backplane controller
PSC =	power share controller
SM Card =	System Management Adjunct Card from board manufacturer
ICMB =	ICMB Bridge controller
uC =	management controller
DS1624 =	Dallas Semiconductor DS1624 Temperature Sensor / SEEPROM device
DS1621 =	Dallas Semiconductor DS1621 Temperature Sensor. National Semiconductor LM75 temperature sensors also use these addresses.
8591 =	Philips Semiconductor A/D - D/A converter
8574 / 8574A =	Philips Semiconductor I^{2}C 8-bit I/O Port

The following table presents the distribution of I^2C addresses among five categories:
I^2C/Access.bus, IPMI Group, Add-in, Board Set, and Chassis

IPMB Address Distribution

USE	RANGE		I2C	IPMI	Board Set	Add-in	Chassis
I2C	00	0F	8				
Board Set	10	1F			8		
IPMI	20	21		1			
Board Set	22	2F			7		
Add-in	30	3F				8	
Board Set	40	43			2		
Chassis	44	4F					6
I2C	50	51	1				
Chassis	52	6D					14
I2C	6E	6F	1				
Board Set	70	73			2		
Chassis	74	7F					6
Board Set	80	8F			8		
Board Set	90	93			2		
Chassis	94	9B					4
Board Set	9C	A3			4		
Chassis	A4	AB					4
Board Set	AC	AF			2		
Add-in	B0	BF				8	
Board Set	C0	CF			8		
Add-in	D0	DF				8	
Board Set	E0	EF			8		
I2C	F0	FF	8				
Totals			18	1	51	24	34

Totals:	
I2C	18
IPMI	1
Board Set	51
Chassis	34
Add-in	24

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