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# **RTM-ATCA-736x-10G and RTM-ATCA-737x-10G**

Control via IPMI Programmer's Reference

P/N: 6806800P16C

January 2020

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# About this Manual

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## Overview of Contents

This manual is intended for users qualified in electronics or electrical engineering. Users must have a working understanding of Intelligent Platform Management Interface (IPMI).

It provides information on how to control and monitor the functionality of the RTM-ATCA-736x-10G and RTM-ATCA-737x-10G via IPMI and contains the following chapters and appendices:

*[Introduction on page 11](#)*

*[Supported IPMI Commands on page 13](#)*

*[FRU Information and Sensor Data Records on page 15](#)*

*[Related Documentation on page 37](#)*



## Abbreviations






This document uses the following abbreviations:

<b>Abbreviation</b>	<b>Definition</b>
AdvancedTCA	Advanced Telecommunications Computing Architecture
ARTM	AdvancedTCA Rear Transition Module
ATA	Advanced Technology Attachment
FRU	Field Replaceable Unit
IPMC	Intelligent Platform Management Controller
IPMI	Intelligent Platform Management Interface
SDR	Sensor Data Record
Abbreviation	Definition

# Conventions

The following table describes the conventions used throughout this manual.

Notation	Description
0x00000000	Typical notation for hexadecimal numbers (digits are 0 through F), for example used for addresses and offsets
0b0000	Same for binary numbers (digits are 0 and 1)
<b>bold</b>	Used to emphasize a word
Screen	Used for on-screen output and code related elements or commands. Sample of Programming used in a table (9pt)
<b>Courier + Bold</b>	Used to characterize user input and to separate it from system output
<i>Reference</i>	Used for references and for table and figure descriptions
File > Exit	Notation for selecting a submenu
<text>	Notation for variables and keys
[text]	Notation for software buttons to click on the screen and parameter description
...	Repeated item for example node 1, node 2, ..., node 12
.	Omission of information from example/command that is not necessary at the time
..	Ranges, for example: 0..4 means one of the integers 0,1,2,3, and 4 (used in registers)
	Logical OR
	Indicates a hazardous situation which, if not avoided, could result in death or serious injury
	Indicates a hazardous situation which, if not avoided, may result in minor or moderate injury

Notation	Description
	Indicates a property damage message
	Indicates a hot surface that could result in moderate or serious injury
	Indicates an electrical situation that could result in moderate injury or death
<p data-bbox="272 725 386 777"><b>Use ESD protection</b></p> 	Indicates that when working in an ESD environment care should be taken to use proper ESD practices
	No danger encountered, pay attention to important information

## Summary of Changes

Document Number	Date	Description
6806800P16C	January 2020	Rebrand to SMART Embedded Computing template
6806800P16B	June 2014	Rebranded to Artesyn.
6806800P16A	March 2012	Initial Version



# Introduction

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## 1.1 Overview

The RTM-ATCA-736x/RTM-ATCA-737x provides an on-board Intelligent Peripheral Management Controller (IPMC) which is fully compliant to the IPMI V1.5 specification. The IPMC provides access to on-board Sensor Data Records (SDRs), Field Replaceable Unit (FRU) data and further more contains an event generator. Within this document you find a description of:

Supported IPMI command

- FRU data
- SDRs

The following Rear Transition Module product variants are available:

- RTM\_ATCA\_736x\_10G (Variant #1)
- RTM\_ATCA\_736x\_10G\_SP (Variant #2)
- RTM\_ATCA\_737x\_10G (Variant #3)

### **RTM-ATCA-736x-10G Features:**

- Four 10Gb interfaces using SFP+ modules
- Four 10/100/1000Base-T Ethernet ports; RJ-45 connectors
- Optional hot swappable 2.5" SAS HDD (supported through on-board SAS controller)

### **RTM-ATCA-736x-10G-SP Features:**

- Six 10Gb interfaces using SFP+ modules
- Four 10/100/1000Base-T Ethernet ports; RJ-45 connectors

### **RTM-ATCA-737x-10G Features:**

- 4x10Gb interfaces using SFP+ modules
- Four 10/100/1000Base-T Ethernet ports; RJ-45 connectors
- Optional hot swappable 2.5" SAS HDD (supported through front board SAS interface)

Both RTM-ATCA-736x-10G and RTM-ATCA-736x-10G-SP variants are compatible with the following front blades:

- ATCA-7365
- ATCA-7367
- ATCA-7370
- ATCA-7470

## Introduction

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The RTM-ATCA-737x-10G variant is compatible only with the ATCA-7370 front blade:  
For more information, refer *RTM-ATCA-737x-10G Installation and Use* guide.

# Supported IPMI Commands

## 2.1 Overview

This chapter describes the IPMI commands supported by the RTM-ATCA-736x-10G platforms.

## 2.2 Standard IPMI Commands

The IPMCs are fully compliant to the Intelligent Platform Management Interface v.1.5. This section provides information on which IPMI commands are supported.

### 2.2.1 Global IPMI Commands

The IPMCs support the following global IPMI commands.

*Table 2-1 Supported Global IPMI Commands*

Command	NetFn (Request/Response)	CMD	Comments
Get Device ID	0x06/0x07	0x01	-
Get Self Test Result	0x06/0x07	0x04	-
Warm Reset	0x06/0x07	0x03	-
Master Write-Read	0x06/0x07	0x52	Only for accessing private I2C buses.

### 2.2.2 System Interface Commands

The system interface commands are supported by blades providing a system interface.

*Table 2-2 System Interface Commands*

Command	NetFn (Request/Response)	CMD
Set BMC Global Enables	0x06/0x07	0x2E
Get BMC Global Enables	0x06/0x07	0x2F
Clear Message Flags	0x06/0x07	0x30
Get Message Flags	0x06/0x07	0x31
Get Message	0x06/0x07	0x33
Send Message	0x06/0x07	0x34

## Supported IPMI Commands

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# FRU Information and Sensor Data Records

## 3.1 FRU Information

The blade provides the following FRU information in FRU ID 0.

*Table 3-1 FRU Information*

Variant Number	Board Information		
	Product Name	Serial No	Part No
1	RTM-ATCA-736X-10G	123456789123	0106861L01B
2	RTM-ATCA-736X-10G-SP	123456789123	0106861L02B
3	RTM-ATCA-737X-10G	123456789123	0106861L03B

## 3.2 Sensor Data Records

The sensors available on the blade/RTM are shown in the table below.

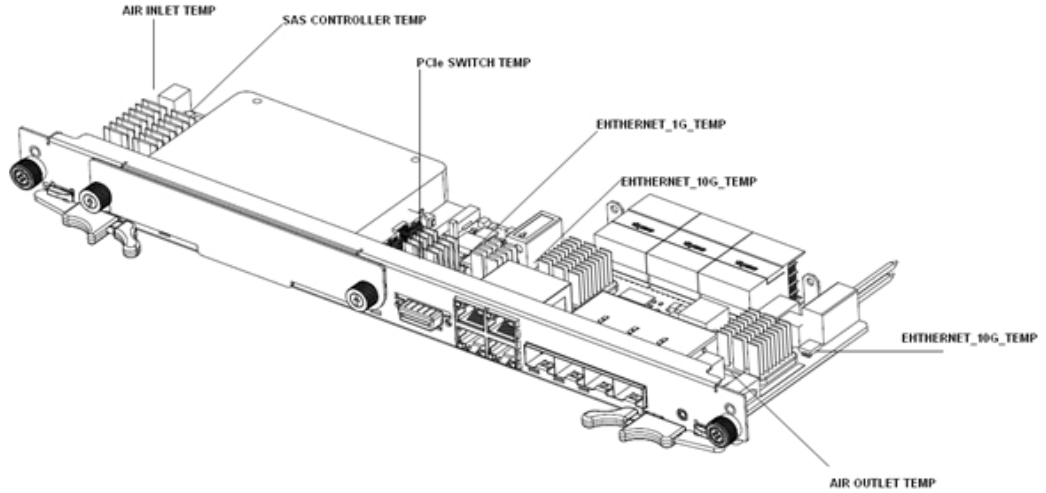
*Table 3-2 IPMI Sensors Overview*

Feature	Raw Value	Detailed SDR Description Table
Hot Swap RTM	Switch	See <a href="#">RTM Hot Swap Sensor on page 19</a>
+12V	Voltage	See <a href="#">RTM 12V Sensor on page 20</a>
+3.3V RTM	Voltage	See <a href="#">RTM 3.3V Sensor on page 21</a>
+1.2V RTM	Voltage	See <a href="#">RTM 1.2V Sensor on page 22</a>
+1.0V RTM	Voltage	See <a href="#">RTM 1.0V Sensor on page 23</a>
air inlet temp	Temperature	See <a href="#">Air Inlet Temp Sensor on page 24</a>
air outlet temp	Temperature	See <a href="#">Air Outlet Temp Sensor on page 25</a>
temp 1G ETH	Temperature	See <a href="#">Temp 1G ETH Sensor on page 26</a>
temp 1-10G ETH	Temperature	See <a href="#">Temp 1-10G ETH Sensor on page 27</a>
temp 2-10G ETH	Temperature	See <a href="#">Temp2-10G ETH Sensor on page 28</a>
temp 3-10G ETH	Temperature	See <a href="#">Temp 3-10G ETH Sensor on page 29</a>
temp SAS	Temperature	See <a href="#">Temp SAS Sensor on page 30</a>
temp PCIe switch	Temperature	See <a href="#">Temp PCI Switch Sensor on page 31</a>
Hot Swap HDD	Switch	See <a href="#">Hot Swap HDD Sensor on page 32</a>
RTM Watchdog	Watchdog 2	See <a href="#">RTM Watchdog Sensor on page 33</a>

# FRU Information and Sensor Data Records

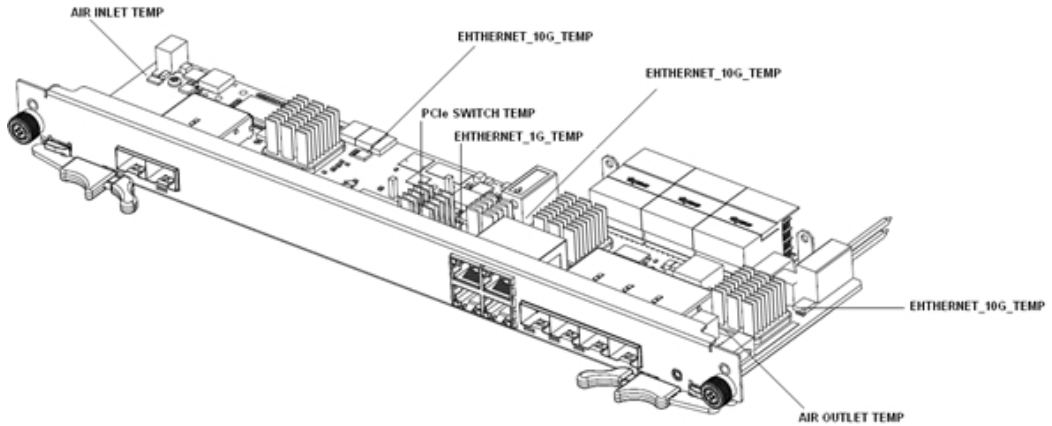
The following figure shows the location of all temperature sensors for Variant #1 RTM-ATCA-736x-10G and Variant #3 RTM-ATCA-737x-10G.

*Figure 3-1 Location of Temperature Sensors (Variants #1 and #3)*



The following figure shows the location of the temperature sensors for Variant #2 RTM-ATCA-736x-10G-SP.

*Figure 3-2 Location of Temperature Sensors (Variant#2)*



The following tables describe all on-board IPMI sensors in detail.

*Table 3-3 RTM Hot Swap Sensor*

<b>Feature</b>	<b>Raw Value</b>	<b>Description</b>
Sensor LUN	0x00	-
Sensor Number	0x00	-
Entity ID	0xC0	PICMG Rear Transition Module
Sensor Type	0xF0	PICMG 3.0: FRU Hot Swap
Event/Reading Type	0x6F	Discrete (sensor-specific)
Assertion Event Mask(Byte 15)	0x07	-
Assertion Event Mask(Byte 16)	0x00	-
Deassertion Event Mask(Byte 17)	0x00	-
Deassertion Event Mask(Byte 18)	0x00	-
Threshold Mask(Byte 19)	0x07	-
Threshold Mask(Byte 20)	0x00	-
Base Unit	0x00	(unspecified)
Sensor Name	Hot Swap RTM	-
Rearm mode	0x01	Auto
Hysteresis Support	0x00	No Hysteresis or unspecified
Threshold Access Support	0x00	No Thresholds
Event Message Control	0x01	Entire Sensor only
Reading Definition	-	Refer <i>chapter "Reading the FRU Hot-Swap Sensor" in the PICMG 3.0 Specification manual</i>

## FRU Information and Sensor Data Records

Table 3-4 RTM 12V Sensor

Features	Raw Value	Description
Sensor LUN	0x00	-
Sensor Number	0x00	-
Entity ID	0xC0	PICMG Rear Transition Module
Sensor Type	0x02	Voltage
Event/Reading Type	0x01	Threshold
Assertion Event Mask(Byte 15)	0x95	-
Assertion Event Mask(Byte 16)	0x7A	-
Deassertion Event Mask(Byte 17)	0x95	-
Deassertion Event Mask(Byte 18)	0x7A	-
Threshold Mask(Byte 19)	0x3F	-
Threshold Mask(Byte 20)	0x3F	-
Base Unit	0x04	Volts
Nominal Reading	0xDA	12.0
Upper non-recoverable threshold	0xF7	13.6
Upper critical threshold	0xF3	13.4
Upper non-critical threshold	0xEC	13.0
Lower non-recoverable threshold	0x BD	10.4
Lower critical threshold	0xC0	10.6
Lower non-critical threshold	0xC8	11.0
Sensor Name	+12V	-
Rearm mode	0x01	Auto
Hysteresis Support	0x01	Readable
Threshold Access Support	0x01	Readable
Event Message Control	0x00	Per Threshold / Discrete State
Reading Definition	Analog reading byte	Analog sensor reading

*Table 3-5 RTM 3.3V Sensor*

<b>Features</b>	<b>Raw Value</b>	<b>Description</b>
Sensor LUN	0x00	-
Sensor Number	0x00	-
Entity ID	0xC0	PICMG Rear Transition Module
Sensor Type	0x02	Voltage
Event/Reading Type	0x01	Threshold
Assertion Event Mask(Byte 15)	0x14	-
Assertion Event Mask(Byte 16)	0x6A	-
Deassertion Event Mask(Byte 17)	0x14	-
Deassertion Event Mask(Byte 18)	0x6A	-
Threshold Mask(Byte 19)	0x36	-
Threshold Mask(Byte 20)	0x36	-
Base Unit	0x04	Volts
Nominal Reading	0xA9	3.3
Upper non-recoverable threshold	0xB8	3.66
Upper critical threshold	0xB3	3.5
Lower non-recoverable threshold	0x97	2.94
Lower critical threshold	0x9F	3.1
Sensor Name	+3.3V RTM	-
Rearm mode	0x01	Auto
Hysteresis Support	0x01	Readable
Threshold Access Support	0x01	Readable
Event Message Control	0x00	Per Threshold / Discrete State
Reading Definition	Analog reading byte	Analog sensor reading

## FRU Information and Sensor Data Records

Table 3-6 RTM 1.2V Sensor

Features	Raw Value	Description
Sensor LUN	0x00	-
Sensor Number	0x00	-
Entity ID	0xC0	PICMG Rear Transition Module
Sensor Type	0x02	Voltage
Event/Reading Type	0x01	Threshold
Assertion Event Mask(Byte 15)	0x14	-
Assertion Event Mask(Byte 16)	0x6A	-
Deassertion Event Mask(Byte 17)	0x14	-
Deassertion Event Mask(Byte 18)	0x6A	-
Threshold Mask(Byte 19)	0x36	-
Threshold Mask(Byte 20)	0x36	-
Base Unit	0x04	Volts
Nominal Reading	0x7B	1.2
Upper non-recoverable threshold	0x88	1.33
Upper critical threshold	0x82	1.27
Lower non-recoverable threshold	0x6E	1.07
Lower critical threshold	0x74	1.13
Sensor Name	+1.2V RTM	-
Rearm mode	0x01	Auto
Hysteresis Support	0x01	Readable
Threshold Access Support	0x01	Readable
Event Message Control	0x00	Per Threshold / Discrete State
Reading Definition	Analog reading byte	Analog sensor reading

*Table 3-7 RTM 1.0V Sensor*

<b>Features</b>	<b>Raw Value</b>	<b>Description</b>
Sensor LUN	0x00	-
Sensor Number	0x00	-
Entity ID	0xC0	PICMG Rear Transition Module
Sensor Type	0x02	Voltage
Event/Reading Type	0x01	Threshold
Assertion Event Mask(Byte 15)	0x14	-
Assertion Event Mask(Byte 16)	0x6A	-
Deassertion Event Mask(Byte 17)	0x14	-
Deassertion Event Mask(Byte 18)	0x6A	-
Threshold Mask(Byte 19)	0x36	-
Threshold Mask(Byte 20)	0x36	-
Base Unit	0x04	Volts
Nominal Reading	0x67	1.0
Upper non-recoverable threshold	0x72	1.11
Upper critical threshold	0x6D	1.06
Lower non-recoverable threshold	0x5B	0.89
Lower critical threshold	0x60	0.94
Sensor Name	+1.0V RTM	-
Rearm mode	0x01	Auto
Hysteresis Support	0x01	Readable
Threshold Access Support	0x01	Readable
Event Message Control	0x00	Per Threshold / Discrete State
Reading Definition	Analog reading byte	Analog sensor reading

## FRU Information and Sensor Data Records

Table 3-8 Air Inlet Temp Sensor

Features	Raw Value	Description
Sensor LUN	0x00	-
Sensor Number	0x00	-
Entity ID	0xC0	PICMG Rear Transition Module
Sensor Type	0x01	Temperature
Event/Reading Type	0x01	Threshold
Assertion Event Mask(Byte 15)	0x80	-
Assertion Event Mask(Byte 16)	0x0A	-
Deassertion Event Mask(Byte 17)	0x80	-
Deassertion Event Mask(Byte 18)	0x7A	-
Threshold Mask(Byte 19)	0x38	-
Threshold Mask(Byte 20)	0x38	-
Base Unit	0x01	deg. C
Nominal Reading		25
Upper non-recoverable threshold		74
Upper critical threshold		61
Upper non-critical threshold		46
Lower non-recoverable threshold	0x 00	(unspecified)
Lower critical threshold	0x00	(unspecified)
Lower non-critical threshold	0x00	(unspecified)
Sensor Name	air inlet temp	-
Rearm mode	0x01	Auto
Hysteresis Support	0x01	Readable
Threshold Access Support	0x01	Readable
Event Message Control	0x00	Per Threshold / Discrete State
Reading Definition	Analog reading byte	Analog sensor reading



## FRU Information and Sensor Data Records

*Table 3-9 Air Outlet Temp Sensor*

<b>Feature</b>	<b>Raw Value</b>	<b>Description</b>
Sensor LUN	0x00	-
Sensor Number	0x00	-
Entity ID	0xC0	PICMG Rear Transition Module
Sensor Type	0x01	Temperature
Event/Reading Type	0x01	Threshold
Assertion Event Mask(Byte 15)	0x80	-
Assertion Event Mask(Byte 16)	0x0A	-
Deassertion Event Mask(Byte 17)	0x80	-
Deassertion Event Mask(Byte 18)	0x7A	-
Threshold Mask(Byte 19)	0x38	-
Threshold Mask(Byte 20)	0x38	-
Base Unit	0x01	deg. C
Nominal Reading		25
Upper non-recoverable threshold		74
Upper critical threshold		63
Upper non-critical threshold		50
Lower non-recoverable threshold	0x 00	(unspecified)
Lower critical threshold	0x00	(unspecified)
Lower non-critical threshold	0x00	(unspecified)
Sensor Name	air outlet temp	-
Rearm mode	0x01	Auto
Hysteresis Support	0x01	Readable
Threshold Access Support	0x01	Readable
Event Message Control	0x00	Per Threshold / Discrete State
Reading Definition	Analog reading byte	Analog sensor reading

## FRU Information and Sensor Data Records

Table 3-10 Temp 1G ETH Sensor

Feature	Raw Value	Description
Sensor LUN	0x00	-
Sensor Number	0x00	-
Entity ID	0xC0	PICMG Rear Transition Module
Sensor Type	0x01	Temperature
Event/Reading Type	0x01	Threshold
Assertion Event Mask(Byte 15)	0x80	-
Assertion Event Mask(Byte 16)	0x0A	-
Deassertion Event Mask(Byte 17)	0x80	-
Deassertion Event Mask(Byte 18)	0x7A	-
Threshold Mask(Byte 19)	0x38	-
Threshold Mask(Byte 20)	0x38	-
Base Unit	0x01	deg. C
Nominal Reading		25
Upper non-recoverable threshold		89
Upper critical threshold		82
Upper non-critical threshold		71
Lower non-recoverable threshold	0x 00	(unspecified)
Lower critical threshold	0x00	(unspecified)
Lower non-critical threshold	0x00	(unspecified)
Sensor Name	temp 1G ETH	-
Rearm mode	0x01	Auto
Hysteresis Support	0x01	Readable
Threshold Access Support	0x01	Readable
Event Message Control	0x00	Per Threshold / Discrete State
Reading Definition	Analog reading byte	Analog sensor reading

## FRU Information and Sensor Data Records

*Table 3-11 Temp 1-10G ETH Sensor*

Feature	Raw Value	Description
Sensor LUN	0x00	-
Sensor Number	0x00	-
Entity ID	0xC0	PICMG Rear Transition Module
Sensor Type	0x01	Temperature
Event/Reading Type	0x01	Threshold
Assertion Event Mask(Byte 15)	0x80	-
Assertion Event Mask(Byte 16)	0x0A	-
Deassertion Event Mask(Byte 17)	0x80	-
Deassertion Event Mask(Byte 18)	0x7A	-
Threshold Mask(Byte 19)	0x38	-
Threshold Mask(Byte 20)	0x38	-
Base Unit	0x01	deg. C
Nominal Reading		25
Upper non-recoverable threshold		103
Upper critical threshold		95
Upper non-critical threshold		81
Lower non-recoverable threshold	0x 00	(unspecified)
Lower critical threshold	0x00	(unspecified)
Lower non-critical threshold	0x00	(unspecified)
Sensor Name	temp 1-10G ETH	-
Rearm mode	0x01	Auto
Hysteresis Support	0x01	Readable
Threshold Access Support	0x01	Readable
Event Message Control	0x00	Per Threshold / Discrete State
Reading Definition	Analog reading byte	Analog sensor reading

## FRU Information and Sensor Data Records

Table 3-12 Temp2-10G ETH Sensor

Feature	Raw Value	Description
Sensor LUN	0x00	-
Sensor Number	0x00	-
Entity ID	0xC0	PICMG Rear Transition Module
Sensor Type	0x01	Temperature
Event/Reading Type	0x01	Threshold
Assertion Event Mask(Byte 15)	0x80	-
Assertion Event Mask(Byte 16)	0x0A	-
Deassertion Event Mask(Byte 17)	0x80	-
Deassertion Event Mask(Byte 18)	0x7A	-
Threshold Mask(Byte 19)	0x38	-
Threshold Mask(Byte 20)	0x38	-
Base Unit	0x01	deg. C
Nominal Reading		25
Upper non-recoverable threshold		96
Upper critical threshold		87
Upper non-critical threshold		75
Lower non-recoverable threshold	0x 00	(unspecified)
Lower critical threshold	0x00	(unspecified)
Lower non-critical threshold	0x00	(unspecified)
Sensor Name	temp 2-10G ETH	-
Rearm mode	0x01	Auto
Hysteresis Support	0x01	Readable
Threshold Access Support	0x01	Readable
Event Message Control	0x00	Per Threshold / Discrete State
Reading Definition	Analog reading byte	Analog sensor reading

## FRU Information and Sensor Data Records

*Table 3-13 Temp 3-10G ETH Sensor*

<b>Feature</b>	<b>Raw Value</b>	<b>Description</b>
Sensor LUN	0x00	-
Sensor Number	0x00	-
Entity ID	0xC0	PICMG Rear Transition Module
Sensor Type	0x01	Temperature
Event/Reading Type	0x01	Threshold
Assertion Event Mask(Byte 15)	0x80	-
Assertion Event Mask(Byte 16)	0x0A	-
Deassertion Event Mask(Byte 17)	0x80	-
Deassertion Event Mask(Byte 18)	0x7A	-
Threshold Mask(Byte 19)	0x38	-
Threshold Mask(Byte 20)	0x38	-
Base Unit	0x01	deg. C
Nominal Reading		25
Upper non-recoverable threshold		96
Upper critical threshold		87
Upper non-critical threshold		75
Lower non-recoverable threshold	0x 00	(unspecified)
Lower critical threshold	0x00	(unspecified)
Lower non-critical threshold	0x00	(unspecified)
Sensor Name	temp 3-10G ETH	-
Rearm mode	0x01	Auto
Hysteresis Support	0x01	Readable
Threshold Access Support	0x01	Readable
Event Message Control	0x00	Per Threshold / Discrete State
Reading Definition	Analog reading byte	Analog sensor reading

## FRU Information and Sensor Data Records

Table 3-14 Temp SAS Sensor

Feature	Raw Value	Description
Sensor LUN	0x00	-
Sensor Number	0x00	-
Entity ID	0xC0	PICMG Rear Transition Module
Sensor Type	0x01	Temperature
Event/Reading Type	0x01	Threshold
Assertion Event Mask(Byte 15)	0x80	-
Assertion Event Mask(Byte 16)	0x0A	-
Deassertion Event Mask(Byte 17)	0x80	-
Deassertion Event Mask(Byte 18)	0x7A	-
Threshold Mask(Byte 19)	0x38	-
Threshold Mask(Byte 20)	0x38	-
Base Unit	0x01	deg. C
Nominal Reading		25
Upper non-recoverable threshold		89
Upper critical threshold		82
Upper non-critical threshold		71
Lower non-recoverable threshold	0x 00	(unspecified)
Lower critical threshold	0x00	(unspecified)
Lower non-critical threshold	0x00	(unspecified)
Sensor Name	temp SAS	-
Rearm mode	0x01	Auto
Hysteresis Support	0x01	Readable
Threshold Access Support	0x01	Readable
Event Message Control	0x00	Per Threshold / Discrete State
Reading Definition	Analog reading byte	Analog sensor reading

*Table 3-15 Temp PCI Switch Sensor*

<b>Feature</b>	<b>Raw Value</b>	<b>Description</b>
Sensor LUN	0x00	-
Sensor Number	0x00	-
Entity ID	0xC0	PICMG Rear Transition Module
Sensor Type	0x01	Temperature
Event/Reading Type	0x01	Threshold
Assertion Event Mask(Byte 15)	0x80	-
Assertion Event Mask(Byte 16)	0x0A	-
Deassertion Event Mask(Byte 17)	0x80	-
Deassertion Event Mask(Byte 18)	0x7A	-
Threshold Mask(Byte 19)	0x38	-
Threshold Mask(Byte 20)	0x38	-
Base Unit	0x01	deg. C
Nominal Reading		25
Upper non-recoverable threshold		86
Upper critical threshold		77
Upper non-critical threshold		67
Lower non-recoverable threshold	0x 00	(unspecified)
Lower critical threshold	0x00	(unspecified)
Lower non-critical threshold	0x00	(unspecified)
Sensor Name	temp PCIe switch	-
Rearm mode	0x01	Auto
Hysteresis Support	0x01	Readable
Threshold Access Support	0x01	Readable
Event Message Control	0x00	Per Threshold / Discrete State
Reading Definition	Analog reading byte	Analog sensor reading

## FRU Information and Sensor Data Records

Table 3-16 Hot Swap HDD Sensor

Feature	Raw Value	Description
Sensor LUN	0x00	-
Sensor Number	0x00	-
Entity ID	0xC0	PICMG Rear Transition Module
Sensor Type	0xF0	PICMG 3.0: FRU Hot Swap
Event/Reading Type	0x6F	Discrete (sensor-specific)
Assertion Event Mask(Byte 15)	0x0F	-
Assertion Event Mask(Byte 16)	0x01	-
Deassertion Event Mask(Byte 17)	0x00	-
Deassertion Event Mask(Byte 18)	0x00	-
Threshold Mask(Byte 19)	0x0F	-
Threshold Mask(Byte 20)	0x01	-
Base Unit	0x00	(unspecified)
Sensor Name	Hot Swap HDD	-
Rearm mode	0x01	Auto
Hysteresis Support	0x00	No Hysteresis or unspecified
Threshold Access Support	0x00	No Thresholds
Event Message Control	0x01	Entire Sensor only
Reading Definition	-	Refer chapter "Reading the FRU Hot-Swap Sensor" in the PICMG 3.0 Specification manual



*Table 3-17 RTM Watchdog Sensor*

<b>Feature</b>	<b>Raw Value</b>	<b>Description</b>
Sensor LUN	0x00	-
Sensor Number	0x00	-
Entity ID	0xC0	PICMG Rear Transition Module
Sensor Type	0x23	Watchdog 2
Event/Reading Type	0x6F	Discrete (sensor-specific)
Assertion Event Mask(Byte 15)	0x0F	-
Assertion Event Mask(Byte 16)	0x01	-
Deassertion Event Mask(Byte 17)	0x00	-
Deassertion Event Mask(Byte 18)	0x00	-
Threshold Mask(Byte 19)	0x0F	-
Threshold Mask(Byte 20)	0x01	-
Sensor Name	RTM Watchdog	-
Rearm mode	0x01	Auto
Hysteresis Support	0x00	No Hysteresis
Threshold Access Support	0x00	No Threshold
Event Message Control	0x01	Entire Sensor only
Reading Definition	Analog reading byte	Analog sensor reading



# Related Documentation

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## A.1 SMART Embedded Computing Documentation

The documentation listed is referenced in this manual. Technical documentation can be found by using the Documentation Search at <https://www.smartembedded.com/ec/support/> or you can obtain electronic copies of SMART EC documentation by contacting your local sales representative.

*Table A-1 SMART EC Documentation*

<b>Document Title</b>	<b>Document Number</b>
RTM-ATCA-736x-10G Installation and Use	6806800P29
ATCA-7365 Installation and Use	6806800K56
ATCA-7367 Installation and Use	6806800K72
ATCA-7370 Installation and Use	6806800N15
ATCA-7470 Installation and Use	6806800P15

# Related Documentation

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