



# SIM8200 and SIM8260 LGA Serices Compatible\_Design

5G Module

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# 1 Introduction

This document describes the differences of SDX55 and SDX62.

## 1.1 Key features differences

Table 1: Key features differences

	SIM8200G	Upgrades	SIM8260
	SIM8200G(SDX55)		SIM8260 (SDX62)
Package	41mm*43.6mm*2.8mm		41mm*43.6mm*2.8mm
Modem	3GPP Rel 15 5G NR mmW and sub-6 5G NR		3GPP Rel <b>16</b> 5G NR mmW and sub-6 5G NR
Application processor	Cortex-A7 up to 1.5 GHz		Cortex-A7 up to 1.5 GHz
Modem system	Qualcomm® Hexagon™ DSP processor at up to 1 GHz (Turbo)		Qualcomm® Hexagon™ DSP processor at up to <b>1.5 GHz</b> (Turbo)
Memory	LPDDR4X at 1.866 GHz External 4Gb LPDDR4X 4Gb NAND		LPDDR4X at <b>2.133 GHz</b> External <b>8Gb</b> LPDDR4X <b>8Gb</b> NAND
PMIC	PMX55 + PMK8002		<b>PMX65 + PMK65</b>
Charge IC	PM8150B		<b>PM7250B</b>
WCN	QCA6391		<b>WCN6856</b>
Sub-6 RF Transceiver	SDR865		<b>SDR735</b>
mmW Transceiver	SMR526		<b>SMR546</b>
mmW Module	QTM525, QTM527		<b>QTM545, QTM547</b>
Display	SPI display support		SPI display support
Emmc/SDC	SDIO 8-bit (no SD card if eMMC is used)		SDIO 8-bit (no SD card if eMMC is used)
PCIE	Gen 3.0 2-lane		Gen 3.0 2-lane or <b>Gen 4.0 1-lane</b>
UART interface	3		<b>Default 2</b>
I2C interface	2		3
SPI	1		1
Audio interface	I2S/PCM 2		I2S/PCM 2
USB	1x USB 3.1 Gen2 or USB 2.0		1x USB 3.1 Gen2 or USB 2.0
UICC	2		2
<b>RGMII</b>	<b>Yes</b>		<b>No</b>

Codec	ALC5616	ALC5616
PCIe Switch	PCIe Switch	PCIe Switch
2.5G Ethernet	RTL8125B	RTL8125B

**NOTE**

1. SIM8060 series cannot support RGMI interface

## 1.2 Pin differences

Table 2: Pin description

Pin name		Pin no.	Description		Comment
SIM8200G	SIM8260		SIM8200G(SDX55)	SIM8260 (SDX62)	
<b>System control</b>					
PON_1	NC	T45	Power on the module, active high	NC	
<b>UART interface</b>					
UART2_CTS	GPIO_82	V3	Clear to send	GPIO_82	
UART2_RTS	GPIO_83	Y3	Request to send	GPIO_83	
UART2_TXD	GPIO_107	U1	Transmit data	GPIO_107	
UART2_RXD	GPIO_89	W1	Receive data	GPIO_89	
<b>WLAN/BT chip interface</b>					
WL_LAA_TX_EN	WL_LAA_TX_EN	R51	WLAN XFEM control for LAA enable <b>SIM8260C/E/A ,unused, please keep open</b>		for WCN 5G and LAA COEX
WL_TX_EN	WL_TX_EN	AY14	WLAN XFEM control for WLAN TX enable <b>SIM8260C unused, please keep open</b>		
NC	WL_TXEN_TO_N79	BA37	NC	From Module N79 to the W82 <b>SIM8260E/A unused, please keep open</b>	N79/WIFI coexistence signals
NC	N79_TO_WL_TXEN	BA29	NC	From the W82 to Module N79	
<b>RGMI interface</b>					
RGMI_MD_I/O	NC	D30	RGMI management data	NC	
RGMI_MD_CLK	NC	D34	RGMI management data clock	NC	
RGMI_RX_CTL	EBI2_WE_N	A35	RGMI receive control	EBI2_WE_N <b>SIM8260C unused</b>	

RGMI _RX_CLK	<b>EBI2_AD_5</b>	B36	RGMI receive clock	<b>EBI2_AD_5</b> SIM8260C unused
RGMI_RX_0	<b>EBI2_AD_6</b>	B40	RGMI receive data bit 0	<b>EBI2_AD_6</b> SIM8260C unused
RGMI_RX_1	<b>EBI2_AD_7</b>	A37	RGMI receive data bit 1	<b>EBI2_AD_7</b> SIM8260C unused
RGMI_RX_2	<b>EBI2_AD_3</b>	B38	RGMI receive data bit 2	<b>EBI2_AD_3</b> SIM8260C unused
RGMI_RX_3	<b>EBI2_AD_1</b>	A39	RGMI receive data bit 3	<b>EBI2_AD_1</b> SIM8260C unused
RGMI _TX_CTL	<b>EBI2_AD_0</b>	A33	RGMI transmit control	<b>EBI2_AD_0</b> SIM8260C unused
RGMI _TX_CLK	<b>EBI2_AD_2</b>	B34	RGMI transmit clock	<b>EBI2_AD_2</b> SIM8260C unused
RGMI_TX_0	<b>EBI2_CLE</b>	A31	RGMI transmit data bit 0	<b>EBI2_CLE</b> SIM8260C unused
RGMI_TX_1	<b>NC</b>	B30	RGMI transmit data bit 1	<b>NC</b>
RGMI_TX_2	<b>NC</b>	A29	RGMI transmit data bit 2	<b>NC</b>
RGMI_TX_3	<b>EBI2_RE_N</b>	B32	RGMI transmit data bit 3	<b>EBI2_RE_N</b> SIM8260C unused
RGMI_PWR _IN	<b>NC</b>	D32	Power supply input for internal RGMI circuit	<b>NC</b>
RGMI_INT_ N	<b>EBI2_AD_4</b>	C39	Interrupt input from RGMI PHY	<b>EBI2_AD_4</b>
RGMI_RST_ N	<b>GPIO_31</b>	C29	Reset output to RGMI PHY	<b>GPIO_31</b>
RGMI_PWR _EN	<b>GPIO_102</b>	D36	Used to enable external LDO to supply 1.8V power to RGMI_PWR_IN pin	<b>GPIO_102</b>
RGMI_3P3_ EN	<b>GPIO_105</b>	D38	Used to enable external DC-DC/LDO to supply 3.3V power to RGMI PHY	<b>GPIO_105</b>

### Antenna interface

ANT0		AL1	Please refer to the HD document	Please refer to the HD document
ANT1	<b>ANT2</b>	BA25	Please refer to the HD document	Please refer to the HD document
ANT4	<b>ANT1</b>	BA33	Please refer to the HD document	Please refer to the HD document
ANT5	<b>NC</b>	BA19	Please refer to the HD document	<b>NC</b>
ANT7	<b>ANT3</b>	BA47	Please refer to the HD document	Please refer to the HD document



## 1.3 GPIO differences Table

**Table 3: GPIO differences**

SIM8200G(SDX55)			SIM8260 (SDX62)	
PIN	GPIO	Description	GPIO	Description
U1	GPIO_4	BLSP_UART2_TX	<b>GPIO_107</b>	GPIO_107
W1	GPIO_5 <sup>Y</sup>	BLSP_UART2_RX	<b>GPIO_89</b>	GPIO_89
V3	GPIO_6 <sup>Y</sup>	GPIO6/UART2_CTS	<b>GPIO_82</b>	GPIO_82
Y3	GPIO_7	GPIO7/UART2_RTS	<b>GPIO_83<sup>Y</sup></b>	GPIO_83
AB3	GPIO_20	BLSP_UART1_TX	<b>GPIO_48<sup>Y</sup></b>	BLSP_UART1_TX
AD3	GPIO_21 <sup>Y</sup>	BLSP_UART1_RX	<b>GPIO_49<sup>Y</sup></b>	BLSP_UART1_RX
AA1	GPIO_22 <sup>Y</sup>	BLSP_UART1_CTS	<b>GPIO_80</b>	BLSP_UART1_CTS
AC1	GPIO_23 <sup>Y</sup>	BLSP_UART_RTS	<b>GPIO_81<sup>Y</sup></b>	BLSP_UART1_RTS
K45	GPIO_52 <sup>Y</sup>	WLAN_EN_GPIO52	<b>GPIO_91</b>	WLAN_EN_GPIO91
AE5	GPIO_61 <sup>Y</sup>	NET_MODE_GPIO61	<b>GPIO_47</b>	NET_MODE_GPIO47
AH3	GPIO_71 <sup>Y</sup>	AP_STATUS_GPIO71	<b>GPIO_90<sup>Y</sup></b>	<b>WAKE_IN_GPIO90</b>
Y7	GPIO_78 <sup>Y</sup>	I2C2_SDA	<b>GPIO_84<sup>Y</sup></b>	I2C2_SDA
AB7	GPIO_79 <sup>Y</sup>	I2C2_SCL	<b>GPIO_85</b>	I2C2_SCL
D14	GPIO_80	BLSP_SPI_MOSI	<b>GPIO_4</b>	BLSP_SPI_MOSI
D16	GPIO_81	BLSP_SPI_MISO	<b>GPIO_5<sup>Y</sup></b>	BLSP_SPI_MISO
D18	GPIO_82	BLSP_SPI_CS_N	<b>GPIO_6<sup>Y</sup></b>	BLSP_SPI_CS_N
D20	GPIO_83 <sup>Y</sup>	BLSP_SPI_CLK	<b>GPIO_7</b>	BLSP_SPI_CLK
C11	GPIO_84 <sup>Y</sup>	USB_ID_GPIO84	<b>PMX_GPIO11</b>	USB_ID_PMX_GPIO11
D10	GPIO_86 <sup>Y</sup>	USB_OTG_EN_GPIO86	<b>GPIO_87</b>	USB_OTG_EN_GPIO87
AG5	GPIO_88 <sup>Y</sup>	SLEEP_IN_GPIO88	<b>GPIO_88<sup>Y</sup></b>	GPIO88
D36	GPIO_89 <sup>Y</sup>	RGMII_VREG_PX_EN	<b>GPIO_102</b>	GPIO_102
C39	GPIO_90 <sup>Y</sup>	RGMII_INT_N	<b>GPIO_107</b>	GPIO_107
C29	GPIO_91	RGMII_RESET_N	<b>GPIO_31</b>	GPIO_31
AF3	GPIO_97	WAKEUP_OUT_GPIO97	GPIO_97	<b>SLEEP_OUT_GPIO97</b>

### NOTE

2. GPIO\_XX<sup>Y</sup> Mark indicates GPIO support interrupt function