

WP as Prerequisites	Author of TSC
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# Technical Safety Concept

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## Objective

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The objectives of this document are:

- to establish hardware architectural design to implement the hardware safety requirements and non-safety requirements;
- to allocate hardware safety requirements on hardware elements

## Application Diagram

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## Architecture

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## Refined Architecture by TSC

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## Operating Mode Transition Diagram

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## Analysis Scope Summery

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Block Name	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
CS	SPF		/		
VCC_FS	/		MPF		
BG2	/		MPF		
IREF2	/		MPF		
VAA_CMP	/		MPF		
VDD_CMP	/		MPF		
CP_CMP	/		MPF		
AGND_OW_DET	/		MPF		
HCLK	SPF		/		
LCLK	SPF		/		
CP	SPF		/		
DRIVE	SPF		/		
VAA	SPF		/		
VDD	SPF		/		
RST_REG	/		/		
CBFET	/		MPF		
TMODE	SPF		/		
IO_INTER	SPF		/		
IO_BUF	SPF		/		
I2C_MAS_INTER	SPF		/		
3P3	/		MPF		
RX_INTER	/		/		
TX_INTER	SPF		/		
10K_20UA_PUPD	/		MPF		

Block Name	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
SEQ	SPF		/		
REFP	SPF		/		
IREF	SPF		/		
BE	/		MPF		
JOT_DAC	/		MPF		
BG	SPF		/		
VPTAT	/		MPF		
TREF	SPF		/		
MUX_HV	SPF		/		
MUX_LV	SPF		/		
ADC_LV_SHT	SPF		/		
ADC_MODU	SPF		/		
AUX_MUX_HV	/		MPF		
AUX_MUX_LV	/		MPF		
AUX_ADC_LV_SHT	/		MPF		
AUX_ADC_MODU	/		MPF		
JOT_CMP	/		MPF		
COMS_VCM	SPF		/		
COMS_TONE_RX	SPF		/		
COMS_TX	SPF		/		
COMN_VCM	SPF		/		
COMN_TONE_RX	SPF		/		
COMN_TX	SPF		/		
PING_DET	/		MPF		
UART_EN_LOGIC	SPF		/		
CB_CTRL	/		MPF		
CKGEN	SPF		/		
RECLK_COMP	SPF		/		
RST_GEN	SPF		/		
CH_SEL_GEN	SPF		/		

Block Name	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
ADC_LOGIC	SPF		/		
CALIBRATION	SPF		/		
DLPF	SPF		/		
AUX_CH_SEL_GEN	/		MPF		
AUX_ADC_LOGIC	/		MPF		
AUX_CALIBRATION	/		MPF		
AUX_DLPF	/		MPF		
CYC_WAKE	SPF		/		
OVUV_OTUT_CMP	/		MPF		
GAP_CMP	/		MPF		
C_OW_CTRL	/		MPF		
I2C_MAS	SPF		/		
MTP_INTER	SPF		/		
MTP	SPF		/		
LOW_BYTE_BUF	SPF		/		
CONF_REG	SPF		/		
FUNC_CTRL_REG	SPF		/		
SM_CTRL_REG	/		MPF		
MTP_REG	SPF		/		
TM_REG	SPF		/		
FLT_BIT_REG	/		MPF		
FLT_SUM	/		MPF		
FLT_LOGIC	/		MPF		
CONF_REG_CRC_DET	/		MPF		
MTP_REG_CRC_DET	/		MPF		
CMP_BIST_CTRL	/		MPF		
TM_KEY_CHECK	/		MPF		
TRIM_LOGIC	SPF		/		
SOFT_RSTB_sync	SPF		/		
TO_SLP_sync	SPF		/		

Block Name	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
TONE_CTRL	SPF		/		
DS_BASIC	SPF		/		
UART_BASIC	/		MPF		
FCOMM_DET	/		MPF		
FCOMM_GEN	/		MPF		
COMM_CTRL	SPF		/		
FR_CRC_DET	/		MPF		
FR_CRC_GEN	/		MPF		
FRAME_COUNTER	/		MPF		
COMM_TO	SPF		/		

## Pin and Bonding

Pin Name	FM	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
BAT	Open	SPF	SM009	/	/	/
	Short to left	/	/	/	/	/
	Short to right	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to PACK-	SPF	SM009	/	/	/
	Short to PACK+	/	/	/	/	/
B18	Open	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025

Pin Name	FM	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
	Short to left	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to right	SPF	SM018	/	/	/
	Short to PACK-	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to PACK+	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
C18	Open	SPF	SM016	/	/	/
	Short to left	SPF	SM018	/	/	/
	Short to right	SPF	SM001	/	/	/
	Short to PACK-	SPF	SM001	/	/	/
	Short to PACK+	SPF	SM001	/	/	/
B17	Open	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to left	SPF	SM001	/	/	/
	Short to right	SPF	SM018	/	/	/
	Short to PACK-	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to PACK+	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025

Pin Name	FM	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
C17	Open	SPF	SM016	/	/	/
	Short to left	SPF	SM018	/	/	/
	Short to right	SPF	SM001	/	/	/
	Short to PACK-	SPF	SM001	/	/	/
	Short to PACK+	SPF	SM001	/	/	/
B16	Open	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to left	SPF	SM001	/	/	/
	Short to right	SPF	SM018	/	/	/
	Short to PACK-	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to PACK+	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
C16	Open	SPF	SM016	/	/	/
	Short to left	SPF	SM018	/	/	/
	Short to right	SPF	SM001	/	/	/
	Short to PACK-	SPF	SM001	/	/	/
	Short to PACK+	SPF	SM001	/	/	/
B15	Open	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025

Pin Name	FM	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
	Short to left	SPF	SM001	/	/	/
	Short to right	SPF	SM018	/	/	/
	Short to PACK-	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to PACK+	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
C15	Open	SPF	SM016	/	/	/
	Short to left	SPF	SM018	/	/	/
	Short to right	SPF	SM001	/	/	/
	Short to PACK-	SPF	SM001	/	/	/
	Short to PACK+	SPF	SM001	/	/	/
B14	Open	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to left	SPF	SM001	/	/	/
	Short to right	SPF	SM018	/	/	/
	Short to PACK-	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to PACK+	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
C14	Open	SPF	SM016	/	/	/



Pin Name	FM	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
	Short to left	SPF	SM018	/	/	/
	Short to right	SPF	SM001	/	/	/
	Short to PACK-	SPF	SM001	/	/	/
	Short to PACK+	SPF	SM001	/	/	/
B13	Open	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to left	SPF	SM001	/	/	/
	Short to right	SPF	SM018	/	/	/
	Short to PACK-	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to PACK+	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
C13	Open	SPF	SM016	/	/	/
	Short to left	SPF	SM018	/	/	/
	Short to right	SPF	SM001	/	/	/
	Short to PACK-	SPF	SM001	/	/	/
	Short to PACK+	SPF	SM001	/	/	/
B12	Open	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025

Pin Name	FM	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
	Short to left	SPF	SM001	/	/	/
	Short to right	SPF	SM018	/	/	/
	Short to PACK-	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to PACK+	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
C12	Open	SPF	SM016	/	/	/
	Short to left	SPF	SM018	/	/	/
	Short to right	SPF	SM001	/	/	/
	Short to PACK-	SPF	SM001	/	/	/
	Short to PACK+	SPF	SM001	/	/	/
B11	Open	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to left	SPF	SM001	/	/	/
	Short to right	/	/	/	/	/
	Short to PACK-	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to PACK+	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
C11	Open	SPF	SM016	/	/	/

Pin Name	FM	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
	Short to left	/	/	/	/	/
	Short to right	SPF	SM001	/	/	/
	Short to PACK-	SPF	SM001	/	/	/
	Short to PACK+	SPF	SM001	/	/	/
B10	Open	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to left	SPF	SM001	/	/	/
	Short to right	SPF	SM018	/	/	/
	Short to PACK-	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to PACK+	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
C10	Open	SPF	SM016	/	/	/
	Short to left	SPF	SM018	/	/	/
	Short to right	/	/	/	/	/
	Short to PACK-	SPF	SM001	/	/	/
	Short to PACK+	SPF	SM001	/	/	/
NC	Open	/	/	/	/	/
	Short to left	/	/	/	/	/

Pin Name	FM	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
	Short to right	/	/	/	/	/
	Short to PACK-	/	/	/	/	/
	Short to PACK+	/	/	/	/	/
B9	Open	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to left	/	/	/	/	/
	Short to right	SPF	SM018	/	/	/
	Short to PACK-	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to PACK+	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
C9	Open	SPF	SM016	/	/	/
	Short to left	SPF	SM018	/	/	/
	Short to right	SPF	SM001	/	/	/
	Short to PACK-	SPF	SM001	/	/	/
	Short to PACK+	SPF	SM001	/	/	/
B8	Open	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to left	SPF	SM001	/	/	/

Pin Name	FM	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
	Short to right	SPF	SM018	/	/	/
	Short to PACK-	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to PACK+	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
C8	Open	SPF	SM016	/	/	/
	Short to left	SPF	SM018	/	/	/
	Short to right	SPF	SM001	/	/	/
	Short to PACK-	SPF	SM001	/	/	/
	Short to PACK+	SPF	SM001	/	/	/
B7	Open	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to left	SPF	SM001	/	/	/
	Short to right	SPF	SM018	/	/	/
	Short to PACK-	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to PACK+	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
C7	Open	SPF	SM016	/	/	/
	Short to left	SPF	SM018	/	/	/

Pin Name	FM	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
	Short to right	SPF	SM001	/	/	/
	Short to PACK-	SPF	SM001	/	/	/
	Short to PACK+	SPF	SM001	/	/	/
B6	Open	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to left	SPF	SM001	/	/	/
	Short to right	SPF	SM018	/	/	/
	Short to PACK-	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to PACK+	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
C6	Open	SPF	SM016	/	/	/
	Short to left	SPF	SM018	/	/	/
	Short to right	SPF	SM001	/	/	/
	Short to PACK-	SPF	SM001	/	/	/
	Short to PACK+	SPF	SM001	/	/	/
B5	Open	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to left	SPF	SM001	/	/	/

Pin Name	FM	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
	Short to right	SPF	SM018	/	/	/
	Short to PACK-	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to PACK+	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
C5	Open	SPF	SM016	/	/	/
	Short to left	SPF	SM018	/	/	/
	Short to right	SPF	SM001	/	/	/
	Short to PACK-	SPF	SM001	/	/	/
	Short to PACK+	SPF	SM001	/	/	/
B4	Open	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to left	SPF	SM001	/	/	/
	Short to right	SPF	SM018	/	/	/
	Short to PACK-	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to PACK+	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
C4	Open	SPF	SM016	/	/	/
	Short to left	SPF	SM018	/	/	/

Pin Name	FM	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
	Short to right	/	/	/	/	/
	Short to PACK-	SPF	SM001	/	/	/
	Short to PACK+	SPF	SM001	/	/	/
B3	Open	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to left	/	/	/	/	/
	Short to right	SPF	SM018	/	/	/
	Short to PACK-	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to PACK+	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
C3	Open	SPF	SM016	/	/	/
	Short to left	SPF	SM018	/	/	/
	Short to right	SPF	SM001	/	/	/
	Short to PACK-	SPF	SM001	/	/	/
	Short to PACK+	SPF	SM001	/	/	/
B2	Open	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to left	SPF	SM001	/	/	/



Pin Name	FM	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
	Short to right	SPF	SM018	/	/	/
	Short to PACK-	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to PACK+	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
C2	Open	SPF	SM016	/	/	/
	Short to left	SPF	SM018	/	/	/
	Short to right	SPF	SM001	/	/	/
	Short to PACK-	SPF	SM001	/	/	/
	Short to PACK+	SPF	SM001	/	/	/
B1	Open	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to left	SPF	SM001	/	/	/
	Short to right	SPF	SM018	/	/	/
	Short to PACK-	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to PACK+	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
C1	Open	SPF	SM016	/	/	/
	Short to left	SPF	SM018	/	/	/

Pin Name	FM	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
	Short to right	SPF	SM001	/	/	/
	Short to PACK-	SPF	SM001	/	/	/
	Short to PACK+	SPF	SM001	/	/	/
B0	Open	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to left	SPF	SM001	/	/	/
	Short to right	SPF	SM018	/	/	/
	Short to PACK-	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
	Short to PACK+	/	/	MPF	MAIN_ADC, GAP_CMP, FLT_BIT_REG, FCOMM_DET, FCOMM_GEN	SM001, SM021, SM025
C0	Open	SPF	SM016	/	/	/
	Short to left	SPF	SM018	/	/	/
	Short to right	SPF	SM001	/	/	/
	Short to PACK-	SPF	SM001	/	/	/
	Short to PACK+	SPF	SM001	/	/	/
VDD	Open	SPF	SM006	/	/	/
	Short to left	SPF	SM001	/	/	/
	Short to right	SPF	SM006	/	/	/

Pin Name	FM	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
	Short to PACK-	SPF	SM006	/	/	/
	Short to PACK+	SPF	SM006	/	/	/
AGND	Open	SPF	SM014	/	/	/
	A_Open	SPF	SM014	/	/	/
	D_Open	SPF	SM009	/	/	/
	Short to left	SPF	SM006	/	/	/
	Short to right	SPF	SM010	/	/	/
	Short to PACK-	/	/	/	/	/
	Short to PACK+	SPF	SM009	/	/	/
COMS+	Open	SPF	SM010	/	/	/
	Short to left	SPF	SM010	/	/	/
	Short to right	SPF	SM009	/	/	/
	Short to PACK-	SPF	SM010	/	/	/
	Short to PACK+	SPF	SM010	/	/	/
COMS-	Open	SPF	SM010	/	/	/
	Short to left	SPF	SM009	/	/	/
	Short to right	SPF	SM011	/	/	/
	Short to PACK-	SPF	SM010	/	/	/
	Short to PACK+	SPF	SM010	/	/	/
COMN-	Open	SPF	SM011	/	/	/

Pin Name	FM	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
	Short to left	SPF	SM011	/	/	/
	Short to right	SPF	SM009	/	/	/
	Short to PACK-	SPF	SM011	/	/	/
	Short to PACK+	SPF	SM011	/	/	/
COMN+	Open	SPF	SM011	/	/	/
	Short to left	SPF	SM009	/	/	/
	Short to right	SPF	SM009	/	/	/
	Short to PACK-	SPF	SM011	/	/	/
	Short to PACK+	SPF	SM011	/	/	/
DRIVE	Open	SPF	SM009	/	/	/
	Short to left	SPF	SM009	/	/	/
	Short to right	SPF	SM009	/	/	/
	Short to PACK-	SPF	SM009	/	/	/
	Short to PACK+	/	/	/	/	/
LDOIN	Open	SPF	SM009	/	/	/
	Short to left	SPF	SM009	/	/	/
	Short to right	/	/	/	/	/
	Short to PACK-	SPF	SM009	/	/	/
	Short to PACK+	/	/	/	/	/

Pin Name	FM	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
VAA	Open	SPF	SM005	/	/	/
	Short to left	/	/	/	/	/
	Short to right	SPF	SM007	/	/	/
	Short to PACK-	SPF	SM009	/	/	/
	Short to PACK+	SPF	SM005	/	/	/
TREF	Open	/	/	/	/	/
	Short to left	SPF	SM007	/	/	/
	Short to right	/	/	/	/	/
	Short to PACK-	SPF	SM007	/	/	/
	Short to PACK+	SPF	SM007	/	/	/
GPIO0	Open	SPF	SM017	/	/	/
	Short to left	/	/	/	/	/
	Short to right	SPF	SM019	/	/	/
	Short to PACK-	/	/	/	/	/
	Short to PACK+	/	/	/	/	/
GPIO1	Open	SPF	SM017	/	/	/
	Short to left	SPF	SM019	/	/	/
	Short to right	SPF	SM019	/	/	/
	Short to PACK-	/	/	/	/	/

Pin Name	FM	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
	Short to PACK+	/	/	/	/	/
GPIO2	Open	SPF	SM017	/	/	/
	Short to left	SPF	SM019	/	/	/
	Short to right	SPF	SM007	/	/	/
	Short to PACK-	/	/	/	/	/
	Short to PACK+	/	/	/	/	/
REFP	Open	SPF	SM007	/	/	/
	Short to left	SPF	SM007	/	/	/
	Short to right	SPF	SM007	/	/	/
	Short to PACK-	/	/	/	/	/
	Short to PACK+	/	/	/	/	/
REFN	Open	SPF	SM007	/	/	/
	Short to left	SPF	SM007	/	/	/
	Short to right	/	/	/	/	/
	Short to PACK-	/	/	/	/	/
	Short to PACK+	SPF	SM007	/	/	/
GPIO11	Open	SPF	SM017	/	/	/
	Short to left	/	/	/	/	/
	Short to right	SPF	SM019	/	/	/

Pin Name	FM	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
	Short to PACK-	/	/	/	/	/
	Short to PACK+	/	/	/	/	/
GPIO10	Open	SPF	SM017	/	/	/
	Short to left	SPF	SM019	/	/	/
	Short to right	SPF	SM019	/	/	/
	Short to PACK-	/	/	/	/	/
	Short to PACK+	/	/	/	/	/
GPIO9	Open	SPF	SM017	/	/	/
	Short to left	SPF	SM019	/	/	/
	Short to right	SPF	SM019	/	/	/
	Short to PACK-	/	/	/	/	/
	Short to PACK+	/	/	/	/	/
GPIO7	Open	SPF	SM017	/	/	/
	Short to left	SPF	SM019	/	/	/
	Short to right	SPF	SM019	/	/	/
	Short to PACK-	/	/	/	/	/
	Short to PACK+	/	/	/	/	/
GPIO6	Open	SPF	SM017	/	/	/
	Short to left	SPF	SM019	/	/	/

Pin Name	FM	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
	Short to right	SPF	SM019	/	/	/
	Short to PACK-	/	/	/	/	/
	Short to PACK+	/	/	/	/	/
GPIO5	Open	SPF	SM017	/	/	/
	Short to left	SPF	SM019	/	/	/
	Short to right	SPF	SM019	/	/	/
	Short to PACK-	/	/	/	/	/
	Short to PACK+	/	/	/	/	/
GPIO4	Open	SPF	SM017	/	/	/
	Short to left	SPF	SM019	/	/	/
	Short to right	SPF	SM019	/	/	/
	Short to PACK-	/	/	/	/	/
	Short to PACK+	/	/	/	/	/
GPIO3	Open	SPF	SM017	/	/	/
	Short to left	SPF	SM019	/	/	/
	Short to right	/	/	/	/	/
	Short to PACK-	/	/	/	/	/
	Short to PACK+	/	/	/	/	/

## Peripherals



Peripheral Name	FM	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
DBAT	Open	/	/	1%	PACK+ connector open	/
	Short					
RBAT	Open	SPF		/		/
	Short					
	x0.5					
	x2					
CBAT	Open	SPFSPF		//		//
	Short					
	x0.5					
	x2					
Battery Cell Connector(Cn/Bn)	Open					
Battery Cell Connector(PACK+)	Open	SPF	SM009	MPF	SM009	SM009
Battery Cell Connector(PACK-)						
RC	Open	SPFSPF		//		//
	Short					
	x0.5					
	x2					
CC	Open	SPFSPF		//		//
	Short					
	x0.5					
	x2					
RB	Open	SPF/	/	/MPF		/
	Short					
	x0.5					
	x2					
CB	Open	SPF/	/	/MPF		/

Peripheral Name	FM	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
	Short					
	x0.5					
	x2					
CVDD	Open	SPFSPF		//		//
	Short					
	x0.5					
	x2					
COMN/S+/- Peripherals	Open	SPFSPF		//		//
	Short					
	x0.5					
	x2					
RPACK	Open	SPFSPF		//		//
	Short					
	x0.5					
	x2					
CPACK	Open	SPFSPF		//		//
	Short					
	x0.5					
	x2					
RBJT	Open	SPFSPF		//		//
	Short					
	x0.5					
	x2					
BJT	Open					
	Short					
	x0.5					
	x2					
CLDOIN	Open	SPFSPF		//		//

Peripheral Name	FM	SPF w/o SM?	SM	MPF?	Another FM Leading to MPF	SM
	Short					
	x0.5					
	x2					
CVAA	Open	SPFSPF		//		//
	Short					
	x0.5					
	x2					
CTREF	Open	SPFSPF		//		//
	Short					
	x0.5					
	x2					
CREFP	Open	SPFSPF		//		//
	Short					
	x0.5					
	x2					
Temperature Sensor Connector	Open					
RGPIO Divider	Open	SPFSPF		//		//
	Short					
	x0.5					
	x2					