

Ref				Pin No.	Name on schematic	Name on ArduinoIDE	Name on SDK	Pin No. on SDK	Type	dir	Voltage	After turning on the power		After starting Arduino		After starting SDK		Connection	Pin group		CXD5602GG pin function				Maximum absolute rating Voltage(V)	Features on the extension board	explanation
Main	Ext	Cam	LTE									dir	Init val	dir	Init val	dir	Init val		Mode name	doc.	mode0	mode1	mode2	mode3			
JP1				1	GND	—	—	—	Power	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
JP1				2	UART2_TX	D01	PIN_UART2_TXD	67	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	UART2	P1n	GPIO	UART2_TXD	—	GPIO	2.5		
JP1				3	UART2_RX	D00	PIN_UART2_RXD	68	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	UART2	P1n	GPIO	UART2_RXD	—	GPIO	2.5		
JP1				4	UART2_RTS	D28	PIN_UART2_RTS	70	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	UART2	P1n	GPIO	UART2_RTS	—	GPIO	2.5		
JP1				5	UART2_CTS	D27	PIN_UART2_CTS	69	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	UART2	P1n	GPIO	UART2_CTS	—	GPIO	2.5		
JP1				6	I2S0_BCK	D26	PIN_I2S0_BCK	93	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	I2S0	P1v	GPIO	I2S0_BCK	—	GPIO	2.5		
JP1				7	I2S0_LRCK	D25	PIN_I2S0_LRCK	94	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	I2S0	P1v	GPIO	I2S0_LRCK	—	GPIO	2.5		
JP1				8	SPI5_CS_X	D24	PIN_SPI5_CS_X	76	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	EMMCA	P1p	GPIO	EMMC_CMD	SPI5_CS_X	GPIO	2.5		
JP1				9	SPI5_SCK	D23	PIN_SPI5_SCK	75	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	EMMCA	P1p	GPIO	EMMC_CLK	SPI5_SCK	GPIO	2.5		
JP1				10	3.3V	—	—	—	Power	0	3.3	0	—	0	—	0	—	—	—	—	—	—	—	—	—		
JP1				11	1.8V	—	—	—	Power	0	1.8	0	—	0	—	0	—	—	—	—	—	—	—	—	—		
JP1				12	SEN_IRQ	D22	PIN_SEN_IRQ_IN	37	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	SEN_IRQ_IN	P1e	GPIO	SEN_IRQ_IN	—	—	2.5		
JP1				13	SEN_AIN4	A2	LPADC2	—	Analog	I	~0.7	I	—	I	—	I	—	CXD5602GG	—	—	—	—	—	—	1.05		
JP2				1	XRST	—	(SPR_RST_X)	—	Digital	0	1.8	—	Low	0	High	0	High	CXD5602GG	—	—	—	—	—	—	—		
JP2				2	1.8V	—	—	—	Power	0	1.8	0	—	0	—	0	—	—	—	—	—	—	—	—	—		
JP2				3	3.7V(4.0V)	—	—	—	Power	I/O	3.6-4.4	0	—	0	—	0	—	—	—	—	—	—	—	—	7		
JP2				4	GPIO	D21	PIN_EMMC_DATA3	80	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	EMMCB	P1q	GPIO	EMMC_DATA3	—	GPIO	2.5		
JP2				5	GPIO	D20	PIN_EMMC_DATA2	79	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	EMMCB	P1q	GPIO	EMMC_DATA2	—	GPIO	2.5		
JP2				6	I2S0_DATA_IN	D19	PIN_I2S0_DATA_IN	95	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	I2S0	P1v	GPIO	I2S0_DATA_IN	—	GPIO	2.5		
JP2				7	I2S0_DATA_OUT	D18	PIN_I2S0_DATA_OUT	96	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	I2S0	P1v	GPIO	I2S0_DATA_OUT	—	GPIO	2.5		
JP2				8	SPR_SPI5_MISO	D17	PIN_SPI5_MISO	78	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	EMMCA	P1p	GPIO	EMMC_DATA1	SPI5_MISO	GPIO	2.5		
JP2				9	SPR_SPI5_MOSI	D16	PIN_SPI5_MOSI	77	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	EMMCA	P1p	GPIO	EMMC_DATA0	SPI5_MOSI	GPIO	2.5		
JP2				10	GND	—	—	—	Power	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
JP2				11	I2C0_SCL	D15	PIN_I2C0_BCK	44	Digital	I/O	1.8	—	High	I	High	I	High	CXD5602GG	I2C0	P1j	GPIO	I2C0_BCK	—	—	2.5		
JP2				12	I2C0_SDA	D14	PIN_I2C0_BDT	45	Digital	I/O	1.8	—	High	I	High	I	High	CXD5602GG	I2C0	P1j	GPIO	I2C0_BDT	—	—	2.5		
JP2				13	SEN_AIN5	A3	LPADC3	—	Analog	I	~0.7	I	—	I	—	I	—	CXD5602GG	—	—	—	—	—	—	1.05		
CN5		CN1		1	MCLK	—	—	—	Digital	0	1.8	—	—	0	Hi-Z	0	Hi-Z	26MHz TCXO	—	—	—	—	—	—	2.5		
CN5		CN1		2	GND	—	—	—	Power	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
CN5		CN1		3	I2C_SDA	—	PIN_SPI0_MISO	20	Digital	I/O	1.8	—	High	—	High	I	High	CXD5602GG	I2C2	P17	GPIO	I2C2_BDT	SPI0_MISO	GPIO	2.5		
CN5		CN1		4	I2C_SCL	—	PIN_SPI0_MOSI	19	Digital	I/O	1.8	—	High	—	High	I	High	CXD5602GG	I2C2	P17	GPIO	I2C2_BCK	SPI0_MOSI	GPIO	2.5		
CN5		CN1		5	XRS	D35	PIN_SDIO_DIR1_3	91	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	SDIOC	P1t	GPIO	SDIO_DIR1_3	GPIO	GPIO	2.5		
CN5		CN1		6	PWDN	D34	PIN_SDIO_DIR0	90	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	SDIOC	P1t	GPIO	SDIO_DIR0	GPIO	GPIO	2.5		
CN5		CN1		7	LDO_EN	—	(ACP_GP04)	—	Digital	0	3.6-4.4	0	Hi-Z	0	Low	0	Low	CXD5247GF	—	—	—	—	—	—	—		
CN5		CN1		8	VDD_3.7V	—	—	—	Power	0	3.6-4.4	0	—	0	—	0	—	—	—	—	—	—	—	—	—		
CN5		CN1		9	IS_DATA4	—	PIN_IS_DATA4	63	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	I	—	CXD5602GG	IS	P1m	GPIO	IS_DATA4	GPIO	GPIO	2.5		
CN5		CN1		10	IS_DATA6	—	PIN_IS_DATA6	65	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	I	—	CXD5602GG	IS	P1m	GPIO	IS_DATA6	GPIO	GPIO	2.5		
CN5		CN1		11	IS_DATA0	—	PIN_IS_DATA0	59	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	I	—	CXD5602GG	IS	P1m	GPIO	IS_DATA0	GPIO	GPIO	2.5		
CN5		CN1		12	IS_DATA7	—	PIN_IS_DATA7	66	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	I	—	CXD5602GG	IS	P1m	GPIO	IS_DATA7	GPIO	GPIO	2.5		
CN5		CN1		13	IS_DATA5	—	PIN_IS_DATA5	64	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	I	—	CXD5602GG	IS	P1m	GPIO	IS_DATA5	GPIO	GPIO	2.5		
CN5		CN1		14	IS_DATA2	—	PIN_IS_DATA2	61	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	I	—	CXD5602GG	IS	P1m	GPIO	IS_DATA2	GPIO	GPIO	2.5		
CN5		CN1		15	IS_HSYNC	—	PIN_IS_HSYNC	58	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	I	—	CXD5602GG	IS	P1m	GPIO	IS_HSYNC	GPIO	GPIO	2.5		
CN5		CN1		16	IS_DATA3	—	PIN_IS_DATA3	62	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	I	—	CXD5602GG	IS	P1m	GPIO	IS_DATA3	GPIO	GPIO	2.5		
CN5		CN1		17	IS_VSYNC	—	PIN_IS_VSYNC	57	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	I	—	CXD5602GG	IS	P1m	GPIO	IS_VSYNC	GPIO	GPIO	2.5		
CN5		CN1		18	IS_DATA1	—	PIN_IS_DATA1</																				

CN4[L]	CN4[L]		CN4[L]	49	SPR_UART2_TX	D01	PIN_UART2_TX	67	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	UART2	P1n	GPIO	UART2_TX	–	GPIO	2.5			
CN4[L]	CN4[L]		CN4[L]	51	SPR_UART2_RX	D00	PIN_UART2_RX	68	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	UART2	P1n	GPIO	UART2_RX	–	GPIO	2.5			
CN4[L]	CN4[L]		CN4[L]	53	SPR_UART2_RTS	D28	PIN_UART2_RTS	70	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	UART2	P1n	GPIO	UART2_RTS	–	GPIO	2.5			
CN4[L]	CN4[L]		CN4[L]	55	SPR_UART2_CTS	D27	PIN_UART2_CTS	69	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	UART2	P1n	GPIO	UART2_CTS	–	GPIO	2.5			
CN4[L]	CN4[L]		CN4[L]	57	SPR_EMMC_CLK	D23	PIN_EMMC_CLK	75	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	EMMCA	P1p	GPIO	EMMC_CLK	SPI5_SCK	GPIO	2.5			
CN4[L]	CN4[L]		CN4[L]	59	SPR_EMMC_CMD	D24	PIN_EMMC_CMD	76	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	EMMCA	P1p	GPIO	EMMC_CMD	SPI5_CS_X	GPIO	2.5			
CN4[L]	CN4[L]		CN4[L]	61	SPR_EMMC_DATA0	D16	PIN_EMMC_DATA0	77	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	EMMCA	P1p	GPIO	EMMC_DATA0	SPI5_MOSI	GPIO	2.5			
CN4[L]	CN4[L]		CN4[L]	63	SPR_EMMC_DATA1	D17	PIN_EMMC_DATA1	78	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	EMMCA	P1p	GPIO	EMMC_DATA1	SPI5_MISO	GPIO	2.5			
CN4[L]	CN4[L]		CN4[L]	65	SPR_EMMC_DATA2	D20	PIN_EMMC_DATA2	79	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	EMMCB	P1q	GPIO	EMMC_DATA2	–	GPIO	2.5			
CN4[L]	CN4[L]		CN4[L]	67	SPR_EMMC_DATA3	D21	PIN_EMMC_DATA3	80	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	EMMCB	P1q	GPIO	EMMC_DATA3	–	GPIO	2.5			
CN4[L]	CN4[L]		CN4[L]	69	GND	–	–	–	Power	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–		
CN4[L]	CN4[L]		CN4[L]	71	SPR_SPI2_SCK	D43	PIN_SPI2_SCK	28	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	SPI2A	P00	GPIO	SPI2_SCK	UART0_RXD	I2C3_BDT	2.5			
CN4[L]	CN4[L]		CN4[L]	73	SPR_SPI2_MISO	D08	PIN_SPI2_MISO	30	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	SPI2B	P01	GPIO	SPI2_MISO	UART0_RTS	GPIO	2.5			
CN4[L]	CN4[L]		CN4[L]	75	SPR_SPI2_MOSI	D04	PIN_SPI2_MOSI	29	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	SPI2B	P01	GPIO	SPI2_MOSI	UART0_CTS	GPIO	2.5			
CN4[L]	CN4[L]		CN4[L]	77	SPR_SPI2_CS_X	D42	PIN_SPI2_CS_X	27	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	SPI2A	P00	GPIO	SPI2_CS_X	UART0_TXD	I2C3_BCK	2.5			
CN4[L]	CN4[L]		CN4[L]	79	1.8V	–	–	–	Power	O	1.8	O	–	O	–	O	–	–	–	–	–	–	–	–	–	–	–	
CN4[L]	CN4[L]		CN4[L]	81	SPR_SDIO_CMDDIR	D33	PIN_SDIO_CMDDIR	89	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	O	Hi-Z	CXD5602GG	SDIOC	P1t	GPIO	SDIO_CMDDIR	GPIO	GPIO	2.5			
CN4[L]	CN4[L]		CN4[L]	83	SPR_SDIO_CLK	D38	PIN_SDIO_CLK	81	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	O	Low	CXD5602GG	SDIOA	P1u	GPIO	SDIO_CLK	SPI5_SCK	GPIO	2.5			
CN4[L]	CN4[L]		CN4[L]	85	SPR_SDIO_CMD	–	PIN_SDIO_CMD	82	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	O	Hi-Z	CXD5602GG	SDIOA	P1r	GPIO	SDIO_CMD	SPI5_CS_X	GPIO	2.5			
CN4[L]	CN4[L]		CN4[L]	87	SPR_SDIO_DATA0	–	PIN_SDIO_DATA0	83	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	O	Low	CXD5602GG	SDIOA	P1r	GPIO	SDIO_DATA0	SPI5_MOSI	GPIO	2.5			
CN4[L]	CN4[L]		CN4[L]	89	SPR_SDIO_DATA1	–	PIN_SDIO_DATA1	84	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	O	Low	CXD5602GG	SDIOA	P1r	GPIO	SDIO_DATA1	SPI5_MISO	GPIO	2.5			
CN4[L]	CN4[L]		CN4[L]	91	SPR_SDIO_DATA2	–	PIN_SDIO_DATA2	85	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	O	Low	CXD5602GG	SDIOA	P1r	GPIO	SDIO_DATA2	GPIO	GPIO	2.5			
CN4[L]	CN4[L]		CN4[L]	93	SPR_SDIO_DATA3	–	PIN_SDIO_DATA3	86	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	O	Low	CXD5602GG	SDIOA	P1r	GPIO	SDIO_DATA3	GPIO	GPIO	2.5			
CN4[L]	CN4[L]		CN4[L]	95	GND	–	–	–	Power	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
CN4[L]	CN4[L]		CN4[L]	97	SPR_SDIO_WP	D37	PIN_SDIO_WP	88	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	SDIOB	P1s	GPIO	SDIO_WP	GPIO	GPIO	2.5			
CN4[L]	CN4[L]		CN4[L]	99	GND	–	–	–	Power	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
CN4[R]	CN4[R]		CN4[R]	2	5V	–	–	–	Power	I/O	5	O	–	O	–	O	–	–	–	–	–	–	–	–	–	6		
CN4[R]	CN4[R]		CN4[R]	4	5V	–	–	–	Power	I/O	5	O	–	O	–	O	–	–	–	–	–	–	–	–	–	6		
CN4[R]	CN4[R]		CN4[R]	6	ACP_SPAP	–	–	–	Analog	O	3.3	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5247GF	–	–	–	–	–	–	–	–	–	
CN4[R]	CN4[R]		CN4[R]	8	ACP_SPAN	–	–	–	Analog	O	3.3	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5247GF	–	–	–	–	–	–	–	–	–	
CN4[R]	CN4[R]		CN4[R]	10	ACP_SPBN	–	–	–	Analog	O	3.3	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5247GF	–	–	–	–	–	–	–	–	–	
CN4[R]	CN4[R]		CN4[R]	12	ACP_SPBP	–	–	–	Analog	O	3.3	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5247GF	–	–	–	–	–	–	–	–	–	
CN4[R]	CN4[R]		CN4[R]	14	AGND_DRV	–	–	–	Power	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
CN4[R]	CN4[R]		CN4[R]	16	SPR_SWDIO	–	–	–	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	–	–	–	–	–	–	–	2.5		
CN4[R]	CN4[R]		CN4[R]	18	SPR_SWDCLK	–	–	–	Digital	I	1.8	I	Hi-Z	I	Hi-Z	I	Hi-Z	CXD5602GG	–	–	–	–	–	–	–	2.5		
CN4[R]	CN4[R]		CN4[R]	20	ACP_CLK_DMIC	–	–	–	Digital	O	1.8	O	Hi-Z	O	Hi-Z	O	Hi-Z	CXD5247GF	–	–	–	–	–	–	–	–	–	
CN4[R]	CN4[R]		CN4[R]	22	XRS_PWON	–	–	–	Power	I/O	3.3	I/O	Low	I/O	Low	I/O	Low	CXD5247GF	–	–	–	–	–	–	–	7		
CN4[R]	CN4[R]		CN4[R]	24	SPR_GNSS_1PPS_OUT	D44	PIN_GNSS_1PPS_OUT	6	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	GNSS_1PPS_OUT	P14	GPIO	GNSS_1PPS_OUT	CPU_WDT (Open Drain)	GPIO	2.5			
CN4[R]	CN4[R]		CN4[R]	26	SPR_SEN_IRQ_IN	D22	PIN_SEN_IRQ_IN	37	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	SEN_IRQ_IN	P1e	SEN_IRQ_IN	SEN_IRQ_IN	SEN_IRQ_IN	SEN_IRQ_IN	SEN_IRQ_IN	2.5		
CN4[R]	CN4[R]		CN4[R]	28	SPR_HIF_IRQ_OUT	D02	PIN_HIF_IRQ_OUT	31	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	HIFIRQ	P02	GPIO	HIF_IRQ_OUT	HIF_IRQ_OUT (Open Drain)	GNSS_1PPS_OUT	2.5			
CN4[R]	CN4[R]		CN4[R]	30	GND	–	–	–	Power	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
CN4[R]	CN4[R]		CN4[R]	32	SPR_RST_X	–	–	–	Digital	O	1.8	–	Low	O	High	O	High	CXD5602GG	–	–	–	–	–	–	–	–	–	
CN4[R]	CN4[R]		CN4[R]	34	SPR_AP_CLK	D40	PIN_AP_CLK	5	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	AP_CLK	P13	GPIO	AP_CLK	PMU_WDT (Open Drain)	GPIO	2.5			
CN4[R]	CN4[R]		CN4[R]	36	SPR_SEN_AIN2	A0	LPADC0	–	Analog	I	0.7	I	–	I	–	I	–	CXD5602GG	–	–	–	–	–	–	–	1.05		
CN4[R]	CN4[R]		CN4[R]	38	SPR_SEN_AIN3	A1	LPADC1	–	Analog	I	0.7	I	–	I	–	I	–	CXD5602GG	–	–	–	–	–	–	–	1.05		
CN4[R]	CN4[R]		CN4[R]	40	SPR_SEN_AIN4	A2	LPADC2	–	Analog	I	0.7	I	–	I	–	I	–	CXD5602GG	–	–	–	–	–	–	–	1.05		
CN4[R]	CN4[R]		CN4[R]	42	SPR_SEN_AIN5	A3	LPADC3	–	Analog	I	0.7	I	–	I	–	I	–	CXD5602GG	–	–	–	–	–	–	–	1.05		
CN4[R]	CN4[R]		CN4[R]	44	SPR_SEN_AIN0	A4	HPADC0	–	Analog	I	1.4	I	–	I	–	I	–	CXD5602GG	–	–	–	–	–	–	–	2.5		
CN4[R]	CN4[R]		CN4[R]	46	SPR_SEN_AIN1	A5	HPADC1	–	Analog	I	1.4	I	–	I	–	I	–	CXD5602GG	–	–	–	–	–	–	–	2.5		
CN4[R]	CN4[R]		CN4[R]	48	GND	–	–	–	Power	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
CN4[R]	CN4[R]		CN4[R]	50	SPR_SPI3_CS1_X	D07	PIN_SPI3_CS1_X	39	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	SPI3_CS1_X	P1g	GPIO	SPI3_CS1_X	–	–	–	2.5		
CN4[R]	CN4[R]		CN4[R]	52	SPR_SPI3_MOSI	D31	PIN_SPI3_MOSI	42	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	SPI3	P1i	GPIO	SPI3_MOSI	–	–	–	2.5		
CN4[R]	CN4[R]		CN4[R]	54	SPR_SPI3_SCK	D29	PIN_SPI3_SCK	41	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	SPI3	P1i	GPIO	SPI3_SCK	–	–	–	2.5		
CN4[R]	CN4[R]		CN4[R]	56	SPR_SPI3_MISO	D30	PIN_SPI3_MISO	43	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	SPI3	P1i	GPIO	SPI3_MISO	–	–	–	2.5		
CN4[R]	CN4[R]		CN4[R]	58	SPR_SPI3_CS0_X	D32	PIN_SPI3_CS0_X	38	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	SPI3_CS0_X	P1f	GPIO	SPI3_CS0_X	–	–	–	2.5		
CN4[R]	CN4[R]		CN4[R]	60	SPR_RTC_IRQ_OUT	D41	PIN_RTC_IRQ_OUT	4	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	RTC_IRQ_OUT	P12	GPIO	RTC_IRQ_OUT	RTC_IRQ_OUT (Open Drain)	GPIO	2.5			
CN4[R]	CN4[R]		CN4[R]	62	SPR_USB_DM	–	–	–	Analog	I/O	3.3	–	–	–	–	–	–	CXD5602GG	–	–	–	–	–	–	–	5.25		
CN4[R]	CN4[R]		CN4[R]	64	SPR_USB_DP	–	–	–	Analog	I/O	3.3	–	–	–	–	–	–	CXD5602GG	–	–	–	–	–	–	–	5.25		
CN4[R]	CN4[R]		CN4[R]	66	SPR_GPS_EXTLD	D39	PIN_HIF_GPIO0	32	Digital	I/O	1.8	–	Hi-Z	–	Hi-Z	–	Hi-Z	CXD5602GG	HIF_GPIO0	P03	GPIO	GPIO	GPIO	GPS_EXTLD	2.5			
CN4[R]	CN4[R]		CN4[R]	68	GND	–	–	–	Power	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
CN4[R]	CN4[R]		CN4[R]	70	ACP_GPO5	–	–	–	Digital	O	3.6-4.4	O	Hi-Z	O	Low	O	Low	CXD5247GF	–	–	–	–	–	–	–	–	–	
CN4[R]	CN4[R]		CN4[R]	72	ACP_GPO6	–	–	–	Digital	O	3.6-4.4	O	Hi-Z	O	Low	O	Low	CXD5247GF	–	–	–	–	–	–	–	–	Headphone mute	
CN4[R]	CN4[R]		CN4[R]	74	ACP_GPO7	–	–	–	Digital	O	3.6-4.4	O	Hi-Z	O	Low	O	Low	CXD5247GF	–	–	–	–	–	–	–	–	Mute at Low	
CN4[R]	CN4[R]		CN4[R]	76																								

CN4[R]	CN4[R]		CN4[R]	86	SPR_I2C2_SCL	—	PIN_SPIO_MOSI	19	Digital	I/O	1.8	—	High	I/O	—	I	High	CXD5602GG	SPI0B	P17	GPIO	I2C2_BCK	SPIO_MOSI	—	2.5		
CN4[R]	CN4[R]		CN4[R]	88	ACP_GPO0	—	—	—	Digital	O	3.6-4.4	O	Hi-Z	O	Hi-Z	O	Hi-Z	CXD5247GF	—	—	—	—	—	—			
CN4[R]	CN4[R]		CN4[R]	90	ACP_GPO1	—	—	—	Digital	O	3.6-4.4	O	Hi-Z	O	Low	O	Low	CXD5247GF	—	—	—	—	—	—		Audio 3.3V output	Output at High
CN4[R]	CN4[R]		CN4[R]	92	ACP_GPO2	—	—	—	Digital	O	3.6-4.4	O	Hi-Z	O	Low	O	Low	CXD5247GF	—	—	—	—	—	—		Power output for LTE (Only LTE extension)	Output at High
CN4[R]	CN4[R]		CN4[R]	94	ACP_GPO3	—	—	—	Digital	O	3.6-4.4	O	Hi-Z	O	Low	O	Low	CXD5247GF	—	—	—	—	—	—		LTE power output from the main board (Only LTE extension)	Output at High
CN4[R]	CN4[R]		CN4[R]	96	SWOCLK	—	—	—	Digital	O	1.8	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	—	—	—	—	—	—	2.5		
CN4[R]	CN4[R]		CN4[R]	98	SWO	—	—	—	Digital	O	1.8	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	—	—	—	—	—	—	2.5		
CN4[R]	CN4[R]		CN4[R]	100	GND	—	—	—	Power	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
D7					SPR_I2S1_BCK	LED0	PIN_I2S1_BCK	97	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	I2S1	P1w	GPIO	I2S1_BCK	—	GPIO	2.5		
D6					SPR_I2S1_LRCK	LED1	PIN_I2S1_LRCK	98	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	I2S1	P1w	GPIO	I2S1_LRCK	—	GPIO	2.5		
D5					SPR_I2S1_DATA_IN	LED2	PIN_I2S1_DATA_IN	99	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	I2S1	P1w	GPIO	I2S1_DATA_IN	—	GPIO	2.5		
D4					SPR_I2S1_DATA_OUT	LED3	PIN_I2S1_DATA_OUT	100	Digital	I/O	1.8	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	I2S1	P1w	GPIO	I2S1_DATA_OUT	—	GPIO	2.5		
	JP3			1	NC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
	JP3			2	VDD_LVS	—	—	—	Power	O	5/3.3	O	—	O	—	O	—	—	—	—	—	—	—	—			
	JP3			3	XRS_PWON	—	—	—	Digital	I/O	3.3	I/O	—	I/O	—	I/O	—	—	—	—	—	—	—	—	7		
	JP3			4	3.3V	—	—	—	Power	O	3.3	O	—	O	—	O	—	—	—	—	—	—	—	—			
	JP3			5	MAIN_POWER	—	—	—	Power	I/O	5	I/O	—	I/O	—	I/O	—	—	—	—	—	—	—	—	6		
	JP3			6	GND	—	—	—	Power	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
	JP3			7	GND	—	—	—	Power	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
	JP3			8	5V_IN_PIN	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
	JP4			1	SPR_SEN_AIN2	A0	LPADC0	—	Analog	I	~5	I	—	I	—	I	—	CXD5602GG	—	—	SEN_AIN2	SEN_AIN2	SEN_AIN2	SEN_AIN2	7.5		
	JP4			2	SPR_SEN_AIN3	A1	LPADC1	—	Analog	I	~5	I	—	I	—	I	—	CXD5602GG	—	—	SEN_AIN3	SEN_AIN3	SEN_AIN3	SEN_AIN3	7.5		
	JP4			3	SPR_SEN_AIN4	A2	LPADC2	—	Analog	I	~5	I	—	I	—	I	—	CXD5602GG	—	—	SEN_AIN4	SEN_AIN4	SEN_AIN4	SEN_AIN4	7.5		
	JP4			4	SPR_SEN_AIN5	A3	LPADC3	—	Analog	I	~5	I	—	I	—	I	—	CXD5602GG	—	—	SEN_AIN5	SEN_AIN5	SEN_AIN5	SEN_AIN5	7.5		
	JP4			5	SPR_SEN_AIN0	A4	HPADC0	—	Analog	I	~5	I	—	I	—	I	—	CXD5602GG	—	—	SEN_AIN0	SEN_AIN0	SEN_AIN0	SEN_AIN0	8.9		
	JP4			6	SPR_SEN_AIN1	A5	HPADC1	—	Analog	I	~5	I	—	I	—	I	—	CXD5602GG	—	—	SEN_AIN1	SEN_AIN1	SEN_AIN1	SEN_AIN1	8.9		
	JP2			1	I2C0_SCL	D15	PIN_I2C0_BCK	44	Digital	I/O	5/3.3	—	High	I	High	I	High	CXD5602GG	I2C0	P1j	GPIO	I2C0_BCK	—	—	7		
	JP2			2	I2C0_SDA	D14	PIN_I2C0_BDT	45	Digital	I/O	5/3.3	—	High	I	High	I	High	CXD5602GG	I2C0	P1j	GPIO	I2C0_BDT	—	—	7		
	JP2			3	AREF	—	—	—	—	O	5/3.3	O	High	O	High	O	High	—	—	—	—	—	—	—			
	JP2			4	GND	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
	JP2			5	SPI4_SCK	D13	PIN_SPI4_SCK	72	Digital	I/O	5/3.3	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	SPI4	P1o	GPIO	SPI4_SCK	—	GPIO	7		
	JP2			6	SPI4_MISO	D12	PIN_SPI4_MISO	74	Digital	I/O	5/3.3	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	SPI4	P1o	GPIO	SPI4_MISO	—	GPIO	7		
	JP2			7	SPI4_MOSI	D11	PIN_SPI4_MOSI	73	Digital	I/O	5/3.3	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	SPI4	P1o	GPIO	SPI4_MOSI	—	GPIO	7		
	JP2			8	SPI4_CS_X	D10	PIN_SPI4_CS_X	71	Digital	I/O	5/3.3	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	SPI4	P1o	GPIO	SPI4_CS_X	—	GPIO	7		
	JP2			9	PWM2	D09	PIN_PWM2	48	Digital	I/O	5/3.3	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	PWMB	P1l	GPIO	PWM2	I2C1_BCK	—	7		
	JP2			10	SPI2_MISO	D08	PIN_SPI2_MISO	30	Digital	I/O	5/3.3	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	SPI2B	P01	GPIO	SPI2_MISO	UART0_RTS	GPIO	7		
	JP13			1	SPI3_CS1_X	D07	PIN_SPI3_CS1_X	39	Digital	I/O	5/3.3	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	SPI3_CS1_X	P1g	GPIO	SPI3_CS1_X	—	—	7		
	JP13			2	PWM0	D06	PIN_PWM0	46	Digital	I/O	5/3.3	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	PWMA	P1k	GPIO	PWM0	—	—	7		
	JP13			3	PWM1	D05	PIN_PWM1	47	Digital	I/O	5/3.3	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	PWMA	P1k	GPIO	PWM1	GPIO	—	7		
	JP13			4	SPI2_MOSI	D04	PIN_SPI2_MOSI	29	Digital	I/O	5/3.3	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	SPI2B	P01	GPIO	SPI2_MOSI	UART0_CTS	GPIO	7		
	JP13			5	PWM3	D03	PIN_PWM3	49	Digital	I/O	5/3.3	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	PWMB	P1l	GPIO	PWM3	I2C1_BDT	—	7		
	JP13			6	HIF_IRQ_OUT	D02	PIN_HIF_IRQ_OUT	31	Digital	I/O	5/3.3	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	HIF_IRQ_OUT	P02	GPIO	HIF_IRQ_OUT	HIF_IRQ_OUT (Open Drain)	GNSS_1PPS_OUT	7		
	JP13			7	UART_TX	D01	PIN_UART2_TX	67	Digital	I/O	5/3.3	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	UART2	P1n	GPIO	UART2_TX	—	GPIO	7		
	JP13			8	UART_RX	D00	PIN_UART2_RX	68	Digital	I/O	5/3.3	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	UART2	P1n	GPIO	UART2_RX	—	GPIO	7		
			CN9	1	MAIN_POWER				Power	O	4~5	O	High	O	High	O	High	—	—	—	—	—	—	—			
			CN9	2	GND				Power	—	—	—	High	—	High	—	High	—	—	—	—	—	—	—			
			CN9	3	SPR_SEN_AIN1	A5	HPADC1	—	Analog	I	~5	I	—	I	—	I	Hi-Z	CXD5602GG	—	—	—	—	—	—	8.9		
			CN9	4	SPR_SEN_AIN0	A4	HPADC0	—	Analog	I	~5	I	—	I	—	I	Hi-Z	CXD5602GG	—	—	—	—	—	—	8.9		
			CN9	5	3.3V				Power	O	3.3	O	—	O	—	O	—	—	—	—	—	—	—	—			
			CN9	6	GND				Power	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
			CN9	7	HIF_IRQ_OUT	D02	PIN_HIF_IRQ_OUT	31	Digital	I/O	5/3.3	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	HIF_IRQ_OUT	P02	GPIO	HIF_IRQ_OUT	HIF_IRQ_OUT (Open Drain)	GNSS_1PPS_OUT	7		
			CN9	8	SPI3_SCK	D29	PIN_SPI3_SCK	41	Digital	I/O	5/3.3	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	SPI3	P1i	GPIO	SPI3_SCK	—	—	7		
			CN9	9	PWM0	D06	PIN_PWM0	46	Digital	I/O	5/3.3	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	PWMA	P1k	GPIO	PWM0	—	—	7		
			CN9	10	SPI3_MISO	D30	PIN_SPI3_MISO	43	Digital	I/O	5/3.3	—	Hi-Z	—	Hi-Z	—	Hi-Z	CXD5602GG	SPI3	P1i	GPIO	SPI3_MISO	—	—	7		
			CN9																								

Date	Contents
2020.11.13	First draft.
2021.4.14	Corrected the initial value of ACP_GPO1 to 7 after starting Arduino and SDK. Corrected each initial value of XRST (SPR_RST_X).
2021.12.20	Corrected the voltage range of the pins connected to the CXD5247GF to 3.6-4.4V. Corrected the initial values after turning on the power of MCLK and after starting Arduino.
2022.9.7	Corrected the name of SPR_SPI2_SCK on ArduinoIDE.
2024.3.21	Added LED0 to 3 on the main board and S1 on the LTE extension board.