



RAGILE RA-B6910-64C

Software Programming Guide

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Executive Summary

This document demonstrates basic contents of the Ragile RA-B6910-64C Open Switch Software Platform which offers guide for software development and deployment.

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Introduction

RA-B6910 switch is data center oriented high density 40G/100G access switch, providing 40G/100G access, low latency, and complete data center features. RA-B6910-64C switch, with up to 64 100G Ports, can be used to compose a high-performance and high-reliability data center network.

1 Overview

The RA-B6910 Series Switch:

Model	100G QSFP28 Ethernet Port	25G/10G SFP28 Ethernet Port	10GBase-T Ethernet Port	Extension Module Slot	Redundant Fan	Redundant Power Supply
RA-B6910-64C	64	N/A	N/A	N/A	2+1	1+1

- An SFP28 Port supports 25G/10Gbase-R and does not support 1000base-X.
- A QSFP28 Port supports both 100G/40G mode and 4x25G/4x10G mode.

Specifications

Model	RA-B6910-64C	
CPU	Intel Xeon D-1527, quad-core eight-thread processor, 2.2GHz, LLC Cache 6M	
BOOT ROM	16MB	
SSD	240GB	
SDRAM	DDR4 8GB (Compatibility: 32GB)	
Extension Module Slot	Unsupported	
Extension Module	Unsupported	
Fan Slot	3 (support 2+1 redundancy, configure at least 2 fan modules in one switch)	
Fan Module	P2EFAN III-F	
Power Supply Slot	2 (support 1+1 redundancy)	
Power Module	PA800I-F	
Power Supply Input	AC input Rated voltage range: 100V AC to 240V AC Maximum voltage range: 90V AC to 264V AC Frequency: 50 Hz to 60 Hz Rated current: 5A to 10A	High voltage direct current (HVDC) input: Input voltage range: 164V DC to 320V DC Input current range: 4.5A
Power Consumption	Less than 731 W	
Optical Module	Refer to Appendix B The supported modules update at any time, contact Ragile Networks for details.	
SFP28 Port	Unsupported	
QSFP28 Port	Supported	
FC Port	Unsupported	
10GBASE-T Port	Unsupported	
Temperature Warning	Support temperature warning and over-temperature protection.	

EMC Standards	Emissions: FCC part15 Subpart B, EN55032, EN61000-3-2, EN61000-3-3 or EN61000-3-11, EN61000-3-12 (as applicable) Immunity: EN55035 Emissions and Immunity: EN300386
Safety Standards	UL/CSA 62368-1, EN 62368-1, IEC 62368-1 CB Scheme with all country differences
Working Temperature	0°C to 40°C (32°F to 104°F)
Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Working Humidity	10% to 90% RH (non-condensing)
Weight	Net weight: 18 kg (including 3 fan modules and 2 power modules)
Dimensions (L x W x H)	442 mm x 608 mm x 86.1 mm, 2RU



RA-B6910-64C switch is a class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

- The 100G Ethernet Port of the RA-B6910-64C switch supports DAC.

2 High Level Block Diagram

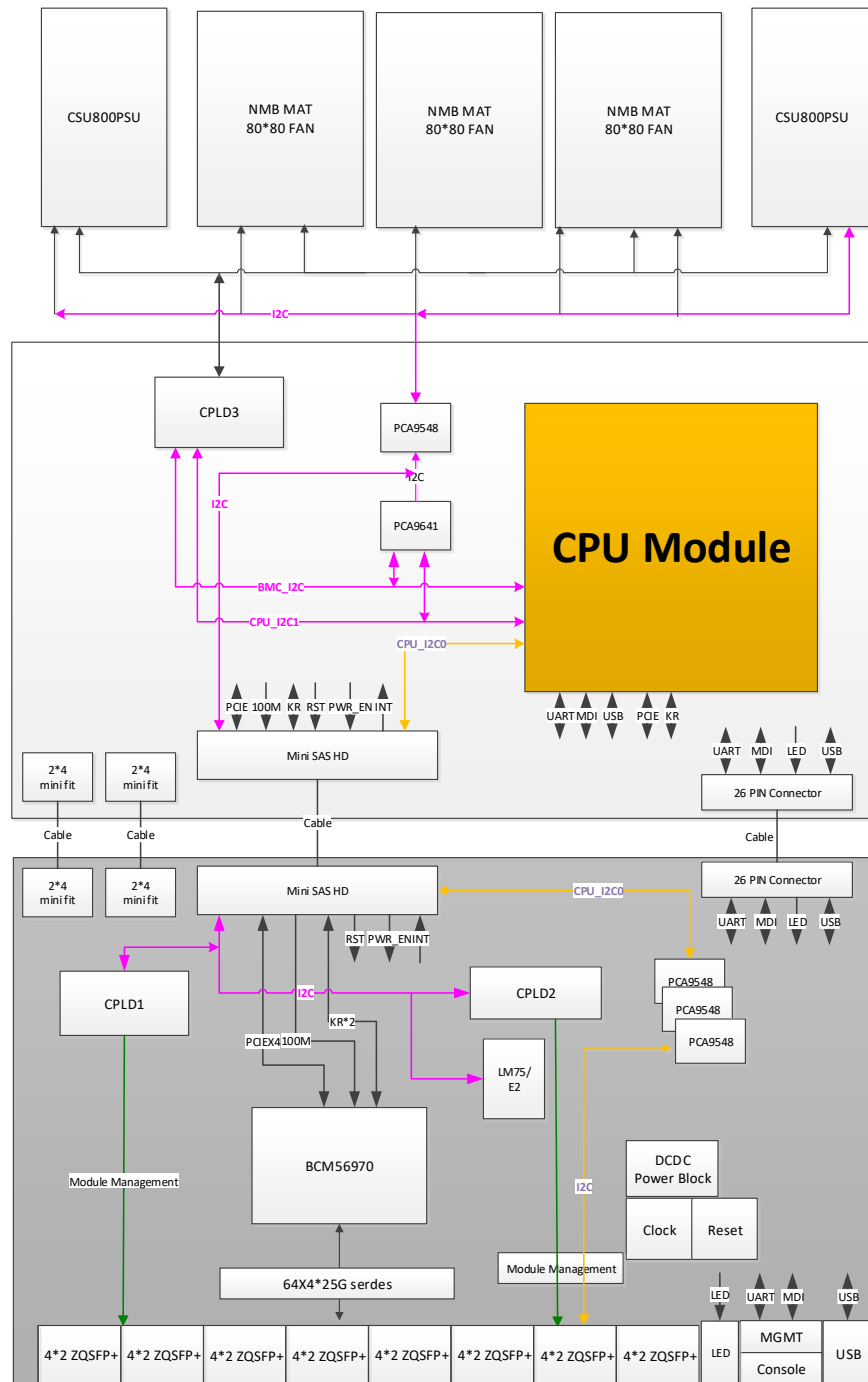


Figure 1. High Level Block Diagram

CPLD 1: Main

- 32 Port s LED control
- 32 Port s Reset signal fanout
- 32 Port s Interrupt signals converge
- Clock chip configuration
- Board voltage monitor
- Front panel LEDs control

Table 1. CPLD 1 Functions

Function			Description
CPLD	Frequency		25MHz input
	IO standard		LVCOMS3.3V
	Version indicator		1 LED indicate program download
	IO (IIC)	Frequency	80kHz
		Level	3.3V
		Data width	8bit
CPLD Functions	Port s LED control		Analyze LED bit stream to control 32 Port s LED
	Reset fanout (Send to second CPLD, MAC)		Send reset signal to second CPLD and MAC
	Interrupt signals converge		32 zQSFP+ modules present monitor and PCIe int signals
	Optical module control		32 zQSFP+ modules reset control
	Clock chip configuration		Configure CLK module through SPI after powered
	Voltage monitor		Monitor each power rail voltage on board
	Front panel LEDs		LED control

CPLD 2: Second

- 32 Port s LED control
- 32 Port s Reset signal fanout
- 32 Port s Interrupt signals converge
- MAC ASIC Core power supply control
- Warm reboot counter

Table 2. CPLD 2 Functions

Function			Description
CPLD	Frequency		25MHz input
	IO standard		LVCOMS3.3V
	Version indicator		1 LED indicate program download
	IO (IIC)	Frequency	80kHz
		Level	3.3V
		Data width	8bit
CPLD Functions	Port s LED control		Analyze LED bit stream to control 32 Port s LED
	Optical control		32 zQSFP+ modules reset control
	Interrupt signals converge		32 zQSFP+ modules present monitor and PCIe int signals
	MAC ASIC core power supply control		Convert AVS information of MAC to IIC for Core power supply regulation
	Warm reboot counter		Count warm reboot times

CPLD 3: Connect

- Fan modules Interrupt signals converge
- Fan modules RPM monitor
- Fan modules RPM control
- Fan modules control
- Fan modules LED control
- System power status monitor

Table 3. CPLD 3 Functions

Function			Description
CPLD	Frequency		25MHz input
	IO standard		LVCOMS3.3V
	Version indicator		1 LED indicate program download
	IO (IIC)	Frequency	80kHz
		Level	3.3V
		Data width	8bit

CPLD Functions	Fan modules Interrupt signals converge	Converge 3 fan modules interrupt signals to CPU module
	Optical control	32 zQSFP+ modules reset control
	Interrupt signals converge	32 zQSFP+ modules present monitor and PCIe int signals
	MAC ASIC core power supply control	Convert AVS information of MAC to IIC for Core power supply regulation
	Warm reboot counter	Count warm reboot times

3 CPLD Design

3.1 CPLD Architecture

- CPLD 1

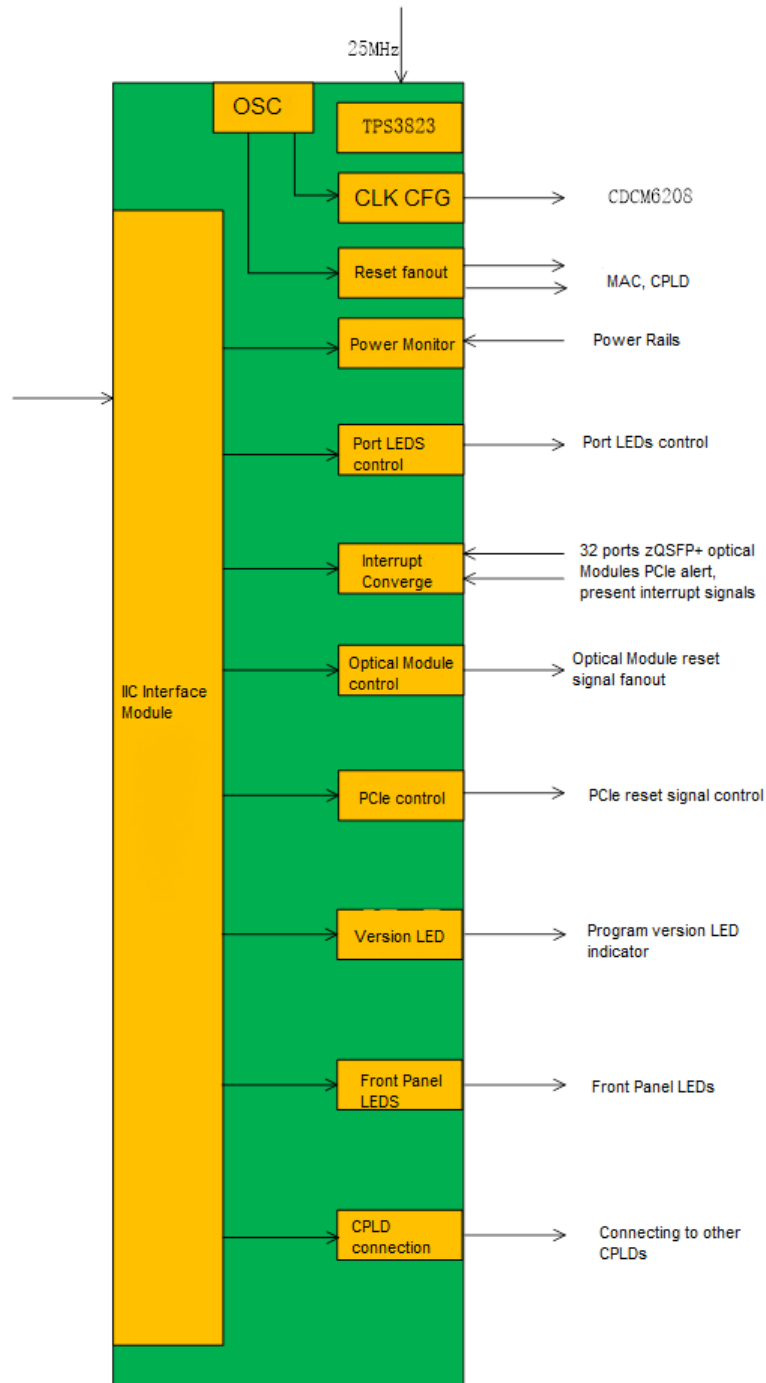


Figure 2. CPLD 1 Architecture

- CPLD 2

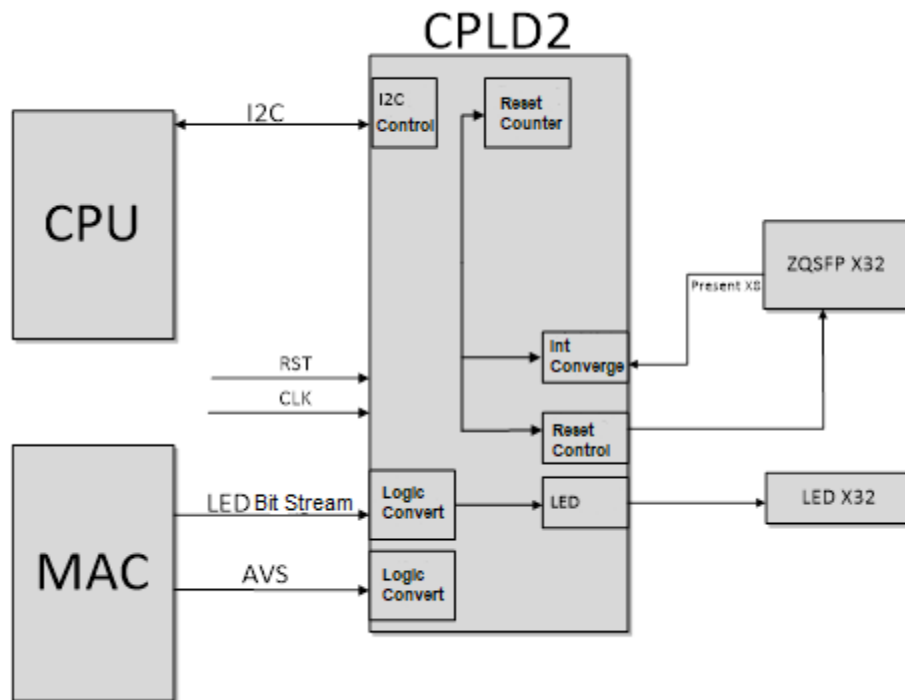


Figure 3. CPLD 2 Architecture

- CPLD 3

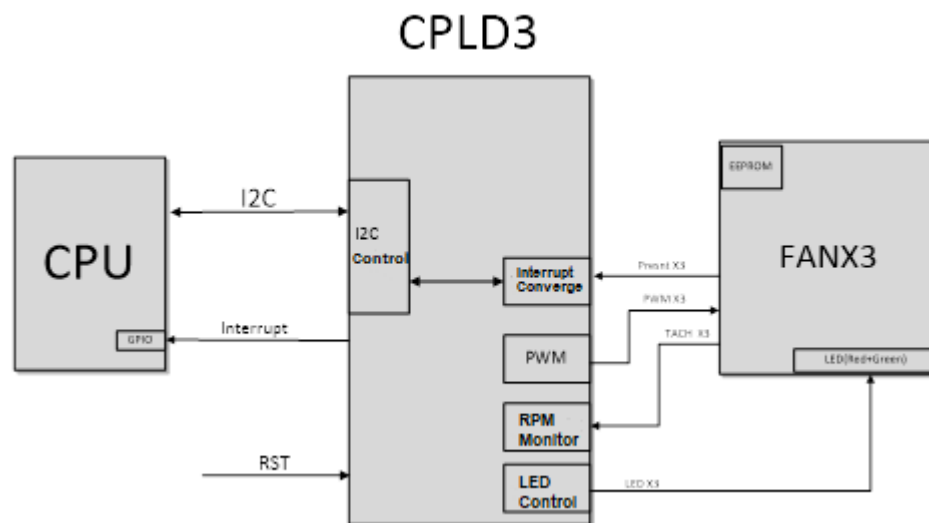


Figure 4. CPLD 3 Architecture

3.2 CPLD Resource Evaluation

- CPLD 1

Table 4. CPLD 1 Resource Evaluation

Functional Module	EST. Macrocell used
SPI interface	133+40
Port LED control	123
Reset fanout	4
Interrupt Converge	82
Optical Module control	20
Clock chip configuration	92
Voltage monitor	210
Front Panel LEDs	60
Overall	764

- CPLD 2

Table 5. CPLD 2 Resource Evaluation

Functional Module	EST. Macrocell used
Port LED control	72
Port Reset control	34
Port Present Interrupt converge	68
Online Upgrade	0
MAC ASIC AVS Core voltage control	300
Warm reboot time counter	8
Overall	482

- CPLD 3

Table 6. CPLD 3 Resource Evaluation

Functional Module	EST. Macrocell used
Fan Modules Interrupt converge	8
Fan Modules speed control	96
Fan Modules RPM monitor	28
Fan Modules control	12
Fan Modules LED control	8
Overall	152

3.3 CPLD I/O Resource Evaluation

- CPLD 1

Table 7. CPLD 1 IO Allocation

Function	I/O number needed
Port LEDs control	$20 + 2(\text{LED}\backslash\text{CLK}) = 22$
Reset fanout	5 (CPU\MAC\PHY\CPLD)
Interrupt converge	$20 (\text{Optical Module present}) + 1 (\text{PCIe}) + 1 + \text{Power} (2*2) = 26$
Optical Module control	20
Clock Chip configuration	8
Voltage Monitor	32
Others	$20 (\text{Optical Module}) + 3 (\text{Temperature}) + 2 \text{Power}) + 1 (\text{RTC}) = 26*2 = 52$
Front Panel Status LED control, Power Good Monitor	$2 + 2 = 4$
Power Up Enable	4
Clock	2
Misc	73
Overall	248

- CPLD 2

Table 8. CPLD 2 IO Allocation

Function	I/O number needed
Port LEDs control	32
Optical Modules Reset fanout	32
Optical Modules Interrupt converge	32
MAC ASIC AVS Core voltage control	10
Others	84
Overall	190

- CPLD 3

Table 9. CPLD 3 IO Allocation

Function	I/O number needed
Port LEDs control	32
Optical Modules Reset fanout	32
Optical Modules Interrupt converge	32
MAC ASIC AVS Core voltage control	10
Others	84
Overall	190

3.4 CPLD Model Selection

- CPLD 1

MachXO3 series CPLD model LCMXO3LF-2100C-5B256C from Lattice company

Table 11. CPLD 1 Parameter

Item	CPLD Characteristic	Design Need
Package Type	BGA	BGA
Macrocell	2100	844
I/O Number	207 (201 available)	201
Level	3.3V, 2.5V, 1.8V, 1.5V	3.3V
Pin-to-Pin Latency	6.96 ns	/
In-chip RAM	74 kbit	/
Pins Interval	0.8 mm	/
Area	196 mm ²	/
L x W	14 mm * 14 mm	/
Starting Time	1.4 ms	/

- CPLD 2

MachXO3 series CPLD model LCMXO3LF-2100C-5B256C from Lattice company

Table 12. CPLD 2 Parameter

Item	CPLD Characteristic	Design Need
Package Type	BGA	BGA
Macrocell	2100	482
I/O Number	207 (201 available)	190
Level	3.3V, 2.5V, 1.8V, 1.5V	3.3V

Pin-to-Pin Latency	6.96 ns	/
In-chip RAM	74 kbit	/
Pins Interval	0.8 mm	/
Area	196 mm ²	/
L x W	14 mm * 14 mm	/
Starting Time	1.4 ms	/

- CPLD 3

MachXO2 series CPLD model LCMXO2-1200HC-4TG144C from Lattice company

Table 13. CPLD 3 Parameter

Item	CPLD Characteristic	Design Need
Package Type	BGA	BGA
Macrocell	1280	152
I/O Number	107	46
Level	3.3V, 2.5V, 1.8V, 1.5V, 1.2V	3.3V
Pin-to-Pin Latency	6.96 ns	/
In-chip RAM	64 kbit	/
Pins Interval	1.6 mm	/
Area	400 mm ²	/
L x W	20 mm * 20 mm	/
Starting Time	1.9 ms	/

3.4 CPLD I/O Allocation

- CPLD 1

Table 14. CPLD 1 IO

Net Name	IO Direction	Note	
GND	/	GND/GND/GND	B2
GND	/	GND/GND/GND	R15
GND	/	GND/GND/GND	B15
GND	/	GND/GND/GND	C3
GND	/	GND/GND/GND	C14
GND	/	GND/GND/GND	D4

GND	/	GND/GND/GND	D13
GND	/	GND/GND/GND	E5
GND	/	GND/GND/GND	E12
GND	/	GND/GND/GND	F6
GND	/	GND/GND/GND	F11
GND	/	GND/GND/GND	H8
GND	/	GND/GND/GND	H9
GND	/	GND/GND/GND	J8
GND	/	GND/GND/GND	J9
GND	/	GND/GND/GND	L6
GND	/	GND/GND/GND	L11
GND	/	GND/GND/GND	M5
GND	/	GND/GND/GND	M12
GND	/	GND/GND/GND	N4
GND	/	GND/GND/GND	N13
GND	/	GND/GND/GND	P3
GND	/	GND/GND/GND	P14
GND	/	GND/GND/GND	R2
/	/	NC/NC/NC	A2
RESETL38	out	PB11A/PB13A/PB16A PCLKT2_0	T7
MODPRSL39	in	PB11B/PB13B/PB16B PCLKC2_0	R8
LINKACT43	out	PB11C/PB12A/PB15A	M6
LINKACT8	out	PB11D/PB12B/PB15B	L8
LINKACT41	out	PB12A/PB15A/PB18A	P8
LINKACT13	out	PB12B/PB15B/PB18B	T8
RESETL43	out	PB12C/PB15C/PB18C	N8
LINKACT7	out	PB12D/PB15D/PB18D	L9
INTL6	in	PB16A/PB20A/PB23A PCLKT2_1	T9
LINKACT38	out	PB16B/PB20B/PB23B PCLKC2_1	P9
LINKACT42	out	PB16C/PB18A/PB21A	M8

RESETL7	out	PB16D/PB18B/PB21B	N9
MODPRSL6	in	PB18A/PB21A/PB26A	R9
INTL40	in	PB18B/PB21B/PB26B	T10
RESETL12	out	PB18C	M9
LINKACT6	out	PB18D/PB21D/PB26D	L10
MODPRSL9	in	PB19A/PB23A/PB29A	P10
MODPRSL38	in	PB19B/PB23B/PB29B	R10
LINKACT39	out	PB19C/PB23C/PB28A	N10
RESETL44	out	PB19D/PB23D/PB28B	M11
INTL39	in	PB21A/PB24A/PB31A	T11
MODPRSL8	in	PB21B/PB24B/PB31B	P11
RESETL42	out	PB21C/PB24C/PB31C	M10
LINKACT40	out	PB21D/PB24D/PB31D	N11
INTL9	in	PB22A/PB27A/PB35A	R11
INTL41	in	PB22B/PB27B/PB35B	T12
MODPRSL40	in	PB22C/PB26A/PB34A	R13
RESETL45	out	PB22D	T14
MODPRSL43	in	PB24A/PB29A/PB37A	P12
RESETL13	out	PB24B/PB29B/PB37B	T13
MODPRSL7	in	PB25A/PB30A/PB38A SN	R12
INTL10	in	PB25B/PB30B/PB38B SI/SISPI	P13
INTL8	in	PB25C/PB30C/PB38C	T15
MODPRSL41	in	PB25D/PB30D/PB38D	R14
RESETL6	out	PB3A/PB3A/PB4A	P4
MODPRSL5	in	PB3B/PB3B/PB4B	T4
INTL0	in	PB3C/PB3C/PB4C	T2
RESETL9	out	PB3D	R3
MODPRSL37	in	PB5A	R5
LINKACT12	out	PB5B/PB4B/PB6B	P5
RESETL10	out	PB6A/PB7A/PB9A	T5
LINKACT11	out	PB6B/PB7B/PB9B	R6
INTL4	in	PB6C/PB6A/PB7A	T3
LINKACT45	out	PB6D/PB6B/PB7B	R4
LINKACT44	out	PB8A/PB9A/PB12A MCLK/CCLK	P6

MODPRSL4	in	PB8B/PB9B/PB12B SO/SPISO	T6
LINKACT14	out	PB8C/PB9C/PB10A	N6
RESETL11	out	PB8D/PB9D/PB10B	L7
INTL38	in	PB9A/PB10A/PB13A	R7
INTL7	in	PB9B/PB10B/PB13B	P7
RESETL39	out	PB9C/PB10C/PB13C	M7
LINKACT47	out	PB9D/PB10D/PB13D	N7
LINKACT1	out	PL10A/PL14A/PL17A	K3
MODPRSL2	in	PL10B/PL14B/PL17B	K2
LINKACT32	out	PL10C/PL14C/PL16C	J5
RESETL37	out	PL10D/PL14D/PL16D	K6
INTL3	in	PL11A/PL16A/PL19A	L1
LINKACT2	out	PL11B/PL16B/PL19B	L3
RESETL4	out	PL11C/PL16C/PL19C	K4
LINKACT35	out	PL11D/PL16D/PL19D	L5
MODPRSL34	in	PL12A/PL17A/PL22A PCLKT3_0	L2
MODPRSL3	in	PL12B/PL17B/PL22B PCLKC3_0	M1
LINKACT36	out	PL12C/PL17C/PL21C	K5
RESETL5	out	PL12D/PL17D/PL21D	L4
LINKACT46	out	PL13A/PL19A/PL24A	M3
INTL37	in	PL13B/PL19B/PL24B	N1
RESETL40	out	PL13C/PL18C/PL23C	N2
INTL5	in	PL13D/PL18D/PL23D	P1
LINKACT15	out	PL14A	M2
RESETL36	out	PL14B/PL20B/PL25B	N3
INTL36	in	PL14C/PL20C/PL25C	R1
MODPRSL36	in	PL14D/PL20D/PL25D	P2
RESETL0	out	PL1A/PL3A/PL3A L_GPLLT_FB	D3
MODPRSL33	in	PL1B/PL3B/PL3B L_GPLLC_FB	D1
MAC_PCIE_INT#	out	PL1C/PL2C/PL2C	B1
INTL33	in	PL1D/PL2D/PL2D	C2
MODPRSL1	in	PL2A	E2
INTL14	in	PL2B/PL4B/PL4B L_GPLLC_IN	E3
RESETL32	out	PL2C/PL4C/PL4C	C1

INTL1	in	PL2D/PL4D/PL4D	D2
INTL32	in	PL3A/PL6A/PL6A PCLKT5_0	E1
RESETL8	out	PL3B/PL6B/PL6B PCLKC5_0	F2
MODPRSL15	in	PL3C/PL6C/PL6C	F4
INTL15	in	PL3D/PL6D/PL6D	G6
RESETL1	out	PL4A	F3
LINKACT37	out	PL4B/PL7B/PL8B	F1
LINKACT4	out	PL4C/PL7C/PL7C	G5
MODPRSL14	in	PL4D/PL7D/PL7D	G4
MODPRSL32	in	PL5A/PL8A/PL9A	G2
RESETL33	out	PL5B/PL8B/PL9B	G3
MODPRSL46	in	PL5C/PL8C/PL9C	F5
LINKACT33	out	PL5D/PL8D/PL9D	H6
MODPRSL0	in	PL6A/PL9A/PL10A	G1
RESETL41	out	PL6B/PL9B/PL10B	H2
INTL2	in	PL6C/PL9C/PL10C	H4
LINKACT5	out	PL6D/PL9D/PL10D	J6
LINKACT34	out	PL7A/PL10A/PL11A	H3
MODPRSL35	in	PL7B/PL10B/PL11B	H1
INTL35	in	PL7C/PL10C/PL12A PCLKT4_0	J1
RESETL34	out	PL7D/PL10D/PL12B PCLKC4_0	J3
INTL34	in	PL9A/PL13A/PL15A	J2
RESETL3	out	PL9B/PL13B/PL15B	K1
LINKACT3	out	PL9C/PL13C/PL15C	H5
LINKACT0	out	PL9D/PL13D/PL15D	J4
MODPRSL45	in	PR10A/PR14A/PR17A	K14
MODPRSL11	in	PR10B/PR14B/PR17B	K15
CPLD_RESERVE4	inout	PR10C/PR14C/PR17C	J11
CPLD_RESERVE2	inout	PR10D/PR14D/PR17D	L12
SECOND_CPLD_RST#	out	PR11A/PR15A/PR18A	L16
LINKACT9	out	PR11B/PR15B/PR18B	L14
LINKACT10	out	PR11C/PR15C/PR19C	K13
CPLD_RESERVE1	inout	PR11D/PR15D/PR19D	K12
MODPRSL42	in	PR12A/PR16A/PR21A	L15

INTL42	in	PR12B/PR16B/PR21B	M16
LED_CLK1	in	PR12C/PR16C/PR21C	K11
LED_DATA1	in	PR12D/PR16D/PR21D	L13
INTL43	in	PR13A/PR18A/PR23A	M14
INTL11	in	PR13B/PR18B/PR23B	M15
LED_CLK0	in	PR13C/PR18C/PR23C	N15
LED_DATA0	in	PR13D/PR18D/PR23D	P16
CPLD_RESERVE5	/	PR14A/PR19A/PR24A	N16
MODPRSL10	in	PR14B/PR19B/PR24B	N14
MAIN_PWR_EN	in	PR14C/PR20C/PR25C	P15
SW_BOARD_PWR_EN	in	PR14D/PR20D/PR25D	R16
TPS3823_WDI	out	PR1A/PR2A/PR2A R_GPLLT_FB**	D14
TPS3823_MR_N	out	PR1B/PR2B/PR2B R_GPLLC_FB**	E15
RESETL15	out	PR1C/PR2C/PR2C	C15
RESETL46	out	PR1D/PR2D/PR2D	B16
TPS3823_RESET#	in	PR2A/PR3A/PR3A R_GPLLT_IN**	D16
/	out	PR2B/PR3B/PR3B R_GPLLC_IN**	E14
RESETL47	out	PR2C/PR4C/PR4C	C16
CPLD_CDCM_MOSI	Out	PR2D/PR4D/PR4D	D15
MODPRSL13	in	PR3A/PR5A/PR5A	E16
INTL47	in	PR3B/PR5B/PR5B	F15
RESETL14	out	PR3C/PR5C/PR6C	F13
LPC_LAD2	inout	PR3D/PR5D/PR6D	G12
RESETL35	out	PR4A/PR6A/PR7A	F14
INTL13	in	PR4B/PR6B/PR7B	F16
LPC_LAD0	inout	PR4C/PR6C/PR7C	F12
LPC_LAD1	inout	PR4D/PR6D/PR7D	G13
MODPRSL47	in	PR5A/PR8A/PR9A	G15
LPC_LCLK	in	PR5B/PR8B/PR9B	G14
LPC_LFRAME#	in	PR5C/PR8C/PR10C	G11

LPC_SERIRQ	out	PR5D/PR8D/PR10D	H12
MODPRSL12	in	PR6A/PR9A/PR11A DQS0	G16
INTL44	in	PR6B/PR9B/PR11B DQS0N	H15
LPC_LAD3	inout	PR6C/PR9C/PR11C	H13
CPLD_RESERVE3	inout	PR6D	J12
MODPRSL44	in	PR7A/PR10A/PR12A PCLKT1_0	H14
INTL12	in	PR7B/PR10B/PR12B PCLKC1_0	H16
zQSFP+4_3.3V	in	PR7C/PR10C/PR15A	J16
VMON_PWM_OUT	in	PR7D/PR10D/PR15B	J14
INTL45	in	PR9A/PR13A/PR16A DQS1	J15
SECOND_CPLD_OE_N	out	PR9B/PR13B/PR16B DQS1N	K16
zQSFP+3_3.3V	in	PR9C	H11
VMON_PWM_OUT	in	PR9D/PR13D/PR16D	J13
CPLD_CDCM_SCK	Out	PT10A	A4
MAC_BCM56970_RST#	out	PT10B	C5
CPLD_CDCM_MISO	in	PT11A	A5
CPLD_CDCM_RST	out	PT11B	B6
VMON_PWM_OUT	out	PT11C/PT12A*/PT12A*	A3
MAC_PCIE_RST#	out	PT11D/PT12B*/PT12B*	B4
RESETL2	out	PT12A*/PT13A*/PT14A*	D6
INTL46	in	PT12B*/PT13B*/PT14B*	E7
MASTER_CPLD_JTAG_TDO	out	PT12C/PT13C/PT14C TDO	C6
MASTER_CPLD_JTAG_TDI	in	PT12D	A6
SW_BOARD_RST#	in	PT13A*/PT14A*/PT15A*	B7
CPLD_CDCM_PDN	out	PT13B*/PT14B*/PT15B*	C7
SW_BOARD_INT#	out	PT13C/PT14C/PT16A*	E6
CPLD_QSFP_EN	out	PT13D	D7
SW_RESERVE1	inout	PT16A*/PT15A*/PT17A*	F7
SW_RESERVE2	inout	PT16B*/PT15B*/PT17B*	E8
MASTER_CPLD_JTAG_TCK	in	PT16C/PT15C/PT17C TCK	A7
MASTER_CPLD_JTAG_TMS	in	PT16D/PT15D/PT17D TMS	B8
MASTER_CPLD_CLK_P	in	PT17A*/PT18A*/PT18A* PCLKT0_1	C8

MASTER_CPLD_CLK_N	in	PT17B*/PT18B*/PT18B* PCLKC0_1	A8
CPU_I2C_SDA	inout	PT17C/PT19A*/PT21A*	D8
CPU_I2C_SCL	in	PT17D/PT19B*/PT21B*	E9
N16843197	in	PT18A*/PT20A*/PT22A*	F8
VMON_PWM_OUT	in	PT18B*/PT20B*/PT22B*	D9
BMC_I2C_SCL	in	PT18C/PT20C/PT22C SCL/PCLKT0_0	A9
BMC_I2C_SDA	inout	PT18D/PT20D/PT22D SCL/PCLKC0_0	C9
N16841642	in	PT19A*/PT21A*/PT25A*	B9
VMON_PWM_OUT	in	PT19B*/PT21B*/PT25B*	A10
N16841819	in	PT19C/PT22A*/PT26A*	F9
VMON_PWM_OUT	in	PT19D/PT22B*/PT26B*	E11
N16841878	in	PT20A*/PT23A*/PT27A*	D10
VMON_PWM_OUT	in	PT20B*/PT23B*/PT27B*	E10
/	/	JTAGENB	C10
/	/	PT20D/PT23D/PT27D PROGRAMN	B10
zQSFP+1_3.3V	in	PT21A*/PT24A*/PT28A*	A11
VMON_PWM_OUT	in	PT21B*/PT24B*/PT28B*	C11
N16843767	in	PT21C/PT24C/PT32A*	F10
VMON_PWM_OUT	in	PT21D/PT24D/PT32B*	D11
VDD1.8V	in	PT22A	B11
VMON_PWM_OUT	in	PT22B*/PT25B*/PT33B*	A12
N27651417	in	PT22C/PT26A*/PT34A*	B13
VMON_PWM_OUT	in	PT22D/PT26B*/PT34B*	A14
zQSFP+2_3.3V	in	PT23A*/PT27A*/PT35A*	C12
VMON_PWM_OUT	in	PT23B*/PT27B*/PT35B*	B12
N31042820	in	PT24A*/PT28A*/PT36A*	B14
VMON_PWM_OUT	in	PT24B*/PT28B*/PT36B*	A15
E2_WP	Out	PT24C/PT28C/PT36C INITN	A13
SECOND_CPLD_INT#	In	PT24D	C13
CDCM_STA	In	PT9A*/PT9A*/PT9A*	C4

CPLD_CDCM_SS	Out	PT9B*/PT9B*/PT9B*	B5
CPLD_CDCM_SYNCN	Out	PT9C/PT9C/PT9C	B3
CPLD_VDD3.3V	/	VCC/VCC/VCC	A1
CPLD_VDD3.3V	/	VCC/VCC/VCC	T16
CPLD_VDD3.3V	/	VCC/VCC/VCC	A16
CPLD_VDD3.3V	/	VCC/VCC/VCC	G7
CPLD_VDD3.3V	/	VCC/VCC/VCC	G10
CPLD_VDD3.3V	/	VCC/VCC/VCC	K7
CPLD_VDD3.3V	/	VCC/VCC/VCC	K10
CPLD_VDD3.3V	/	VCC/VCC/VCC	T1
CPLD_VDD3.3V	/	VCCIO0/VCCIO0/VCCIO0	G8
CPLD_VDD3.3V	/	VCCIO0/VCCIO0/VCCIO0	G9
CPLD_VDD3.3V	/	VCCIO0/VCCIO0/VCCIO0	D5
CPLD_VDD3.3V	/	VCCIO0/VCCIO0/VCCIO0	D12
CPLD_VDD3.3V	/	VCCIO1/VCCIO1/VCCIO1	J10
CPLD_VDD3.3V	/	VCCIO1/VCCIO1/VCCIO1	M13
CPLD_VDD3.3V	/	VCCIO1/VCCIO1/VCCIO1	E13
CPLD_VDD3.3V	/	VCCIO1/VCCIO1/VCCIO1	H10
CPLD_VDD3.3V	/	VCCIO2/VCCIO2/VCCIO2	N5
CPLD_VDD3.3V	/	VCCIO2/VCCIO2/VCCIO2	N12
CPLD_VDD3.3V	/	VCCIO2/VCCIO2/VCCIO2	K8
CPLD_VDD3.3V	/	VCCIO2/VCCIO2/VCCIO2	K9
CPLD_VDD3.3V	/	VCCIO3/VCCIO3/VCCIO3	M4
CPLD_VDD3.3V	/	VCCIO4/VCCIO4/VCCIO4	H7
CPLD_VDD3.3V	/	VCCIO4/VCCIO4/VCCIO4	J7
CPLD_VDD3.3V	/	VCCIO5/VCCIO5/VCCIO5	E4

- CPLD 2

Table 15. CPLD 2 IO

Net Name	IO Direction	Note	
GND	/	GND/GND/GND	B2
GND	/	GND/GND/GND	R15

GND	/	GND/GND/GND	B15
GND	/	GND/GND/GND	C3
GND	/	GND/GND/GND	C14
GND	/	GND/GND/GND	D4
GND	/	GND/GND/GND	D13
GND	/	GND/GND/GND	E5
GND	/	GND/GND/GND	E12
GND	/	GND/GND/GND	F6
GND	/	GND/GND/GND	F11
GND	/	GND/GND/GND	H8
GND	/	GND/GND/GND	H9
GND	/	GND/GND/GND	J8
GND	/	GND/GND/GND	J9
GND	/	GND/GND/GND	L6
GND	/	GND/GND/GND	L11
GND	/	GND/GND/GND	M5
GND	/	GND/GND/GND	M12
GND	/	GND/GND/GND	N4
GND	/	GND/GND/GND	N13
GND	/	GND/GND/GND	P3
GND	/	GND/GND/GND	P14
GND	/	GND/GND/GND	R2
/	/	NC/NC/NC	A2
RESETL57	out	PB11A/PB13A/PB16A PCLKT2_0	T7
INTL56	in	PB11B/PB13B/PB16B PCLKC2_0	R8
LINKACT30	out	PB11C/PB12A/PB15A	M6
LINKACT27	out	PB11D/PB12B/PB15B	L8
INTL58	in	PB12A/PB15A/PB18A	P8
MODPRSL59	in	PB12B/PB15B/PB18B	T8
RESETL27	out	PB12C/PB15C/PB18C	N8
LINKACT58	out	PB12D/PB15D/PB18D	L9

MODPRSL58	in	PB16A/PB20A/PB23A PCLKT2_1	T9
INTL27	in	PB16B/PB20B/PB23B PCLKC2_1	P9
LINKACT61	out	PB16C/PB18A/PB21A	M8
LINKACT24	out	PB16D/PB18B/PB21B	N9
RESETL59	out	PB18A/PB21A/PB26A	R9
LINKACT25	out	PB18B/PB21B/PB26B	T10
LINKACT59	out	PB18C	M9
LINKACT57	out	PB18D/PB21D/PB26D	L10
MODPRSL61	in	PB19A/PB23A/PB29A	P10
MODPRSL27	in	PB19B/PB23B/PB29B	R10
RESETL28	out	PB19C/PB23C/PB28A	N10
LINKACT23	out	PB19D/PB23D/PB28B	M11
RESETL61	out	PB21A/PB24A/PB31A	T11
INTL61	in	PB21B/PB24B/PB31B	P11
LINKACT56	out	PB21C/PB24C/PB31C	M10
CPU_STATUS_LED	out	PB21D/PB24D/PB31D	N11
INTL26	in	PB22A/PB27A/PB35A	R11
INTL59	in	PB22B/PB27B/PB35B	T12
RESETL60	out	PB22C/PB26A/PB34A	R13
MODPRSL28	in	PB22D/PB26B/PB34B	T14
RESETL29	out	PB24A/PB29A/PB37A	P12
MODPRSL26	in	PB24B/PB29B/PB37B	T13
LINKACT56	out	PB25A/PB30A/PB38A SN	R12
INTL28	in	PB25B	P13
RESETL48	out	PB25C/PB30C/PB38C	T15
INTL60	in	PB25D/PB30D/PB38D	R14
RESETL25	out	PB3A/PB3A/PB4A	P4
MODPRSL25	in	PB3B/PB3B/PB4B	T4
INTL18	in	PB3C/PB3C/PB4C	T2
MODPRSL57	in	PB3D/PB3D/PB4D	R3
RESETL56	out	PB5A/PB4A/PB6A CSSPIN	R5
MODPRSL24	in	PB5B/PB4B/PB6B	P5

RESETL24	out	PB6A/PB7A/PB9A	T5
INTL25	in	PB6B/PB7B/PB9B	R6
MODPRSL56	in	PB6C/PB6A/PB7A	T3
INTL51	in	PB6D/PB6B/PB7B	R4
RESETL26	out	PB8A/PB9A/PB12A MCLK/CCLK	P6
INTL57	in	PB8B	T6
INTL63	in	PB8C/PB9C/PB10A	N6
LINKACT29	out	PB8D/PB9D/PB10B	L7
INTL24	in	PB9A/PB10A/PB13A	R7
MODPRSL30	in	PB9B/PB10B/PB13B	P7
RESETL58	out	PB9C/PB10C/PB13C	M7
INTL30	in	PB9D/PB10D/PB13D	N7
RESETL22	out	PL10A/PL14A/PL17A	K3
MODPRSL20	in	PL10B/PL14B/PL17B	K2
LINKACT63	out	PL10C/PL14C/PL16C	J5
LINKACT60	out	PL10D/PL14D/PL16D	K6
INTL54	in	PL11A/PL16A/PL19A	L1
MODPRSL62	in	PL11B	L3
RESETL54	out	PL11C/PL16C/PL19C	K4
LINKACT62	out	PL11D/PL16D/PL19D	L5
RESETL51	out	PL12A	L2
MODPRSL55	in	PL12B	M1
BMC_STATUS_LED	out	PL12C/PL17C/PL21C	K5
MODPRSL31	in	PL12D/PL17D/PL21D	L4
RESETL18	out	PL13A/PL19A/PL24A	M3
MODPRSL23	in	PL13B/PL19B/PL24B	N1
MODPRSL54	in	PL13C/PL18C/PL23C	N2
INTL22	in	PL13D/PL18D/PL23D	P1
INTL23	in	PL14A/PL20A/PL25A	M2
MODPRSL22	in	PL14B/PL20B/PL25B	N3
RESETL19	out	PL14C/PL20C/PL25C	R1
INTL55	in	PL14D/PL20D/PL25D	P2
RESETL50	out	PL1A/PL3A/PL3A L_GPLLT_FB	D3

INTL16	in	PL1B/PL3B/PL3B L_GPLLC_FB	D1
MODPRSL49	in	PL1C/PL2C/PL2C	B1
INTL17	in	PL1D/PL2D/PL2D	C2
INTL19	in	PL2A/PL4A/PL4A L_GPLLT_IN	E2
MODPRSL19	in	PL2B	E3
RESETL21	out	PL2C	C1
INTL49	in	PL2D/PL4D/PL4D	D2
INTL50	in	PL3A/PL6A/PL6A PCLKT5_0	E1
MODPRSL18	in	PL3B/PL6B/PL6B PCLKC5_0	F2
RESETL21	out	PL3C/PL6C/PL6C	F4
LINKACT26	out	PL3D/PL6D/PL6D	G6
RESETL20	out	PL4A/PL7A/PL8A	F3
MODPRSL53	in	PL4B/PL7B/PL8B	F1
INTL62	in	PL4C/PL7C/PL7C	G5
INTL31	in	PL4D/PL7D/PL7D	G4
INTL52	in	PL5A/PL8A/PL9A	G2
MODPRSL52	in	PL5B/PL8B/PL9B	G3
RESETL53	out	PL5C/PL8C/PL9C	F5
LINKACT31	out	PL5D/PL8D/PL9D	H6
INTL53	in	PL6A/PL9A/PL10A	G1
MODPRSL21	in	PL6B/PL9B/PL10B	H2
RESETL55	out	PL6C/PL9C/PL10C	H4
LINKACT28	out	PL6D/PL9D/PL10D	J6
/	/	PL7A/PL10A/PL11A	H3
/	/	PL7B/PL10B/PL11B	H1
/	/	PL7C/PL10C/PL12A PCLKT4_0	J1
/	/	PL7D/PL10D/PL12B PCLKC4_0	J3
INTL21	in	PL9A/PL13A/PL15A	J2
INTL20	in	PL9B/PL13B/PL15B	K1
RESETL23	out	PL9C/PL13C/PL15C	H5
MODPRSL63	in	PL9D/PL13D/PL15D	J4
LINKACT50	out	PR10A/PR14A/PR17A	K14
LINKACT48	out	PR10B/PR14B/PR17B	K15
LPC_LAD0	inout	PR10C	J11

LINKACT22	out	PR10D	L12
RESETL30	out	PR11A/PR15A/PR18A	L16
LINKACT53	out	PR11B	L14
LINKACT18	out	PR11C/PR15C/PR19C	K13
LINKACT52	out	PR11D/PR15D/PR19D	K12
RESETL16	out	PR12A/PR16A/PR21A	L15
LINKACT16	out	PR12B/PR16B/PR21B	M16
LINKACT20	out	PR12C/PR16C/PR21C	K11
LINKACT54	out	PR12D/PR16D/PR21D	L13
LINKACT21	out	PR13A/PR18A/PR23A	M14
MODPRSL16	in	PR13B/PR18B/PR23B	M15
MODPRSL29	in	PR13C/PR18C/PR23C	N15
MODPRSL51	in	PR13D/PR18D/PR23D	P16
RESETL17	out	PR14A	N16
INTL29	in	PR14B	N14
RESETL49	out	PR14C/PR20C/PR25C	P15
MODPRSL60	in	PR14D/PR20D/PR25D	R16
AVS_IN2	in	PR1A/PR2A/PR2A R_GPLLT_FB**	D14
FAN_STATUS_LED	out	PR1B/PR2B/PR2B R_GPLLC_FB**	E15
/	/	PR1C/PR2C/PR2C	C15
/	/	PR1D/PR2D/PR2D	B16
RESETL63	out	PR2A/PR3A/PR3A R_GPLLT_IN**	D16
AVS_IN1	in	PR2B/PR3B/PR3B R_GPLLC_IN**	E14
/	/	PR2C/PR4C/PR4C	C16
/	/	PR2D/PR4D/PR4D	D15
LINKACT19	out	PR3A/PR5A/PR5A	E16
LOCATOR_LED	out	PR3B	F15
/	/	PR3C/PR5C/PR6C	F13
/	/	PR3D/PR5D/PR6D	G12
RESETL62	out	PR4A/PR6A/PR7A	F14

SWITCH	in	PR4B/PR6B/PR7B	F16
/	/	PR4C/PR6C/PR7C	F12
/	/	PR4D/PR6D/PR7D	G13
LINKACT51	out	PR5A/PR8A/PR9A	G15
AVS_IN3	in	PR5B/PR8B/PR9B	G14
LINKACT17	out	PR5C/PR8C/PR10C	G11
LINKACT49	out	PR5D/PR8D/PR10D	H12
RESETL31	out	PR6A/PR9A/PR11A DQS0	G16
PWR_STATUS_LED	out	PR6B/PR9B/PR11B DQS0N	H15
LPC_LAD2	inout	PR6C	H13
LPC_LCLK	in	PR6D	J12
ISL68127_SALRT	in	PR7A/PR10A/PR12A PCLKT1_0	H14
ISL68127_TWARN	in	PR7B/PR10B/PR12B PCLKC1_0	H16
LPC_LAD1	inout	PR7C	J16
LPC_LFRAME#	in	PR7D	J14
ISL68127_PG1	in	PR9A/PR13A/PR16A DQS1	J15
ISL68127_PG0	in	PR9B/PR13B/PR16B DQS1N	K16
LPC_SERIRQ	out	PR9C	H11
LPC_LAD3	inout	PR9D/PR13D/PR16D	J13
RST#_9548_0	out	PT10A*/PT10A*/PT10A*	A4
RST#_9548_1	out	PT10B*/PT10B*/PT10B*	C5
RST#_9548_2	out	PT11A*/PT11A*/PT11A*	A5
RST#_9548_3	out	PT11B*/PT11B*/PT11B*	B6
RST#_9548_4	out	PT11C/PT12A*/PT12A*	A3
RST#_9548_5	out	PT11D/PT12B*/PT12B*	B4
RST#_9548_6	out	PT12A*/PT13A*/PT14A*	D6
RST#_9548_7	out	PT12B*/PT13B*/PT14B*	E7
SECOND_CPLD_JTAG_TDO	out	PT12C/PT13C/PT14C TDO	C6
SECOND_CPLD_JTAG_TDI	in	PT12D/PT13D/PT14D TDI	A6
CPLD_RESERVE3	inout	PT13A*/PT14A*/PT15A*	B7
CPLD_RESERVE4	inout	PT13B*/PT14B*/PT15B*	C7
CPLD_RESERVE1	inout	PT13C/PT14C/PT16A*	E6
CPLD_RESERVE2	inout	PT13D/PT14D/PT16B*	D7

CPLD_RESERVE5	inout	PT16A*/PT15A*/PT17A*	F7
/	/	PT16B*/PT15B*/PT17B*	E8
SECOND_CPLD_JTAG_TCK	in	PT16C/PT15C/PT17C TCK	A7
SECOND_CPLD_JTAG_TMS	in	PT16D/PT15D/PT17D TMS	B8
SECOND_CPLD_CLK_P	in	PT17A*/PT18A*/PT18A* PCLKT0_1	C8
SECOND_CPLD_CLK_N	in	PT17B*/PT18B*/PT18B* PCLKC0_1	A8
MODPRSL50	in	PT17C/PT19A*/PT21A*	D8
SECOND_CPLD_RST#	in	PT17D/PT19B*/PT21B*	E9
CPU_I2C_SDA	inout	PT18A*/PT20A*/PT22A*	F8
CPU_I2C_SCL	in	PT18B*/PT20B*/PT22B*	D9
BMC_I2C_SCL	in	PT18C/PT20C/PT22C SCL/PCLKT0_0	A9
BMC_I2C_SDA	inout	PT18D	C9
/	/	PT19A*/PT21A*/PT25A*	B9
/	/	PT19B*/PT21B*/PT25B*	A10
SECOND_CPLD_INT#	out	PT19C/PT22A*/PT26A*	F9
SECOND_CPLD_OE_N	in	PT19D/PT22B*/PT26B*	E11
/	/	PT20A	D10
/	/	PT20B*/PT23B*/PT27B*	E10
/	/	PT20C/PT23C/PT27C JTAGENB	C10
/	/	PT20D/PT23D/PT27D PROGRAMN	B10
AVS_IN7	in	PT21A*/PT24A*/PT28A*	A11
MODPRSL17	in	PT21B*/PT24B*/PT28B*	C11
INTL48	in	PT21C/PT24C/PT32A*	F10
MODPRSL48	in	PT21D/PT24D/PT32B*	D11
AVS_IN0	in	PT22A*/PT25A*/PT33A*	B11
AVS_IN6	in	PT22B*/PT25B*/PT33B*	A12
AVS_IN5	in	PT22C/PT26A*/PT34A*	B13

AVS_IN4	in	PT22D/PT26B*/PT34B*	A14
LED_DATA2	in	PT23A*/PT27A*/PT35A*	C12
LED_CLK2	in	PT23B*/PT27B*/PT35B*	B12
LED_DATA3	in	PT24A*/PT28A*/PT36A*	B14
LED_CLK3	in	PT24B*/PT28B*/PT36B*	A15
LM75_48_INT#	in	PT24C/PT28C/PT36C INITN	A13
LM75_4A_INT#	in	PT24D/PT28D/PT36D DONE	C13
/	/	PT9A*/PT9A*/PT9A*	C4
/	/	PT9B*/PT9B*/PT9B*	B5
CPU_I2C_RST#	in	PT9C/PT9C/PT9C	B3
CPLD_VDD3.3V	/	VCC/VCC/VCC	A1
CPLD_VDD3.3V	/	VCC/VCC/VCC	T16
CPLD_VDD3.3V	/	VCC/VCC/VCC	A16
CPLD_VDD3.3V	/	VCC/VCC/VCC	G7
CPLD_VDD3.3V	/	VCC/VCC/VCC	G10
CPLD_VDD3.3V	/	VCC/VCC/VCC	K7
CPLD_VDD3.3V	/	VCC/VCC/VCC	K10
CPLD_VDD3.3V	/	VCC/VCC/VCC	T1
CPLD_VDD3.3V	/	VCCIO0/VCCIO0/VCCIO0	G8
CPLD_VDD3.3V	/	VCCIO0/VCCIO0/VCCIO0	G9
CPLD_VDD3.3V	/	VCCIO0/VCCIO0/VCCIO0	D5
CPLD_VDD3.3V	/	VCCIO0/VCCIO0/VCCIO0	D12
CPLD_VDD3.3V	/	VCCIO1/VCCIO1/VCCIO1	J10
CPLD_VDD3.3V	/	VCCIO1/VCCIO1/VCCIO1	M13
CPLD_VDD3.3V	/	VCCIO1/VCCIO1/VCCIO1	E13
CPLD_VDD3.3V	/	VCCIO1/VCCIO1/VCCIO1	H10
CPLD_VDD3.3V	/	VCCIO2/VCCIO2/VCCIO2	N5
CPLD_VDD3.3V	/	VCCIO2/VCCIO2/VCCIO2	N12
CPLD_VDD3.3V	/	VCCIO2/VCCIO2/VCCIO2	K8
CPLD_VDD3.3V	/	VCCIO2/VCCIO2/VCCIO2	K9
CPLD_VDD3.3V	/	VCCIO3/VCCIO3/VCCIO3	M4
CPLD_VDD3.3V	/	VCCIO4/VCCIO4/VCCIO4	H7
CPLD_VDD3.3V	/	VCCIO4/VCCIO4/VCCIO4	J7
CPLD_VDD3.3V	/	VCCIO5/VCCIO5/VCCIO5	E4

▪ CPLD 3

Table 16. CPLD 3 IO

Net Name	IO Direction	Note	
GND	/	GND_1	U1.8
GND	/	GND_10	U1.116
GND	/	GND_11	U1.124
GND	/	GND_12	U1.134
GND	/	GND_2	U1.18
GND	/	GND_3	U1.29
GND	/	GND_4	U1.46
GND	/	GND_5	U1.53
GND	/	GND_6	U1.64
GND	/	GND_7	U1.80
GND	/	GND_8	U1.90
GND	/	GND_9	U1.101
CPU_RESERVE1	inout	PB11A/PCLKT2_1	U1.55
CPU_RESERVE2	inout	PB11B/PCLKC2_1	U1.56
LPC_LAD0	inout	PB11C	U1.52
LPC_LAD1	inout	PB11D	U1.54
LPC_LAD2	inout	PB15A	U1.57
LPC_LAD3	inout	PB15B	U1.58
LPC_LCLK	in	PB15C	U1.59
LPC_LFRAME#	in	PB15D	U1.60
LPC_SERIRQ	out	PB18A	U1.61
/	/	PB18B	U1.62
/	/	PB18C	U1.65
/	/	PB18D	U1.67
PCA9641_SCL	in	PB20A	U1.68
PCA9641_SDA	inout	PB20B	U1.69
/	/	PB20C	U1.70
/	/	PB20D	U1.71

/	/	PB4A	U1.38
/	/	PB4B	U1.39
SW_BOARD_INT#	in	PB4C/CSSPIN	U1.40
BMC_RESERVE1	inout	PB4D	U1.41
/	/	PB6A	U1.42
/	/	PB6B	U1.43
/	/	PB6C	U1.44
/	/	PB6D	U1.45
/	/	PB9A	U1.49
/	/	PB9B	U1.50
GPIO_I2C_SCL	in	PB9C	U1.47
GPIO_I2C_SDA	inout	PB9D	U1.48
FAN0_EN	out	PL10A	U1.32
FAN0_TACH	in	PL10B	U1.33
FAN0_POWER_OK#	in	PL10C	U1.34
FAN0_PRESENT_IN#	in	PL10D	U1.35
FAN2_PWM	out	PL2A/L_GPLLT_FB	U1.1
FAN2_LED2	out	PL2B/L_GPLLC_FB	U1.2
FAN2_EN	out	PL2C/L_GPLLT_IN	U1.3
FAN2_LED1	out	PL2D/L_GPLLC_IN	U1.4
FAN2_E2_WP	out	PL3A/PCLKT3_2	U1.5
FAN2_PRESENT_IN#	in	PL3B/PCLKC3_2	U1.6
FAN2_TACH	in	PL3C	U1.9
FAN2_POWER_OK#	in	PL3D	U1.10
CPU_I2C_SCL	in	PL4A	U1.11
CPU_I2C_SDA	inout	PL4B	U1.12
FAN1_E2_WP	out	PL4C	U1.13
FAN1_LED1	out	PL4D	U1.14
FAN1_EN	out	PL5A/PCLKT3_1	U1.19
FAN1_LED2	out	PL5B/PCLKC3_1	U1.20
FAN1_PWM	out	PL5C	U1.21
FAN1_TACH	in	PL5D	U1.22
FAN1_POWER_OK#	in	PL8A	U1.23
FAN1_PRESENT_IN#	in	PL8B	U1.24

FAN0_E2_WP	out	PL8C	U1.25
FAN0_LED2	out	PL8D	U1.26
FAN0_LED1	out	PL9A/PCLKT3_0	U1.27
FAN0_PWM	out	PL9B/PCLKC3_0	U1.28
/	/	PR10A	U1.76
/	/	PR10B	U1.75
/	/	PR10C	U1.74
VR_EN	in	PR10D	U1.73
ALL_RESET#	in	PR2A	U1.107
CPLD_DOWNLOAD_OK	out	PR2B	U1.106
SW_BOARD_RST#	out	PR2C	U1.105
BMC_I2C_RST#	in	PR2D	U1.104
/	out	PR3A	U1.100
/	in	PR3B	U1.99
MGMT_LED_LINKACT	out	PR4A	U1.98
MGMT_LED_GREEN	out	PR4B	U1.97
SLAVE_INT#	out	PR4C	U1.96
/	out	PR4D	U1.95
USB_POWER_OC#	in	PR5A/DQS0	U1.94
USB_POWER_EN	out	PR5B/DQS0N	U1.93
/	/	PR5C/PCLKT1_0	U1.92
USB_OC#	out	PR5D/PCLKC1_0	U1.91
9548_RST#	out	PR8A/DQS1	U1.86
/	/	PR8B/DQS1N	U1.85
/	/	PR8C	U1.84
/	/	PR8D	U1.83
/	/	PR9A	U1.82
/	/	PR9B	U1.81
SW_DCDC_EN	out	PR9C	U1.78
/	/	PR9D	U1.77
PCA9641_RST#	out	PT10A	U1.139
LM75_INT#	in	PT10B*	U1.138
CPLD_TDO	out	PT10C/TDO	U1.137
CPLD_TDI	in	PT10D/TDI	U1.136

TO_BMC_INT#	out	PT11A*	U1.133
TO_CPU_INT#	out	PT11B*	U1.132
CPLD_TCK	in	PT11C/TCK	U1.131
CPLD_TMS	in	PT11D/TMS	U1.130
SW_RESERVE1	inout	PT12A*/PCLKT0_1	U1.128
SW_RESERVE2	inout	PT12B*/PCLKC0_1	U1.127
BMC_I2C_SCL	in	PT12C/SCL/PCLKT0_0	U1.126
BMC_I2C_SDA	inout	PT12D/SDA/PCLKC0_0	U1.125
/	/	PT15A	U1.122
/	/	PT15B	U1.121
/	/	PT15C/JTAGENB	U1.120
/	/	PT15D/PROGRAMN	U1.119
PWR1_OUTPUT_OK	in	PT16A*	U1.117
PWR2_OUTPUT_OK	in	PT16B*	U1.115
PWR1_PRESENT#	in	PT16C	U1.114
PWR2_PRESENT#	in	PT16D	U1.113
PWR1_SMB_ALERT#	in	PT17A*	U1.112
PWR2_SMB_ALERT#	in	PT17B*	U1.111
/	/	PT17C	U1.110
/	/	PT17D	U1.109
MGMT_LED_LINK_100	in	PT9A*	U1.143
MGMT_LED_LINK_1000	in	PT9B*	U1.142
MGMT_LED_ACT	in	PT9C	U1.141
/	/	PT9D	U1.140
CPLD3.3V	/	VCC_1	U1.36
CPLD3.3V	/	VCC_2	U1.72
CPLD3.3V	/	VCC_3	U1.108
CPLD3.3V	/	VCC_4	U1.144
CPLD3.3V	/	VCCIO0_1	U1.118
CPLD3.3V	/	VCCIO0_2	U1.123
CPLD3.3V	/	VCCIO0_3	U1.135
CPLD3.3V	/	VCCIO1_1	U1.79
CPLD3.3V	/	VCCIO1_2	U1.88
CPLD3.3V	/	VCCIO1_3	U1.102

CPLD3.3V	/	VCCIO2_1	U1.37
CPLD3.3V	/	VCCIO2_2	U1.51
CPLD3.3V	/	VCCIO2_3	U1.66
CPLD3.3V	/	VCCIO3_1	U1.7
CPLD3.3V	/	VCCIO3_2	U1.16
CPLD3.3V	/	VCCIO3_3	U1.30

3.5 CPLD Default Register Value

- CPLD 1

Table 17. CPLD 1 Register Address

Register Address	Function	Bit	Description	Default Value	R/W	I2C Bus
0x00	Version	Bit0	Version	0x10 denotes 1.0 Version	Read Only	0x33
		Bit1	Version			
		Bit2	Version			
		Bit3	Version			
		Bit4	Version			
		Bit5	Version			
		Bit6	Version			
		Bit7	Version			
0x01	Version - Year	Bit0	Version - Year	0x17 denotes Year 2017	Read Only	0x33
		Bit1	Version - Year			
		Bit2	Version - Year			
		Bit3	Version - Year			
		Bit4	Version - Year			
		Bit5	Version - Year			
		Bit6	Version - Year			
		Bit7	Version - Year			
0x02	Version - Month	Bit0	Version - Month	0x08 denotes Month August	Read Only	0x33
		Bit1	Version - Month			
		Bit2	Version - Month			
		Bit3	Version - Month			
		Bit4	Version - Month			
		Bit5	Version - Month			
		Bit6	Version - Month			
		Bit7	Version - Month			
0x03	Version - Day	Bit0	Version - Day	0x28 denotes Day 28	Read Only	0x33
		Bit1	Version - Day			
		Bit2	Version - Day			
		Bit3	Version - Day			
		Bit4	Version - Day			

		Bit5	Version - Day			
		Bit6	Version - Day			
		Bit7	Version - Day			
0x30	zQSFP+ [7:0] Present: 0 denotes "present" 1 denotes "not present"	Bit0	zQSFP+0 Present	1	Read Only	0x34
		Bit1	zQSFP+1 Present	1		
		Bit2	zQSFP+2 Present	1		
		Bit3	zQSFP+3 Present	1		
		Bit4	zQSFP+4 Present	1		
		Bit5	zQSFP+5 Present	1		
		Bit6	zQSFP+6 Present	1		
		Bit7	zQSFP+7 Present	1		
0x31	zQSFP+ [15:8] Present: 0 denotes "present", 1 denotes "not present"	Bit0	zQSFP+8 Present	1	Read Only	0x34
		Bit1	zQSFP+9 Present	1		
		Bit2	zQSFP+10 Present	1		
		Bit3	zQSFP+11 Present	1		
		Bit4	zQSFP+12 Present	1		
		Bit5	zQSFP+13 Present	1		
		Bit6	zQSFP+14 Present	1		
		Bit7	zQSFP+15 Present	1		
0x32	zQSFP+ [39:32] Present: 0 denotes "present", 1 denotes "not present"	Bit0	zQSFP+32 Present	1	Read Only	0x34
		Bit1	zQSFP+33 Present	1		
		Bit2	zQSFP+34 Present	1		
		Bit3	zQSFP+35 Present	1		
		Bit4	zQSFP+36 Present	1		
		Bit5	zQSFP+37 Present	1		
		Bit6	zQSFP+38 Present	1		
		Bit7	zQSFP+39 Present	1		
0x33	zQSFP+ [47:40] Present: 0 denotes "present", 1 denotes "not present"	Bit0	zQSFP+40 Present	1	Read Only	0x34
		Bit1	zQSFP+41 Present	1		
		Bit2	zQSFP+42 Present	1		
		Bit3	zQSFP+43 Present	1		
		Bit4	zQSFP+44 Present	1		
		Bit5	zQSFP+45 Present	1		
		Bit6	zQSFP+46 Present	1		
		Bit7	zQSFP+47 Present	1		
0x40	zQSFP+ [7:0] Interrupt: 0 denotes "interrupt", 1 denotes "no interrupt"	Bit0	zQSFP+0 Present Interrupt	1	Write Clear	0x34
		Bit1	zQSFP+1 Present Interrupt	1		
		Bit2	zQSFP+2 Present Interrupt	1		
		Bit3	zQSFP+3 Present Interrupt	1		
		Bit4	zQSFP+4 Present Interrupt	1		

		Bit5	zQSFP+5 Present Interrupt	1		
		Bit6	zQSFP+6 Present Interrupt	1		
		Bit7	zQSFP+7 Present Interrupt	1		
0x41	zQSFP+ [15:8] Interrupt: 0 denotes "interrupt", 1 denotes "no interrupt"	Bit0	zQSFP+8 Present Interrupt	1	Write Clear	0x34
		Bit1	zQSFP+9 Present Interrupt	1		
		Bit2	zQSFP+10 Present Interrupt	1		
		Bit3	zQSFP+11 Present Interrupt	1		
		Bit4	zQSFP+12 Present Interrupt	1		
		Bit5	zQSFP+13 Present Interrupt	1		
		Bit6	zQSFP+14 Present Interrupt	1		
		Bit7	zQSFP+15 Present Interrupt	1		
0x42	zQSFP+ [39:32] Interrupt: 0 denotes "interrupt", 1 denotes "no interrupt"	Bit0	zQSFP+32 Present Interrupt	1	Write Clear	0x34
		Bit1	zQSFP+33 Present Interrupt	1		
		Bit2	zQSFP+34 Present Interrupt	1		
		Bit3	zQSFP+35 Present Interrupt	1		
		Bit4	zQSFP+36 Present Interrupt	1		
		Bit5	zQSFP+37 Present Interrupt	1		
		Bit6	zQSFP+38 Present Interrupt	1		
		Bit7	zQSFP+39 Present Interrupt	1		
0x43	zQSFP+ [47:40] Interrupt: 0 denotes "interrupt", 1 denotes "no interrupt"	Bit0	zQSFP+40 Present Interrupt	1	Write Clear	0x34
		Bit1	zQSFP+41 Present Interrupt	1		
		Bit2	zQSFP+42 Present Interrupt	1		
		Bit3	zQSFP+43 Present Interrupt	1		
		Bit4	zQSFP+44 Present Interrupt	1		

		Bit5	zQSFP+45 Present Interrupt	1		
		Bit6	zQSFP+46 Present Interrupt	1		
		Bit7	zQSFP+47 Present Interrupt	1		
0x50	zQSFP+ [7:0] Present Interrupt Mask control: 0 denotes "no mask" 1 denotes "mask"	Bit0	zQSFP+0 Present Interrupt Mask control bit	1	R/W	0x34
		Bit1	zQSFP+1 Present Interrupt Mask control bit	1		
		Bit2	zQSFP+2 Present Interrupt Mask control bit	1		
		Bit3	zQSFP+3 Present Interrupt Mask control bit	1		
		Bit4	zQSFP+4 Present Interrupt Mask control bit	1		
		Bit5	zQSFP+5 Present Interrupt Mask control bit	1		
		Bit6	zQSFP+6 Present Interrupt Mask control bit	1		
		Bit7	zQSFP+7 Present Interrupt Mask control bit	1		
0x51	zQSFP+ [15:8] Present Interrupt Mask control: 0 denotes "no mask" 1 denotes "mask"	Bit0	zQSFP+8 Present Interrupt Mask control bit	1	R/W	0x34
		Bit1	zQSFP+9 Present Interrupt Mask control bit	1		
		Bit2	zQSFP+10 Present Interrupt Mask control bit	1		
		Bit3	zQSFP+11 Present Interrupt Mask control bit	1		
		Bit4	zQSFP+12 Present Interrupt Mask control bit	1		
		Bit5	zQSFP+13 Present Interrupt Mask control bit	1		
		Bit6	zQSFP+14 Present Interrupt Mask control bit	1		
		Bit7	zQSFP+15 Present Interrupt Mask control bit	1		
0x52	zQSFP+ [39:32] Present Interrupt Mask control: 0 denotes "no mask" 1 denotes "mask"	Bit0	zQSFP+32 Present Interrupt Mask control bit	1	R/W	0x34
		Bit1	zQSFP+33 Present Interrupt Mask control bit	1		
		Bit2	zQSFP+34 Present Interrupt Mask control bit	1		
		Bit3	zQSFP+35 Present Interrupt Mask control bit	1		
		Bit4	zQSFP+36 Present Interrupt Mask control bit	1		

		Bit5	zQSFP+37 Present Interrupt Mask control bit	1		
		Bit6	zQSFP+38 Present Interrupt Mask control bit	1		
		Bit7	zQSFP+39 Present Interrupt Mask control bit	1		
0x53	zQSFP+ [47:40] Present Interrupt Mask control: 0 denotes "no mask" 1 denotes "mask"	Bit0	zQSFP+40 Present Interrupt Mask control bit	1	R/W	0x34
		Bit1	zQSFP+41 Present Interrupt Mask control bit	1		
		Bit2	zQSFP+42 Present Interrupt Mask control bit	1		
		Bit3	zQSFP+43 Present Interrupt Mask control bit	1		
		Bit4	zQSFP+44 Present Interrupt Mask control bit	1		
		Bit5	zQSFP+45 Present Interrupt Mask control bit	1		
		Bit6	zQSFP+46 Present Interrupt Mask control bit	1		
		Bit7	zQSFP+47 Present Interrupt Mask control bit	1		
0x70	Interrupt converge: 0 denotes "Interrupt", 1 denotes "no Interrupt"	Bit0	ZQSFP Present Interrupt (all Interrupt signals &&)	1	Write Clear	0x34
		Bit1				
		Bit2				
		Bit3				
		Bit4				
		Bit5	CPLD_B Interrupt	1		
		Bit6				
		Bit7				
0x71	Interrupt mask:0 denotes "no mask" 1 denotes "mask"	Bit0	zQSFP+ Present Interrupt Mask control bit	1	R/W	0x34
		Bit1		1		
		Bit2		1		
		Bit3		1		
		Bit4		1		
		Bit5	CPLD_B Interrupt Mask control bit	1		
		Bit6		1		
		Bit7		1		
0x80	VDD3v3, 12 bits Voltage monitor value high 8bit	Bit0	8bit Voltage value	0	Read Only	0x33
		Bit1	8bit Voltage value	0		
		Bit2	8bit Voltage value	0		
		Bit3	8bit Voltage value	0		
		Bit4	8bit Voltage value	0		
		Bit5	8bit Voltage value	0		

		Bit6	8bit Voltage value	0		
		Bit7	8bit Voltage value	0		
0x81	VDD3v3, 12 bits Voltage monitor value low 4 bits	Bit0	4bit Voltage value	0	Read Only	0x33
		Bit1	4bit Voltage value	0		
		Bit2	4bit Voltage value	0		
		Bit3	4bit Voltage value	0		
		Bit4	NA	NA		
		Bit5	NA	NA		
		Bit6	NA	NA		
		Bit7	NA	NA		
0x82	VDD1v2_mac, 12 bits Voltage value high 8 bits	Bit0	8bit Voltage value	0	Read Only	0x33
		Bit1	8bit Voltage value	0		
		Bit2	8bit Voltage value	0		
		Bit3	8bit Voltage value	0		
		Bit4	8bit Voltage value	0		
		Bit5	8bit Voltage value	0		
		Bit6	8bit Voltage value	0		
		Bit7	8bit Voltage value	0		
0x83	VDD1v2_mac, 12 bits Voltage value low 4 bits	Bit0	4bit Voltage value	0	Read Only	0x33
		Bit1	4bit Voltage value	0		
		Bit2	4bit Voltage value	0		
		Bit3	4bit Voltage value	0		
		Bit4	NA	NA		
		Bit5	NA	NA		
		Bit6	NA	NA		
		Bit7	NA	NA		
0x84	VDD_core, 12 bits Voltage monitor value high 8 bits	Bit0	8bit Voltage value	0	Read Only	0x33
		Bit1	8bit Voltage value	0		
		Bit2	8bit Voltage value	0		
		Bit3	8bit Voltage value	0		
		Bit4	8bit Voltage value	0		
		Bit5	8bit Voltage value	0		
		Bit6	8bit Voltage value	0		
		Bit7	8bit Voltage value	0		
0x85	VDD_core, 12 bits Voltage monitor value low 4 bits	Bit0	4bit Voltage value	0	Read Only	0x33
		Bit1	4bit Voltage value	0		
		Bit2	4bit Voltage value	0		
		Bit3	4bit Voltage value	0		
		Bit4	NA	NA		
		Bit5	NA	NA		
		Bit6	NA	NA		
		Bit7	NA	NA		
0x86	VDD_analog, 12 bits Voltage monitor value high 8 bits	Bit0	8bit Voltage value	0	Read Only	0x33
		Bit1	8bit Voltage value	0		
		Bit2	8bit Voltage value	0		
		Bit3	8bit Voltage value	0		

		Bit4	8bit Voltage value	0		
		Bit5	8bit Voltage value	0		
		Bit6	8bit Voltage value	0		
		Bit7	8bit Voltage value	0		
0x87	VDD_analog, 12 bits Voltage monitor value low 4 bits	Bit0	4bit Voltage value	0	Read Only	0x33
		Bit1	4bit Voltage value	0		
		Bit2	4bit Voltage value	0		
		Bit3	4bit Voltage value	0		
		Bit4	NA	NA		
		Bit5	NA	NA		
		Bit6	NA	NA		
		Bit7	NA	NA		
0x88	QSFP_3v3, 12 bits Voltage monitor value high 8 bits	Bit0	8bit Voltage value	0	Read Only	0x33
		Bit1	8bit Voltage value	0		
		Bit2	8bit Voltage value	0		
		Bit3	8bit Voltage value	0		
		Bit4	8bit Voltage value	0		
		Bit5	8bit Voltage value	0		
		Bit6	8bit Voltage value	0		
		Bit7	8bit Voltage value	0		
0x89	QSFP_3v3, 12 bits Voltage monitor value low 4 bits	Bit0	4bit Voltage value	0	Read Only	0x33
		Bit1	4bit Voltage value	0		
		Bit2	4bit Voltage value	0		
		Bit3	4bit Voltage value	0		
		Bit4	NA	NA		
		Bit5	NA	NA		
		Bit6	NA	NA		
		Bit7	NA	NA		
0x8a	5v, 12 bits Voltage monitor value high 8 bits	Bit0	8bit Voltage value	0	Read Only	0x33
		Bit1	8bit Voltage value	0		
		Bit2	8bit Voltage value	0		
		Bit3	8bit Voltage value	0		
		Bit4	8bit Voltage value	0		
		Bit5	8bit Voltage value	0		
		Bit6	8bit Voltage value	0		
		Bit7	8bit Voltage value	0		
0x8b	5v, 12 bits Voltage monitor value low 4 bits	Bit0	4bit Voltage value	0	Read Only	0x33
		Bit1	4bit Voltage value	0		
		Bit2	4bit Voltage value	0		
		Bit3	4bit Voltage value	0		
		Bit4	NA	NA		
		Bit5	NA	NA		
		Bit6	NA	NA		
		Bit7	NA	NA		
0x8c		Bit0	8bit Voltage value	0	Read Only	0x33
		Bit1	8bit Voltage value	0		

	1v8, 12 bits Voltage monitor value high 8 bits	Bit2	8bit Voltage value	0		
		Bit3	8bit Voltage value	0		
		Bit4	8bit Voltage value	0		
		Bit5	8bit Voltage value	0		
		Bit6	8bit Voltage value	0		
		Bit7	8bit Voltage value	0		
0x8d	1v8, 12 bits Voltage monitor value low 4 bits	Bit0	4bit Voltage value	0	Read Only	0x33
		Bit1	4bit Voltage value	0		
		Bit2	4bit Voltage value	0		
		Bit3	4bit Voltage value	0		
		Bit4	NA	NA		
		Bit5	NA	NA		
		Bit6	NA	NA		
		Bit7	NA	NA		
0x8e	1v24, 12 bits Voltage monitor value high 8 bits	Bit0	8bit Voltage value	0	Read Only	0x33
		Bit1	8bit Voltage value	0		
		Bit2	8bit Voltage value	0		
		Bit3	8bit Voltage value	0		
		Bit4	8bit Voltage value	0		
		Bit5	8bit Voltage value	0		
		Bit6	8bit Voltage value	0		
		Bit7	8bit Voltage value	0		
0x8f	1v24, 12 bits Voltage monitor value low 4 bits	Bit0	4bit Voltage value	0	Read Only	0x33
		Bit1	4bit Voltage value	0		
		Bit2	4bit Voltage value	0		
		Bit3	4bit Voltage value	0		
		Bit4	NA	NA		
		Bit5	NA	NA		
		Bit6	NA	NA		
		Bit7	NA	NA		
0x96	QSFP_3v3_2, 12 bits Voltage monitor value high 8 bits	Bit0	8bit Voltage value	0	Read Only	0x33
		Bit1	8bit Voltage value	0		
		Bit2	8bit Voltage value	0		
		Bit3	8bit Voltage value	0		
		Bit4	8bit Voltage value	0		
		Bit5	8bit Voltage value	0		
		Bit6	8bit Voltage value	0		
		Bit7	8bit Voltage value	0		
0x97	QSFP_3v3_2, 12 bits Voltage monitor value low 4 bits	Bit0	4bit Voltage value	0	Read Only	0x33
		Bit1	4bit Voltage value	0		
		Bit2	4bit Voltage value	0		
		Bit3	4bit Voltage value	0		
		Bit4	NA	NA		
		Bit5	NA	NA		
		Bit6	NA	NA		

		Bit7	NA	NA		
0x98	QSFP_3v3_3, 12 bits Voltage monitor value high 8 bits	Bit0	8bit Voltage value	0	Read Only	0x33
		Bit1	8bit Voltage value	0		
		Bit2	8bit Voltage value	0		
		Bit3	8bit Voltage value	0		
		Bit4	8bit Voltage value	0		
		Bit5	8bit Voltage value	0		
		Bit6	8bit Voltage value	0		
		Bit7	8bit Voltage value	0		
0x99	QSFP_3v3_3, 12 bits Voltage monitor value low 4 bits	Bit0	4bit Voltage value	0	Read Only	0x33
		Bit1	4bit Voltage value	0		
		Bit2	4bit Voltage value	0		
		Bit3	4bit Voltage value	0		
		Bit4	NA	NA		
		Bit5	NA	NA		
		Bit6	NA	NA		
		Bit7	NA	NA		
0x9a	QSFP_3v3_4, 12 bits Voltage monitor value high 8 bits	Bit0	8bit Voltage value	0	Read Only	0x33
		Bit1	8bit Voltage value	0		
		Bit2	8bit Voltage value	0		
		Bit3	8bit Voltage value	0		
		Bit4	8bit Voltage value	0		
		Bit5	8bit Voltage value	0		
		Bit6	8bit Voltage value	0		
		Bit7	8bit Voltage value	0		
0x9b	QSFP_3v3_4, 12 bits Voltage monitor value low 4 bits	Bit0	4bit Voltage value	0	Read Only	0x33
		Bit1	4bit Voltage value	0		
		Bit2	4bit Voltage value	0		
		Bit3	4bit Voltage value	0		
		Bit4	NA	NA		
		Bit5	NA	NA		
		Bit6	NA	NA		
		Bit7	NA	NA		
0x9c	mcu3.3V, 12 bits Voltage monitor value high 8 bits	Bit0	8bit Voltage value	0	Read Only	0x33
		Bit1	8bit Voltage value	0		
		Bit2	8bit Voltage value	0		
		Bit3	8bit Voltage value	0		
		Bit4	8bit Voltage value	0		
		Bit5	8bit Voltage value	0		
		Bit6	8bit Voltage value	0		
		Bit7	8bit Voltage value	0		
0x9d	mcu3.3V, 12 bits Voltage monitor value low 4 bits	Bit0	4bit Voltage value	0	Read Only	0x33
		Bit1	4bit Voltage value	0		
		Bit2	4bit Voltage value	0		
		Bit3	4bit Voltage value	0		
		Bit4	NA	NA		

		Bit5	NA	NA		
		Bit6	NA	NA		
		Bit7	NA	NA		
0xa0	Reset control: 0 denotes "reset", 1 denotes "no reset"	Bit0			R/W	0x33
		Bit1	Mac reset control	1		
		Bit2	Mac PCIe reset control	1		
		Bit3				
		Bit4	Second CPLD reset control	1		
		Bit5				
		Bit6				
		Bit7	LED reset, software enable	0		
0xa1	Optical module 3.3V power up control: 0 denotes "not power" 1 denotes "powered"	Bit0	Power up enable	0	R/W	0x34
		Bit1				
		Bit2				
		Bit3				
		Bit4				
		Bit5				
		Bit6				
		Bit7				
0xa2	Port s [7:0] Red LED control: 1 denotes "Red on", 0 denotes "Red off"	Bit0	Port zQSFP+, Red LED0 on	0	R/W	0x34
		Bit1	Port zQSFP+, Red LED1 on	0		
		Bit2	Port zQSFP+, Red LED2 on	0		
		Bit3	Port zQSFP+, Red LED3 on	0		
		Bit4	Port zQSFP+, Red LED4 on	0		
		Bit5	Port zQSFP+, Red LED5 on	0		
		Bit6	Port zQSFP+, Red LED6 on	0		
		Bit7	Port zQSFP+, Red LED7 on	0		
0xa3	Port s [15:8] Red LED control: 1 denotes "Red on", 0 denotes "Red off"	Bit0	Port zQSFP+, Red LED8 on	0	R/W	0x34
		Bit1	Port zQSFP+, Red LED9 on	0		
		Bit2	Port zQSFP+, Red LED10 on	0		
		Bit3	Port zQSFP+, Red LED11 on	0		
		Bit4	Port zQSFP+, Red LED12 on	0		
		Bit5	Port zQSFP+, Red LED13 on	0		
		Bit6	Port zQSFP+, Red LED14 on	0		

		Bit7	Port zQSFP+, Red LED15 on	0		
0xa4	Port s [39:32] Red LED control: 1 denotes "Red on", 0 denotes "Red off"	Bit0	Port zQSFP+, Red LED32 on	0	R/W	0x34
		Bit1	Port zQSFP+, Red LED33 on	0		
		Bit2	Port zQSFP+, Red LED34 on	0		
		Bit3	Port zQSFP+, Red LED35 on	0		
		Bit4	Port zQSFP+, Red LED36 on	0		
		Bit5	Port zQSFP+, Red LED37 on	0		
		Bit6	Port zQSFP+, Red LED38 on	0		
		Bit7	Port zQSFP+, Red LED39 on	0		
0xa5	Port s [47:40] Red LED control: 1 denotes "Red on", 0 denotes "Red off"	Bit0	Port zQSFP+, Red LED40 on	0	R/W	0x34
		Bit1	Port zQSFP+, Red LED41 on	0		
		Bit2	Port zQSFP+, Red LED42 on	0		
		Bit3	Port zQSFP+, Red LED43 on	0		
		Bit4	Port zQSFP+, Red LED44 on	0		
		Bit5	Port zQSFP+, Red LED45 on	0		
		Bit6	Port zQSFP+, Red LED46 on	0		
		Bit7	Port zQSFP+, Red LED47 on	0		
0xa6	1 denotes "Yellow LED on"	Bit0	Port zQSFP+, Yellow LED0 on	1	R/W	0x34
		Bit1	Port zQSFP+, Yellow LED1 on	1		
		Bit2	Port zQSFP+, Yellow LED2 on	1		
		Bit3	Port zQSFP+, Yellow LED3 on	1		
		Bit4	Port zQSFP+, Yellow LED4 on	1		
		Bit5	Port zQSFP+, Yellow LED5 on	1		
		Bit6	Port zQSFP+, Yellow LED6 on	1		

		Bit7	Port zQSFP+, Yellow LED7 on	1		
0xa7	1 denotes "Yellow LED on"	Bit0	Port zQSFP+, Yellow LED8 on	1	R/W	0x34
		Bit1	Port zQSFP+, Yellow LED9 on	1		
		Bit2	Port zQSFP+, Yellow LED10 on	1		
		Bit3	Port zQSFP+, Yellow LED11 on	1		
		Bit4	Port zQSFP+, Yellow LED12 on	1		
		Bit5	Port zQSFP+, Yellow LED13 on	1		
		Bit6	Port zQSFP+, Yellow LED14 on	1		
		Bit7	Port zQSFP+, Yellow LED15 on	1		
0xa8	1 denotes "Yellow LED on"	Bit0	Port zQSFP+, Yellow LED32 on	1	R/W	0x34
		Bit1	Port zQSFP+, Yellow LED33 on	1		
		Bit2	Port zQSFP+, Yellow LED34 on	1		
		Bit3	Port zQSFP+, Yellow LED35 on	1		
		Bit4	Port zQSFP+, Yellow LED36 on	1		
		Bit5	Port zQSFP+, Yellow LED37 on	1		
		Bit6	Port zQSFP+, Yellow LED38 on	1		
		Bit7	Port zQSFP+, Yellow LED39 on	1		
0xa9	1 denotes "Yellow LED on"	Bit0	Port zQSFP+, Yellow LED40 on	1	R/W	0x34
		Bit1	Port zQSFP+, Yellow LED41 on	1		
		Bit2	Port zQSFP+, Yellow LED42 on	1		
		Bit3	Port zQSFP+, Yellow LED43 on	1		
		Bit4	Port zQSFP+, Yellow LED44 on	1		
		Bit5	Port zQSFP+, Yellow LED45 on	1		
		Bit6	Port zQSFP+, Yellow LED46 on	1		

		Bit7	Port zQSFP+, Yellow LED47 on	1		
0xAA	Test (CPU)	Bit0	8 bits form a byte	0	R/W	0x34
		Bit1		0		
		Bit2		1		
		Bit3		0		
		Bit4		1		
		Bit5		0		
		Bit6		1		
		Bit7		0		
0xAB	Test (BMC)	Bit0	8 bits form a byte	1	R/W	0x33
		Bit1		0		
		Bit2		1		
		Bit3		0		
		Bit4		1		
		Bit5		0		
		Bit6		1		
		Bit7		0		
0xb0	Board EEPROM write protection	Bit0	(0==normal; 1==protect)	1	R/W	0x33
		Bit1	NA			
		Bit2	NA			
		Bit3	NA			
		Bit4	NA			
		Bit5	NA			
		Bit6	NA			
		Bit7	NA			
0xb9	100G Optical module reset: 0 denotes "reset"	Bit0	zQSFP+0 Optical module reset	1	R/W	0x34
		Bit1	zQSFP+1 Optical module reset	1		
		Bit2	zQSFP+2 Optical module reset	1		
		Bit3	zQSFP+3 Optical module reset	1		
		Bit4	zQSFP+4 Optical module reset	1		
		Bit5	zQSFP+5 Optical module reset	1		
		Bit6	zQSFP+6 Optical module reset	1		
		Bit7	zQSFP+7 Optical module reset	1		
0xba	100G Optical module reset: 0 denotes "reset"	Bit0	zQSFP+8 Optical module reset	1	R/W	0x34
		Bit1	zQSFP+9 Optical module reset	1		
		Bit2	zQSFP+10 Optical module reset	1		
		Bit3	zQSFP+11 Optical module reset	1		

		Bit4	zQSFP+12 Optical module reset	1		
		Bit5	zQSFP+13 Optical module reset	1		
		Bit6	zQSFP+14 Optical module reset	1		
		Bit7	zQSFP+15 Optical module reset	1		
0xbb	100G Optical module reset: 0 denotes "reset"	Bit0	zQSFP+32 Optical module reset	1	R/W	0x34
		Bit1	zQSFP+33 Optical module reset	1		
		Bit2	zQSFP+34 Optical module reset	1		
		Bit3	zQSFP+35 Optical module reset	1		
		Bit4	zQSFP+36 Optical module reset	1		
		Bit5	zQSFP+37 Optical module reset	1		
		Bit6	zQSFP+38 Optical module reset	1		
		Bit7	zQSFP+39 Optical module reset	1		
0xbc	100G Optical module reset: 0 denotes "reset"	Bit0	zQSFP+40 Optical module reset	1	R/W	0x34
		Bit1	zQSFP+41 Optical module reset	1		
		Bit2	zQSFP+42 Optical module reset	1		
		Bit3	zQSFP+43 Optical module reset	1		
		Bit4	zQSFP+44 Optical module reset	1		
		Bit5	zQSFP+45 Optical module reset	1		
		Bit6	zQSFP+46 Optical module reset	1		
		Bit7	zQSFP+47 Optical module reset	1		

▪ CPLD 2

Table 18. CPLD 2 Register Address

Register Address	Function	Bit	Description	Default	R/W	I2C Bus
0x00	Version	Bit0	Version	0x10 denotes	Read Only	0x33
		Bit1	Version			
		Bit2	Version			

		Bit3	Version	1.0 Version		
		Bit4	Version			
		Bit5	Version			
		Bit6	Version			
		Bit7	Version			
0x01	Version - Year	Bit0	Version - Year	0x17 denotes Year 2017	Read Only	0x33
		Bit1	Version - Year			
		Bit2	Version - Year			
		Bit3	Version - Year			
		Bit4	Version - Year			
		Bit5	Version - Year			
		Bit6	Version - Year			
		Bit7	Version - Year			
0x02	Version - Month	Bit0	Version - Month	0x08 denotes Month August	Read Only	0x33
		Bit1	Version - Month			
		Bit2	Version - Month			
		Bit3	Version - Month			
		Bit4	Version - Month			
		Bit5	Version - Month			
		Bit6	Version - Month			
		Bit7	Version - Month			
0x03	Version - Day	Bit0	Version - Day	0x28 denotes Day 28	Read Only	0x33
		Bit1	Version - Day			
		Bit2	Version - Day			
		Bit3	Version - Day			
		Bit4	Version - Day			
		Bit5	Version - Day			
		Bit6	Version - Day			
		Bit7	Version - Day			
0x2a	Front Panel Locate LED control: 0 denotes "LED on"	Bit0	Locate LED on	1	R/W	0x35
		Bit1				
		Bit2				
		Bit3				
		Bit4				
		Bit5				
		Bit6				
		Bit7				
0x30	zQSFP+ Present: 0 denotes "present", 1 denotes "not present"	Bit0	zQSFP+16 Present	1	Read Only	0x36
		Bit1	zQSFP+17 Present	1		
		Bit2	zQSFP+18 Present	1		
		Bit3	zQSFP+19 Present	1		
		Bit4	zQSFP+20 Present	1		
		Bit5	zQSFP+21 Present	1		
		Bit6	zQSFP+22 Present	1		
		Bit7	zQSFP+23 Present	1		
0x31	zQSFP+ Present:	Bit0	zQSFP+24 Present	1	Read Only	0x36
		Bit1	zQSFP+25 Present	1		

	0 denotes "present", 1 denotes "not present"	Bit2	zQSFP+26 Present	1		
		Bit3	zQSFP+27 Present	1		
		Bit4	zQSFP+28 Present	1		
		Bit5	zQSFP+29 Present	1		
		Bit6	zQSFP+30 Present	1		
		Bit7	zQSFP+31 Present	1		
0x32	zQSFP+ Present: 0 denotes "present", 1 denotes "not present"	Bit0	zQSFP+48 Present	1	Read Only	0x36
		Bit1	zQSFP+49 Present	1		
		Bit2	zQSFP+50 Present	1		
		Bit3	zQSFP+51 Present	1		
		Bit4	zQSFP+52 Present	1		
		Bit5	zQSFP+53 Present	1		
		Bit6	zQSFP+54 Present	1		
		Bit7	zQSFP+55 Present	1		
0x33	zQSFP+ Present: 0 denotes "present", 1 denotes "not present"	Bit0	zQSFP+56 Present	1	Read Only	0x36
		Bit1	zQSFP+57 Present	1		
		Bit2	zQSFP+58 Present	1		
		Bit3	zQSFP+59 Present	1		
		Bit4	zQSFP+60 Present	1		
		Bit5	zQSFP+61 Present	1		
		Bit6	zQSFP+62 Present	1		
		Bit7	zQSFP+63 Present	1		
0x40	zQSFP+ Present Interrupt: 0 denotes "Interrupt", 1 denotes "no Interrupt"	Bit0	zQSFP+16 Present Interrupt	1	Write Clear	0x36
		Bit1	zQSFP+17 Present Interrupt	1		
		Bit2	zQSFP+18 Present Interrupt	1		
		Bit3	zQSFP+19 Present Interrupt	1		
		Bit4	zQSFP+20 Present Interrupt	1		
		Bit5	zQSFP+21 Present Interrupt	1		
		Bit6	zQSFP+22 Present Interrupt	1		
		Bit7	zQSFP+23 Present Interrupt	1		
0x41	zQSFP+ Present Interrupt: 0 denotes "Interrupt", 1 denotes "no Interrupt"	Bit0	zQSFP+24 Present Interrupt	1	Write Clear	0x36
		Bit1	zQSFP+25 Present Interrupt	1		
		Bit2	zQSFP+26 Present Interrupt	1		
		Bit3	zQSFP+27 Present Interrupt	1		
		Bit4	zQSFP+28 Present Interrupt	1		

		Bit5	zQSFP+29 Present Interrupt	1		
		Bit6	zQSFP+30 Present Interrupt	1		
		Bit7	zQSFP+31 Present Interrupt	1		
0x42	zQSFP+ Present Interrupt: 0 denotes "Interrupt", 1 denotes "no Interrupt"	Bit0	zQSFP+48 Present Interrupt	1	Write Clear	0x36
		Bit1	zQSFP+49 Present Interrupt	1		
		Bit2	zQSFP+50 Present Interrupt	1		
		Bit3	zQSFP+51 Present Interrupt	1		
		Bit4	zQSFP+52 Present Interrupt	1		
		Bit5	zQSFP+53 Present Interrupt	1		
		Bit6	zQSFP+54 Present Interrupt	1		
		Bit7	zQSFP+55 Present Interrupt	1		
0x43	zQSFP+ Present Interrupt: 0 denotes "Interrupt", 1 denotes "no Interrupt"	Bit0	zQSFP+56 Present Interrupt	1	Write Clear	0x36
		Bit1	zQSFP+57 Present Interrupt	1		
		Bit2	zQSFP+58 Present Interrupt	1		
		Bit3	zQSFP+59 Present Interrupt	1		
		Bit4	zQSFP+60 Present Interrupt	1		
		Bit5	zQSFP+61 Present Interrupt	1		
		Bit6	zQSFP+62 Present Interrupt	1		
		Bit7	zQSFP+63 Present Interrupt	1		
0x50	zQSFP+ Present Interrupt mask control: 0 denotes "no mask", 1 denotes "mask"	Bit0	zQSFP+16 Present Interrupt Mask control bit	1	R/W	0x36
		Bit1	zQSFP+17 Present Interrupt Mask control bit	1		
		Bit2	zQSFP+18 Present Interrupt Mask control bit	1		
		Bit3	zQSFP+19 Present Interrupt Mask control bit	1		
		Bit4	zQSFP+20 Present Interrupt Mask control bit	1		

		Bit5	zQSFP+21 Present Interrupt Mask control bit	1		
		Bit6	zQSFP+22 Present Interrupt Mask control bit	1		
		Bit7	zQSFP+23 Present Interrupt Mask control bit	1		
0x51	zQSFP+ Present Interrupt mask control: 0 denotes "no mask", 1 denotes "mask"	Bit0	zQSFP+24 Present Interrupt Mask control bit	1	R/W	0x36
		Bit1	zQSFP+25 Present Interrupt Mask control bit	1		
		Bit2	zQSFP+26 Present Interrupt Mask control bit	1		
		Bit3	zQSFP+27 Present Interrupt Mask control bit	1		
		Bit4	zQSFP+28 Present Interrupt Mask control bit	1		
		Bit5	zQSFP+29 Present Interrupt Mask control bit	1		
		Bit6	zQSFP+30 Present Interrupt Mask control bit	1		
		Bit7	zQSFP+31 Present Interrupt Mask control bit	1		
0x52	zQSFP+ Present Interrupt mask control: 0 denotes "no mask", 1 denotes "mask"	Bit0	zQSFP+48 Present Interrupt Mask control bit	1	R/W	0x36
		Bit1	zQSFP+49 Present Interrupt Mask control bit	1		
		Bit2	zQSFP+50 Present Interrupt Mask control bit	1		
		Bit3	zQSFP+51 Present Interrupt Mask control bit	1		
		Bit4	zQSFP+52 Present Interrupt Mask control bit	1		
		Bit5	zQSFP+53 Present Interrupt Mask control bit	1		
		Bit6	zQSFP+54 Present Interrupt Mask control bit	1		
		Bit7	zQSFP+55 Present Interrupt Mask control bit	1		
0x53	zQSFP+ Present Interrupt mask control: 0 denotes "no mask", 1 denotes "mask"	Bit0	zQSFP+56 Present Interrupt Mask control bit	1	R/W	0x36
		Bit1	zQSFP+57 Present Interrupt Mask control bit	1		
		Bit2	zQSFP+58 Present Interrupt Mask control bit	1		
		Bit3	zQSFP+59 Present Interrupt Mask control bit	1		
		Bit4	zQSFP+60 Present Interrupt Mask control bit	1		

		Bit5	zQSFP+61 Present Interrupt Mask control bit	1		
		Bit6	zQSFP+62 Present Interrupt Mask control bit	1		
		Bit7	zQSFP+63 Present Interrupt Mask control bit	1		
0x70	Interrupt converge: 0 denotes "interrupt", 1 denotes "clear interrupt"	Bit0	zQSFP Present Interrupt (all Interrupt signals &&)	1	Write Clear	0x36
		Bit1	FUNC button Interrupt	1		
		Bit2		1		
		Bit3		1		
		Bit4		1		
		Bit5		1		
		Bit6		1		
		Bit7		1		
0x71	Interrupt mask: 0 denotes "no mask", 1 denotes "mask"	Bit0	zQSFP Present Interrupt Mask control converge bit	1	R/W	0x36
		Bit1	FUNC button Interrupt Mask control	1		
		Bit2		1		
		Bit3		1		
		Bit4		1		
		Bit5		1		
		Bit6		1		
		Bit7		1		
0x72	AVS register, 8 bits from MAC	Bit0	AVS value bit0	0	Read Only	0x35
		Bit1	AVS value bit1	0		
		Bit2	AVS value bit2	0		
		Bit3	AVS value bit3	0		
		Bit4	AVS value bit4	0		
		Bit5	AVS value bit5	0		
		Bit6	AVS value bit6	0		
		Bit7	AVS value bit7	0		
0xa0	Reset control: 0 denotes "reset", 1 denotes "no reset"	Bit0			R/W	0x35
		Bit1				
		Bit2				
		Bit3				
		Bit4				
		Bit5				
		Bit6				
		Bit7	LED reset, software enable	0		
0xa1	Warm reboot counter, only reset after cold reboot	Bit0	8 bits form a byte		Read Only	0x35
		Bit1				
		Bit2				
		Bit3				
		Bit4				
		Bit5				
		Bit6				

		Bit7				
0xa2	Port [7:0] Red LED control: 1 denotes "Red on"	Bit0	Port zQSFP+, Red LED16 on	0	R/W	0x36
		Bit1	Port zQSFP+, Red LED17 on	0		
		Bit2	Port zQSFP+, Red LED18 on	0		
		Bit3	Port zQSFP+, Red LED19 on	0		
		Bit4	Port zQSFP+, Red LED20 on	0		
		Bit5	Port zQSFP+, Red LED21 on	0		
		Bit6	Port zQSFP+, Red LED22 on	0		
		Bit7	Port zQSFP+, Red LED23 on	0		
0xa3	Port [15:8] Red LED control: 1 denotes "Red on"	Bit0	Port zQSFP+, Red LED24 on	0	R/W	0x36
		Bit1	Port zQSFP+, Red LED25 on	0		
		Bit2	Port zQSFP+, Red LED26 on	0		
		Bit3	Port zQSFP+, Red LED27 on	0		
		Bit4	Port zQSFP+, Red LED28 on	0		
		Bit5	Port zQSFP+, Red LED29 on	0		
		Bit6	Port zQSFP+, Red LED30 on	0		
		Bit7	Port zQSFP+, Red LED31 on	0		
0xa4	Port Red LED control: 1 denotes "Red on"	Bit0	Port zQSFP+, Red LED48 on	0	R/W	0x36
		Bit1	Port zQSFP+, Red LED49 on	0		
		Bit2	Port zQSFP+, Red LED50 on	0		
		Bit3	Port zQSFP+, Red LED51 on	0		
		Bit4	Port zQSFP+, Red LED52 on	0		
		Bit5	Port zQSFP+, Red LED53 on	0		
		Bit6	Port zQSFP+, Red LED54 on	0		
		Bit7	Port zQSFP+, Red LED55 on	0		

0xa5	Port Red LED control: 1 denotes "Red on"	Bit0	Port zQSFP+, Red LED56 on	0	R/W	0x36
		Bit1	Port zQSFP+, Red LED57 on	0		
		Bit2	Port zQSFP+, Red LED58 on	0		
		Bit3	Port zQSFP+, Red LED59 on	0		
		Bit4	Port zQSFP+, Red LED60 on	0		
		Bit5	Port zQSFP+, Red LED61 on	0		
		Bit6	Port zQSFP+, Red LED62 on	0		
		Bit7	Port zQSFP+, Red LED63 on	0		
0xa6	1 denotes "Yellow LED on"	Bit0	Port zQSFP+, Yellow LED16 on	1	R/W	0x36
		Bit1	Port zQSFP+, Yellow LED17 on	1		
		Bit2	Port zQSFP+, Yellow LED18 on	1		
		Bit3	Port zQSFP+, Yellow LED19 on	1		
		Bit4	Port zQSFP+, Yellow LED20 on	1		
		Bit5	Port zQSFP+, Yellow LED21 on	1		
		Bit6	Port zQSFP+, Yellow LED22 on	1		
		Bit7	Port zQSFP+, Yellow LED23 on	1		
0xa7	1 denotes "Yellow LED on"	Bit0	Port zQSFP+, Yellow LED24 on	1	R/W	0x36
		Bit1	Port zQSFP+, Yellow LED25 on	1		
		Bit2	Port zQSFP+, Yellow LED26 on	1		
		Bit3	Port zQSFP+, Yellow LED27 on	1		
		Bit4	Port zQSFP+, Yellow LED28 on	1		
		Bit5	Port zQSFP+, Yellow LED29 on	1		
		Bit6	Port zQSFP+, Yellow LED30 on	1		
		Bit7	Port zQSFP+, Yellow LED31 on	1		

0xa8	1 denotes "Yellow LED on"	Bit0	Port zQSFP+, Yellow LED48 on	1	R/W	0x36
		Bit1	Port zQSFP+, Yellow LED49 on	1		
		Bit2	Port zQSFP+, Yellow LED50 on	1		
		Bit3	Port zQSFP+, Yellow LED51 on	1		
		Bit4	Port zQSFP+, Yellow LED52 on	1		
		Bit5	Port zQSFP+, Yellow LED53 on	1		
		Bit6	Port zQSFP+, Yellow LED54 on	1		
		Bit7	Port zQSFP+, Yellow LED55 on	1		
0xa9	1 denotes "Yellow LED on"	Bit0	Port zQSFP+, Yellow LED56 on	1	R/W	0x36
		Bit1	Port zQSFP+, Yellow LED57 on	1		
		Bit2	Port zQSFP+, Yellow LED58 on	1		
		Bit3	Port zQSFP+, Yellow LED59 on	1		
		Bit4	Port zQSFP+, Yellow LED60 on	1		
		Bit5	Port zQSFP+, Yellow LED61 on	1		
		Bit6	Port zQSFP+, Yellow LED62 on	1		
		Bit7	Port zQSFP+, Yellow LED63 on	1		
0xAA	Test (CPU)	Bit0	8 bits form a byte	1	R/W	0x36
		Bit1		0		
		Bit2		1		
		Bit3		0		
		Bit4		1		
		Bit5		0		
		Bit6		1		
		Bit7		0		
0xAB	测试(bmc)	Bit0	8 bits form a byte	1	R/W	0x35
		Bit1		0		
		Bit2		1		
		Bit3		0		
		Bit4		1		
		Bit5		0		
		Bit6		1		
		Bit7		0		
0xb0	9548reset:	Bit0	rst_n_9548_0	1	R/W	0x35

	0 denotes "reset"	Bit1	rst_n_9548_1	1		
		Bit2	rst_n_9548_2	1		
		Bit3	rst_n_9548_3	1		
		Bit4	rst_n_9548_4	1		
		Bit5	rst_n_9548_5	1		
		Bit6	rst_n_9548_6	1		
		Bit7	rst_n_9548_7	1		
0xb1	Front Panel LED-BMC	Bit0	Bit0	0	R/W	0x35
		Bit1	Bit1	0		
		Bit2	Bit2	0		
		Bit3				
		Bit4				
		Bit5				
		Bit6				
		Bit7				
0xb2	Front Panel LED-CPU	Bit0	Bit0	1	R/W	0x35
		Bit1	Bit1	1		
		Bit2	Bit2	0		
		Bit3				
		Bit4				
		Bit5				
		Bit6				
		Bit7				
0xb3	Front Panel LED-PWR	Bit0	Bit0	0	R/W	0x35
		Bit1	Bit1	0		
		Bit2	Bit2	0		
		Bit3				
		Bit4				
		Bit5				
		Bit6				
		Bit7				
0xb4	Front Panel LED-FAN	Bit0	Bit0	0	R/W	0x35
		Bit1	Bit1	0		
		Bit2	Bit2	0		
		Bit3				
		Bit4				
		Bit5				
		Bit6				
		Bit7				
0xb9	100GOptical module reset: 0 denotes "reset"	Bit0	zQSFP+16 Optical module reset	1	R/W	0x36
		Bit1	zQSFP+17 Optical module reset	1		
		Bit2	zQSFP+18 Optical module reset	1		
		Bit3	zQSFP+19 Optical module reset	1		

		Bit4	zQSFP+20 Optical module reset	1		
		Bit5	zQSFP+21 Optical module reset	1		
		Bit6	zQSFP+22 Optical module reset	1		
		Bit7	zQSFP+23 Optical module reset	1		
0xba	100G Optical module reset: 0 denotes "reset"	Bit0	zQSFP+24 Optical module reset	1	R/W	0x36
		Bit1	zQSFP+25 Optical module reset	1		
		Bit2	zQSFP+26 Optical module reset	1		
		Bit3	zQSFP+27 Optical module reset	1		
		Bit4	zQSFP+28 Optical module reset	1		
		Bit5	zQSFP+29 Optical module reset	1		
		Bit6	zQSFP+30 Optical module reset	1		
		Bit7	zQSFP+31 Optical module reset	1		
0xbb	100G Optical module reset: 0 denotes "reset"	Bit0	zQSFP+48 Optical module reset	1	R/W	0x36
		Bit1	zQSFP+49 Optical module reset	1		
		Bit2	zQSFP+50 Optical module reset	1		
		Bit3	zQSFP+51 Optical module reset	1		
		Bit4	zQSFP+52 Optical module reset	1		
		Bit5	zQSFP+53 Optical module reset	1		
		Bit6	zQSFP+54 Optical module reset	1		
		Bit7	zQSFP+55 Optical module reset	1		
0xbc	100G Optical module reset: 0 denotes "reset"	Bit0	zQSFP+56 Optical module reset	1	R/W	0x36
		Bit1	zQSFP+57 Optical module reset	1		
		Bit2	zQSFP+58 Optical module reset	1		
		Bit3	zQSFP+59 Optical module reset	1		
		Bit4	zQSFP+60 Optical module reset	1		
		Bit5	zQSFP+61 Optical module reset	1		

		Bit6	zQSFP+62 Optical module reset	1		
		Bit7	zQSFP+63 Optical module reset	1		

▪ CPLD 3

Table 18. CPLD 3 Register Address

Register Address	Function	Bit	Description	Default Value	R/W	I2C Bus	
0x00	Version	Bit0	Version	0x10 denotes 1.0 Version	Read Only	9641	0x37
		Bit1	Version				
		Bit2	Version				
		Bit3	Version				
		Bit4	Version				
		Bit5	Version				
		Bit6	Version				
		Bit7	Version				
0x01	Version - Year	Bit0	Version - Year	0x17 denotes Year 2017	Read Only		0x37
		Bit1	Version - Year				
		Bit2	Version - Year				
		Bit3	Version - Year				
		Bit4	Version - Year				
		Bit5	Version - Year				
		Bit6	Version - Year				
		Bit7	Version - Year				
0x02	Version - Month	Bit0	Version - Month	0x08 denotes Month August	Read Only	9641	0x37
		Bit1	Version - Month				
		Bit2	Version - Month				
		Bit3	Version - Month				
		Bit4	Version - Month				
		Bit5	Version - Month				
		Bit6	Version - Month				
		Bit7	Version - Month				
0x03	Version - Day	Bit0	Version - Day	0x28 denotes Day 28	Read Only	9641	0x37
		Bit1	Version - Day				
		Bit2	Version - Day				
		Bit3	Version - Day				
		Bit4	Version - Day				

		Bit5	Version - Day				
		Bit6	Version - Day				
		Bit7	Version - Day				
0x15	Fan RPM control	Bit0	Set Fan speed value: 0-255 0: Stop 255: Max RPM Default 50% 0x80	0	R/W	CPU	0x32
		Bit1		0			
		Bit2		0			
		Bit3		0			
		Bit4		0			
		Bit5		0			
		Bit6		0			
		Bit7		1			
0x19	FAN Write Protect	Bit0	FAN0 ROM Write protect (0==normal; 1==protect)	1	R/W	CPU	0x32
		Bit1	FAN1 ROM Write protect (0==normal; 1==protect)	1			
		Bit2	FAN2 ROM Write protect (0==normal; 1==protect)	1			
		Bit3					
		Bit4					
		Bit5					
		Bit6					
		Bit7					
0x1A	FAN Power up status	Bit0	FAN0 Power up status (0==powered; 1==not powered)	1	Read Only	9641	0x37
		Bit1	FAN1 Power up status (0==powered; 1==not powered)	1			
		Bit2	FAN2 Power up status (0==powered; 1==not powered)	1			
		Bit3					
		Bit4					
		Bit5					
		Bit6					
		Bit7					
0x1B	FAN0 Speed Read (Low 8 bits)	Bit0	FAN0 Speed Read: Low 8 bits	0	Read Only	9641	0x37
		Bit1		0			
		Bit2		0			
		Bit3		0			
		Bit4		0			
		Bit5		0			
		Bit6		0			
		Bit7		0			
0x1C	FAN0 Speed Read (High 8 bits)	Bit0	FAN0 Speed Read: High 8 bits	0	Read Only	9641	0x37
		Bit1		0			
		Bit2		0			
		Bit3		0			
		Bit4		0			

		Bit5		0			
		Bit6		0			
		Bit7		0			
0x1D	FAN1 Speed Read (Low 8 bits)	Bit0	FAN1 Speed Read: Low 8 bits	0	Read Only	9641	0x37
		Bit1		0			
		Bit2		0			
		Bit3		0			
		Bit4		0			
		Bit5		0			
		Bit6		0			
		Bit7		0			
0x1E	FAN1 Speed Read (High 8 bits)	Bit0	FAN1 Speed Read: High 8 bits	0	Read Only	9641	0x37
		Bit1		0			
		Bit2		0			
		Bit3		0			
		Bit4		0			
		Bit5		0			
		Bit6		0			
		Bit7		0			
0x1F	FAN2 Speed Read (Low 8 bits)	Bit0	FAN2 Speed Read: Low 8 bits	0	Read Only	9641	0x37
		Bit1		0			
		Bit2		0			
		Bit3		0			
		Bit4		0			
		Bit5		0			
		Bit6		0			
		Bit7		0			
0x20	FAN2 Speed Read (High 8 bits)	Bit0	FAN2 Speed Read: High 8 bits	0	Read Only	9641	0x37
		Bit1		0			
		Bit2		0			
		Bit3		0			
		Bit4		0			
		Bit5		0			
		Bit6		0			
		Bit7		0			
0x23	FAN0 LED control	Bit0	Red LED on/off (1=off, 0=on)	1	RW	CPU	0x32
		Bit1	Green LED on/off (1=off, 0=on)	0			
		Bit2	Blink (1=Blink, 0=not blink)	1			
		Bit3	Yellow LED on/off (1=off, 0=on)	1			
		Bit4	Reserve	1			
		Bit5	Reserve	1			
		Bit6	Reserve	1			
		Bit7	Reserve	1			
0x24	FAN1 LED control	Bit0	Red LED on/off (1=off, 0=on)	1	RW	CPU	0x32
		Bit1	Green LED on/off (1=off, 0=on)	0			
		Bit2	Blink (1=Blink, 0=not blink)	1			

		Bit3	Yellow LED on/off (1=off, 0=on)	1			
		Bit4	Reserve	1			
		Bit5	Reserve	1			
		Bit6	Reserve	1			
		Bit7	Reserve	1			
0x25	FAN2 LED control	Bit0	Red LED on/off (1=off, 0=on)	1	R/W	CPU	0x32
		Bit1	Green LED on/off (1=off, 0=on)	0			
		Bit2	Blink (1=Blink, 0=not blink)	1			
		Bit3	Yellow LED on/off (1=off, 0=on)	1			
		Bit4	Reserve	1			
		Bit5	Reserve	1			
		Bit6	Reserve	1			
		Bit7	Reserve	1			
0x30	FAN Present status: 0=present; 1=not present	Bit0	FAN0present (0=present; 1=not present)	1	Read Only	9641	0x37
		Bit1	FAN1present (0=present; 1=not present)	1			
		Bit2	FAN2present (0=present; 1=not present)	1			
0x31	FAN0 - FAN3 status read: 0=stop; 1=work	Bit0	FAN0 work status	0	Read Only	9641	0x37
		Bit1	FAN1 work status	0			
		Bit2	FAN2 work status	0			
0x32	Interrupt converge: 0=interrupt; 1=no interrupt (write 1 clear interrupt)	Bit0	Fan 0 Present Interrupt	1	Write Clear		0x32
		Bit1	Fan 1 Present Interrupt	1			
		Bit2	Fan 2 Present Interrupt	1			
		Bit3					
		Bit4					
		Bit5					
		Bit6					
		Bit7					
0x33	Interrupt mask: 0=no mask, 1=mask	Bit0	Fan 0 Present Interrupt Mask control	1	R/W		0x32
		Bit1	Fan 1 Present Interrupt Mask control	1			

		Bit2	Fan 2 Present Interrupt Mask control	1			
		Bit3					
		Bit4					
		Bit5					
		Bit6					
		Bit7					
0x34	Interrupt converge: 0=interrupt; 1=no interrupt (write 1 clear interrupt)	Bit0	Fan 0 Present Interrupt	1	Write Clear		0x31
		Bit1	Fan 1 Present Interrupt	1			
		Bit2	Fan 2 Present Interrupt	1			
		Bit3					
		Bit4					
		Bit5					
		Bit6					
		Bit7					
0x35	Interrupt mask: 0=no mask, 1=mask	Bit0	Fan 0 Present Interrupt Mask control	1	R/W		0x31
		Bit1	Fan 1 Present Interrupt Mask control	1			
		Bit2	Fan 2 Present Interrupt Mask control	1			
		Bit3					
		Bit4					
		Bit5					
		Bit6					
		Bit7					
0x43	Interrupt converge: 0=interrupt; 1=no interrupt (write 1 clear interrupt)	Bit0			Write Clear		0x32
		Bit1					
		Bit2					
		Bit3	Fan Interrupt converge (all interrupts &&)	1			
		Bit4	Power Interrupt converge (all interrupts &&)	1			
		Bit5	U75-main CPLD Interrupt	1			
		Bit6	LM75 Interrupt	1			
		Bit7					
0x44	Interrupt mask: 0=no mask, 1=mask	Bit0			R/W		0x32
		Bit1	FUNC Button Interrupt Mask control	1			
		Bit2		1			
		Bit3	Fan Interrupt Mask control	1			
		Bit4	Power Interrupt Mask control	1			
		Bit5	U75-main CPLD Interrupt Mask control	1			

		Bit6	LM75 Interrupt Mask control	1			
		Bit7					
0x45	Interrupt converge: 0=interrupt; 1=no interrupt (write 1 clear interrupt)	Bit0			Write Clear		0x31
		Bit1	FUNC Button interrupt	1			
		Bit2					
		Bit3	Fan Interrupt converge	1			
		Bit4	Power Interrupt converge	1			
		Bit5	U75-main CPLD interrupt converge	1			
		Bit6	LM75 Interrupt converge	1			
		Bit7					
0x46	Interrupt mask: 0=no mask, 1=mask	Bit0			R/W		0x31
		Bit1	FUNC Button Interrupt Mask control	1			
		Bit2		1			
		Bit3	Fan Interrupt Mask control	1			
		Bit4	Power Interrupt Mask control	1			
		Bit5	U75-main CPLD Interrupt Mask control	1			
		Bit6	LM75 Interrupt Mask control	1			
		Bit7					
0x51	PSU status	Bit0	PSU present: 0=present, 1=not present	0	Read Only	9641	0x37
		Bit1	PSU operation status: 0=fault, 1=normal	0			
		Bit2	PSU warning: 0=interrupt, 1=no interrupt	NA			
		Bit3	Reserved	NA			
		Bit4	PSU present: 0=present, 1=not present	NA			
		Bit5	PSU operation status: 0=fault, 1=normal	NA			
		Bit6	PSU warning: 0=interrupt, 1=no interrupt	NA			
		Bit7	Reserved	NA			
0x52	Interrupt (Read: 0=interrupt, 1=no interrupt; Write: 1 clear interrupt)	Bit0	power1_pre Interrupt	1	Write Clear		0x32
		Bit1	power1_psok Interrupt	1			
		Bit2	power1_alert Interrupt	1			
		Bit3	reversed	1			
		Bit4	power2_pre Interrupt	1			
		Bit5	power2_psok Interrupt	1			
		Bit6	power2_alert Interrupt	1			
		Bit7	reversed	1			
0x53	Interrupt mask	Bit0	power1_pre Interrupt Mask	1	R/W		0x32
		Bit1	power1_psok Interrupt Mask	1			

	(0=interrupt, 1=interrupt mask)	Bit2	power1_alert Interrupt Mask	1			
		Bit3	reversed	1			
		Bit4	power2_pre Interrupt Mask	1			
		Bit5	power2_psok Interrupt Mask	1			
		Bit6	power2_alert Interrupt Mask	1			
		Bit7	reversed	1			
0x57	Interrupt (Read: 0=interrupt, 1=no interrupt; Write: 1 clear interrupt)	Bit0	power1_pre Interrupt	1	Write Clear		0x31
		Bit1	power1_psok Interrupt	1			
		Bit2	power1_alert Interrupt	1			
		Bit3	reversed	1			
		Bit4	power2_pre Interrupt	1			
		Bit5	power2_psok Interrupt	1			
		Bit6	power2_alert Interrupt	1			
		Bit7	reversed	1			
0x58	Interrupt mask (0=interrupt, 1=interrupt mask)	Bit0	power1_pre Interrupt Mask	1	R/W		0x31
		Bit1	power1_psok Interrupt Mask	1			
		Bit2	power1_alert Interrupt Mask	1			
		Bit3	reversed	1			
		Bit4	power2_pre Interrupt Mask	1			
		Bit5	power2_psok Interrupt Mask	1			
		Bit6	power2_alert Interrupt Mask	1			
		Bit7	reversed	1			
0x64	Reset control: 0=reset, 1=not reset	Bit0	tca_9548_rst_n	1	R/W	9641	0x37
		Bit1	pca9641_rst_n	1			
		Bit2					
		Bit3					
		Bit4					
		Bit5					
		Bit6					
		Bit7					
0x65	Reset control: 0=reset, 1=not reset	Bit0	sw_board_rst_n	1	R/W	CPU	0x32
		Bit1					
		Bit2					
		Bit3					
		Bit4					
		Bit5					
		Bit6					
		Bit7					
0x66	USB controller OC status: 1=not over current, 0=oc active	Bit0	USB OC bit	1	Read Only	9641	0x37
		Bit1	NA	NA			
		Bit2	NA	NA			
		Bit3	NA	NA			
		Bit4	NA	NA			
		Bit5	NA	NA			
		Bit6	NA	NA			
		Bit7	NA	NA			

0x67	USB Controller Enable control: 1=en, 0=off	Bit0	USB enable control bit	1	R/W	CPU	0x32
		Bit1	NA	NA			
		Bit2	NA	NA			
		Bit3	NA	NA			
		Bit4	NA	NA			
		Bit5	NA	NA			
		Bit6	NA	NA			
		Bit7	NA	NA			
0xAA	Test (CPU)	Bit0	8 bits form a byte	1	R/W		0x32
		Bit1		0			
		Bit2		1			
		Bit3		0			
		Bit4		1			
		Bit5		0			
		Bit6		1			
		Bit7		0			
0xAB	Test (BMC)	Bit0	8 bits form a byte	1	R/W		0x31
		Bit1		0			
		Bit2		1			
		Bit3		0			
		Bit4		1			
		Bit5		0			
		Bit6		1			
		Bit7		0			
0xAC	Test (9641)	Bit0	8 bits form a byte	1	R/W	9641	0x37
		Bit1		0			
		Bit2		1			
		Bit3		0			
		Bit4		1			
		Bit5		0			
		Bit6		1			
		Bit7		0			

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