

APPENDIX I: LTE DL ONLY CARRIER AGGREGATION TEST REDUCTION METHODOLOGY

SAR test exclusion for LTE downlink Carrier Aggregation is determined by power measurements according to the number of component carriers (CCs) supported by the product implementation. Per April 2018 TCBC Workshop Notes, the following test reduction methodology was applied to determine the combinations required for conducted power measurements.

LTE DLCA Test Reduction Methodology:

- The supported combinations were arranged by the number of component carriers in columns.
 - Any limitations on the PCC or SCC for each combination were identified alongside the combination (e.g. CA_2A-2A-4A-12A, but B12 can only be configured as a SCC).
 - Power measurements were performed for "supersets" (LTE CA combinations with multiple component carriers) and any "subsets" (LTE CA combinations with fewer component carriers) that were not completely covered by the supersets.
 - Only subsets that have the exact same components as a superset were excluded for measurement.
 - When there were certain restrictions on component carriers that existed in the superset that were not applied for the subset, the subset configuration was additionally evaluated.
 - Both inter-band and intra-band downlink carrier aggregation scenarios were considered.
 - Downlink CA combinations for SISO and 4x4 Downlink MIMO operations were measured independently, per May 2017 TCBC Workshop notes.

Table I-1 – Exclusion Table for SISO Configurations

FCC ID: C3K2077	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Portable Computing Device		APPENDIX I: Page 1 of 18

Table I-2 – Exclusion Table for 4x4 Downlink MIMO Configurations

Note: [CC] indicates component carrier with 4x4 DL MIMO antenna configuration

FCC ID: C3K2077	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Portable Computing Device		APPENDIX I: Page 2 of 18

I.1 LTE Downlink Only Carrier Aggregation Test Selection and Setup

SAR test exclusion for LTE downlink Carrier Aggregation is determined by power measurements according to the number component carriers (CCs) supported by the product implementation. For those configurations required by April 2018 TCBC Workshop Notes, conducted power measurements with LTE Carrier Aggregation (CA) (downlink only) active are made in accordance to KDB Publication 941225 D05Av01r02. The RRC connection is only handled by one cell, the primary component carrier (PCC) for downlink and uplink communications. After making a data connection to the PCC, the UE device adds secondary component carrier(s) (SCC) on the downlink only. All uplink communications and acknowledgements remain identical to specifications when downlink carrier aggregation is inactive on the PCC. Additional conducted output powers are measured with the downlink carrier aggregation active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.

Per FCC KDB Publication 941225 D05Av01r02, no SAR measurements are required for carrier aggregation configurations when the maximum average output power with downlink only carrier aggregation active is not more than 0.25 dB higher than the average output power with downlink only carrier aggregation inactive. All bands required for SAR testing per FCC KDB procedures were considered. Based on the measured maximum powers below, no additional SAR tests were required for DLCA SAR configurations.

General PCC and SCC configuration selection procedure

- PCC uplink channel, channel bandwidth, modulation and RB configurations were selected based on section C(3)b)ii) of KDB 941225 D05 V01r02. All LTE bandwidth conducted powers needed for PCC uplink configuration selection can be found in the RF Conducted Powers Section and LTE/NR Lower Bandwidth RF Conducted Power Appendix. The downlink PCC channel was paired with the selected PCC uplink channel according to normal configurations without carrier aggregation.
- To maximize aggregated bandwidth, highest channel bandwidth available for that CA combination was selected for SCC. For inter-band CA, the SCC downlink channels were selected near the middle of their transmission bands. For contiguous intra-band CA, the downlink channel spacing between the component carriers was set to multiple of 300 kHz less than the nominal channel spacing defined in section 5.4.1A of 3GPP TS 36.521. For non-contiguous intra-band CA, the downlink channel spacing between the component carriers was set to be larger than the nominal channel spacing and provided maximum separation between the component carriers.
- All selected PCC and SCC(s) remained fully within the uplink/downlink transmission band of the respective component carrier.

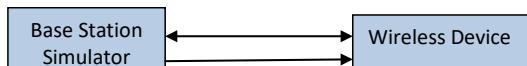


Figure I-1
DL CA Power Measurement Setup

FCC ID: C3K2077	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Portable Computing Device		APPENDIX I: Page 3 of 18

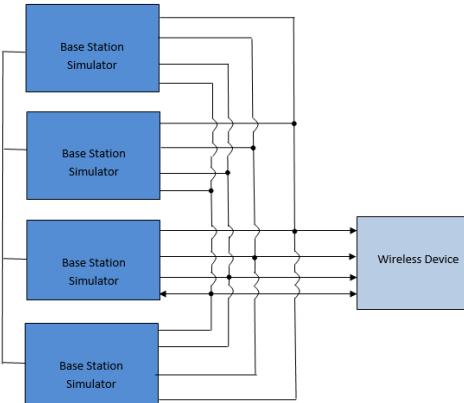


Figure I-2
DL CA with DL 4x4 MIMO Power Measurement Setup

I.2 Downlink Carrier Aggregation RF Conducted Powers

I.2.1 LTE Band 71 as PCC

Table I-3
Maximum Output Powers

Combination	PCC						SCC 1			SCC 2			SCC 3			Power		
	PCC Band	PCC BW [MHz]	PCC (UL) Ch Freq. [MHz]	PCC (UL) Mod.	PCC ULRB	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power [dBm]	
CA 4A-4A-71A	LTE B71	15	133297	680.5	QPSK	1	36	68761	634.5	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	-
CA 48A-48A-71A	LTE B71	15	133297	680.5	QPSK	1	36	68761	634.5	LTE B4B	20	55990	3625	LTE B4B	20	56640	3690	-
CA 48C-71A	LTE B71	15	133297	680.5	QPSK	1	36	68761	634.5	LTE B4B	20	55990	3625	LTE B4B	20	56188	3644.8	-
CA 2A-66A-66A-71A	LTE B71	15	133297	680.5	QPSK	1	36	68761	634.5	LTE B2	20	900	1960	LTE B6B	20	66786	2145	LTE B6B
CA 2A-2A-4A-71A	LTE B71	15	133297	680.5	QPSK	1	36	68761	634.5	LTE B2	20	900	1960	LTE B6B	20	66786	2145	LTE B6B
CA 2A-2A-66A-71A	LTE B71	15	133297	680.5	QPSK	1	36	68761	634.5	LTE B2	20	900	1960	LTE B6B	20	66786	2145	LTE B6B
CA 2A-2A-66A-71A	LTE B71	15	133297	680.5	QPSK	1	36	68761	634.5	LTE B2	20	900	1960	LTE B6B	20	66786	2145	LTE B6B

I.2.2 LTE Band 12 as PCC

Table I-4
Maximum Output Powers

Combination	PCC						SCC 1			SCC 2			SCC 3			Power		
	PCC Band	PCC BW [MHz]	PCC (UL) Ch Freq. [MHz]	PCC (UL) Mod.	PCC ULRB	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power [dBm]	
CA 2A-12A (1)	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B2	20	900	1960	LTE B6B	20	-	-	
CA 4A-12A (1)	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B4	20	2175	2132.5	LTE B4	10	-	-	
CA 4A/12A(2)	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B4	20	2175	2132.5	LTE B4	10	-	-	
CA 12A-12A	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B2	20	900	1960	LTE B6B	20	-	-	
CA 12A-66A	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B2	20	900	1960	LTE B6B	20	-	-	
CA 12A-66A (1)	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B6B	20	66786	2145	LTE B6B	10	-	-	
CA 12A-66A (2)	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B6B	20	66786	2145	LTE B6B	10	-	-	
CA 12B	LTE B12	5	23035	701.5	QPSK	1	12	5035	731.5	LTE B12	5	5083	738.3	-	-	-	-	
CA 12A-48C	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B4B	20	55990	3625	LTE B4B	20	56188	3644.8	-
CA 4A-4A-12B	LTE B12	5	23035	701.5	QPSK	1	12	5035	731.5	LTE B12	10	5107	738.7	LTE B4	20	900	LTE B4	
CA 4A-12A-12A	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B2	20	900	1960	LTE B6B	20	66786	2145	LTE B6B
CA 2A-12A-49C	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B2	20	900	1960	LTE B6B	20	66786	2145	LTE B6B
CA 2A-2A-12A-12A	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B2	20	900	1960	LTE B6B	20	66786	2145	LTE B6B
CA 2A-2A-12A-30A	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B2	20	900	1960	LTE B6B	20	700	1940	
CA 2A-2A-12A-12A	LTE B12	5	23035	701.5	QPSK	1	12	5035	731.5	LTE B2	5	5155	743.5	LTE B2	20	900	1960	
CA 2C-12A-30A	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B2	20	900	1960	LTE B6B	20	700	1940	
CA 2C-12A-48B	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B2	20	702	1940.2	LTE B30	10	9820	2355	24.60
CA 4A-4A-12B	LTE B12	5	23035	701.5	QPSK	1	12	5035	731.5	LTE B12	10	5107	738.7	LTE B4	20	900	LTE B4	
CA 4A-4A-12-12A	LTE B12	5	23035	701.5	QPSK	1	12	5035	731.5	LTE B12	5	5155	743.5	LTE B4	20	2175	2132.5	24.60
CA 4A-4A-12B	LTE B12	5	23035	701.5	QPSK	1	12	5035	731.5	LTE B12	10	5107	738.7	LTE B4	10	2350	2150	24.60
CA 4A-4A-12-12A	LTE B12	5	23035	701.5	QPSK	1	12	5035	731.5	LTE B12	5	5155	743.5	LTE B4	10	2350	2150	24.60
CA 4A-4A-12B	LTE B12	5	23035	701.5	QPSK	1	12	5035	731.5	LTE B12	5	5155	743.5	LTE B4	10	2350	2150	24.60
CA 12A-48D	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B4B	20	55990	3625	LTE B4B	20	56188	3644.8	-
CA 2A-12B-66A-66A	LTE B12	5	23035	701.5	QPSK	1	12	5035	731.5	LTE B12	10	5107	738.7	LTE B2	20	900	1960	
CA 2A-2A-12A-66A-66A	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B2	20	900	1960	LTE B6B	20	66786	2145	24.60
CA 2A-2A-12A-66A-66A	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B2	20	900	1960	LTE B6B	20	66786	2145	24.60
CA 2A-2A-12B-66A	LTE B12	5	23035	701.5	QPSK	1	12	5035	731.5	LTE B2	10	5107	738.7	LTE B2	20	700	1940	24.60

FCC ID: C3K2077	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Portable Computing Device		APPENDIX I: Page 4 of 18

I.2.3 LTE Band 13 as PCC

Table I-5
Maximum Output Powers

FCC ID: C3K2077	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Portable Computing Device		APPENDIX I: Page 5 of 18

I.2.4 LTE Band 14 as PCC

Table I-6
Maximum Output Powers

Combination	PCC										SCC 1				SCC 2				SCC 3				Power	
	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC ULR RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)	
CA_2A-14A-30A	LTE B14	5	23330	793	QPSK	1	0	5330	763	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B30	10	9820	2395	23.88	24.16	
CA_44A-39A-65A	LTE B14	5	23330	793	QPSK	1	0	5330	763	LTE B20	10	900	1960	LTE B20	10	66786	2145	LTE B20	20	66786	2145	23.88	24.16	
CA_14A-65A-65A-65A	LTE B14	5	23330	793	QPSK	1	0	5330	763	LTE B96	20	66786	2145	LTE B96	20	66536	2120	LTE B96	20	67236	2190	23.88	24.16	
CA_2A-2A-14A-65A-65A	LTE B14	5	23330	793	QPSK	1	0	5330	763	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B96	20	66786	2145	24.17	24.16	

I.2.5 LTE Band 5 as PCC

Table I-7
Maximum Output Powers

Combination	PCC										SCC 1				SCC 2				SCC 3				Power		
	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC ULR RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)		
CA_5A-2A	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B25	20	890	1960	-	-	-	-	-	-	-	-	-	24.40	24.46	
CA_5A-4A-5A	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B25	20	40620	2145	LTE B25	20	900	1960	LTE B4	10	2350	2150	24.43	24.46		
CA_5A-5A(1)	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B25	20	40620	2145	LTE B25	20	900	1960	LTE B4	10	2350	2150	24.43	24.46		
CA_5B (1)	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	3	2486	877.6	-	-	-	-	-	-	-	-	-	24.47	24.48	
CA_2A-5A-4A	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B25	20	900	1960	LTE B48	20	55990	3625	-	-	-	-	-	-	24.37	24.48
CA_2A-4A-5B	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	10	2453	874.3	LTE B2	20	900	1960	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150
CA_5A-4A-5A	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B25	20	900	1960	LTE B48	20	56442	3670.2	LTE B48	20	56442	3670.2	24.45	24.48		
CA_2A-5A-4A-5B	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	5	2425	871.5	-	-	-	-	-	-	-	-	-	24.47	24.48	
CA_2A-5A-30A	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	10	2453	874.3	LTE B2	20	900	1960	LTE B30	10	9820	2355	24.47	24.48		
CA_2A-5B-65A	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	10	2453	874.3	LTE B2	20	900	1960	LTE B96	20	66786	2145	24.40	24.48		
CA_2A-4B-48C	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B48	20	55990	3625	LTE B48	20	56442	3670.2	LTE B48	20	56442	3670.2	24.46	24.48		
CA_2A-2A-5A-5A	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B2	20	900	1960	LTE B2	20	2175	2132.5	LTE B2	20	2175	2132.5	24.42	24.48		
CA_2A-2A-5A-30A	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B2	20	700	1940	LTE B30	10	9820	2355	LTE B30	10	9820	2355	24.45	24.48		
CA_4A-4A-5B	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	10	2453	874.3	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	24.47	24.48		
CA_5A-30A-65A-65A	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B30	10	9820	2355	LTE B96	20	66786	2145	LTE B96	20	67236	2190	24.50	24.48		
CA_5A-4B-65A-65A	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B48	20	55990	3625	LTE B48	20	66786	2145	LTE B48	20	66786	2145	24.51	24.48		
CA_5A-4B-65A-65C	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	5	2425	871.5	LTE B96	20	66786	2145	LTE B96	20	66786	2145	24.51	24.48		
CA_5A-5B-65C	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	10	2453	874.3	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	24.47	24.48		
CA_5A-5B-65C	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	5	2425	871.5	LTE B96	20	66786	2145	LTE B96	20	66786	2145	24.50	24.48		
CA_5A-5B-65C-65C	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	5	2425	871.5	LTE B96	20	66786	2145	LTE B96	20	66786	2145	24.41	24.48		
CA_5A-5B-65C-65D	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	10	2453	874.3	LTE B30	10	9820	2355	LTE B30	10	66786	2145	24.41	24.48		
CA_5A-5B-65D	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B25	20	66786	2145	LTE B25	20	66786	2145	LTE B25	20	67038	2170.2	24.46	24.48		
CA_5A-5B-65D	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	10	2453	874.3	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	24.47	24.48		
CA_5A-5B-65D	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	5	2425	871.5	LTE B96	20	66786	2145	LTE B96	20	66786	2145	24.46	24.48		
CA_5A-5B-65D	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	10	2453	874.3	LTE B2	20	700	1940	LTE B30	10	9820	2355	24.48	24.48		
CA_5A-5B-65D	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	5	2425	871.5	LTE B96	20	66786	2145	LTE B96	20	66786	2145	24.47	24.48		
CA_5A-5B-65D	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	10	2453	874.3	LTE B2	20	700	1940	LTE B30	10	9820	2355	24.48	24.48		
CA_5A-5B-65D	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	5	2425	871.5	LTE B96	20	66786	2145	LTE B96	20	66786	2145	24.47	24.48		
CA_5A-5B-65D	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	10	2453	874.3	LTE B2	20	700	1940	LTE B30	10	9820	2355	24.48	24.48		
CA_5A-5B-65D	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	5	2425	871.5	LTE B96	20	66786	2145	LTE B96	20	66786	2145	24.47	24.48		
CA_5A-5B-65D	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	10	2453	874.3	LTE B2	20	700	1940	LTE B30	10	9820	2355	24.48	24.48		
CA_5A-5B-65D	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	5	2425	871.5	LTE B96	20	66786	2145	LTE B96	20	66786	2145	24.47	24.48		
CA_5A-5B-65D	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	10	2453	874.3	LTE B2	20	700	1940	LTE B30	10	9820	2355	24.48	24.48		
CA_5A-5B-65D	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	5	2425	871.5	LTE B96	20	66786	2145	LTE B96	20	66786	2145	24.47	24.48		
CA_5A-5B-65D	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	10	2453	874.3	LTE B2	20	700	1940	LTE B30	10	9820	2355	24.48	24.48		
CA_5A-5B-65D	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	5	2425	871.5	LTE B96	20	66786	2145	LTE B96	20	66786	2145	24.47	24.48		
CA_5A-5B-65D	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	10	2453	874.3	LTE B2	20	700	1940	LTE B30	10	9820	2355	24.48	24.48		
CA_5A-5B-65D	LTE B5	5	20525	836.5	QPSK	1	12	2525	881.5	LTE B5	5	2425	871.5	LTE B96	20	66786	2145	LTE B96	20	66786	2145	24.47	24.48</		

I.2.7

LTE Band 66 as PCC

Table I-9
Maximum Output Powers

FCC ID: C3K2077	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Portable Computing Device		APPENDIX I: Page 7 of 18

I.2.8 LTE Band 2 as PCC

Table I-10
Maximum Output Powers

I.2.9 LTE Band 25 as PCC

Table I-11
Maximum Output Powers

Combination	PCC								SCC 1				SCC 2				SCC 3				Power		
	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL RB/RB	PCC UL/RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx Power with DL CA Enabled [dBm]	LTE Single Carrier Tx Power [dBm]
CA_2A-25A	LTE B25	5	8005	1852.5	QPSK	1	12	8005	1932.5	LTE B5	10	2525	881.5	-	-	-	-	-	-	-	24.50	24.51	
CA_12A-25A	LTE B25	5	8005	1852.5	QPSK	1	12	8005	1932.5	LTE B12	10	5095	737.5	-	-	-	-	-	-	-	24.49	24.51	
CA_25A-25A-68A	LTE B25	5	8005	1852.5	QPSK	1	12	8005	1932.5	LTE B25	20	8590	1985	LTE B68	20	66786	2145	-	-	-	-	24.42	24.51
CA_25A-25A-25A	LTE B25	5	8005	1852.5	QPSK	1	12	8005	1932.5	LTE B25	20	8590	1985	LTE B25	20	8140	1940	-	-	-	-	24.41	24.51
CA_25A-26A-41C	LTE B25	5	8005	1852.5	QPSK	1	12	8005	1932.5	LTE B26	15	8865	876.5	LTE B41	20	40620	2593	LTE B41	20	40422	2573.2	24.52	24.51
CA_25A-25A-26A-41A	LTE B25	5	8005	1852.5	QPSK	1	12	8005	1932.5	LTE B25	20	8590	1985	LTE B26	5	8865	876.5	LTE B41	20	40620	2593	24.50	24.51
CA_25A-24A-41E	LTE B25	5	8005	1852.5	QPSK	1	12	8005	1932.5	LTE B41	20	40620	2593	LTE B41	20	40422	2573.2	LTE B41	20	40620	2593	24.47	24.51
CA_25A-25A-26A-41C	LTE B25	5	8005	1852.5	QPSK	1	12	8005	1932.5	LTE B25	20	8590	1985	LTE B26	15	8865	876.5	LTE B41	20	40620	2593	24.41	24.51
CA_25A-25A-24A-41D	LTE B25	5	8005	1852.5	QPSK	1	12	8005	1932.5	LTE B25	20	8590	1985	LTE B41	20	40422	2573.2	LTE B41	20	40620	2593	24.39	24.51

FCC ID: C3K2077	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Portable Computing Device		APPENDIX I: Page 8 of 18

I.2.10 LTE Band 30 as PCC

Table I-12
Maximum Output Powers

Combination	PCC										SCC 1			SCC 2			SCC 3			Power							
	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC ULR RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)				
CA 2A-4A-30A	LTE B30	10	27710	2310	QPSK	1	25	9820	2355	LTE B2	20	900	1960	LTE B4	20	2175	2132.5	-	-	-	-	22.05	22.11				
CA 2A-5B-30A	LTE B30	10	27710	2310	QPSK	1	25	9820	2355	LTE B2	20	900	1960	LTE B5	10	2525	881.5	LTE B5	5	2453	874.3	22.05	22.11				
CA 2A-30A-66A-66A	LTE B30	10	27710	2310	QPSK	1	25	9820	2355	LTE B2	20	900	1960	LTE B66	10	66786	2145	LTE B66	20	67236	2190	22.05	22.11				
CA 2A-2A-30A-30A	LTE B30	10	27710	2310	QPSK	1	25	9820	2355	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B6	10	2525	881.5	22.04	22.11				
CA 2A-12A-30A	LTE B30	10	27710	2310	QPSK	1	25	9820	2355	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B12	10	5095	737.5	22.05	22.11				
CA 2A-1A-12A-30A	LTE B30	10	27710	2310	QPSK	1	25	9820	2355	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B14	10	5330	763	22.04	22.11				
CA 2A-4A-12A-30A	LTE B30	10	27710	2310	QPSK	1	25	9820	2355	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B14	10	9715	763	22.04	22.11				
CA 2A-2A-2A-30A	LTE B30	10	27710	2310	QPSK	1	25	9820	2355	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B29	10	9715	722.5	22.05	22.11				
CA 2A-1A-2A-30A	LTE B30	10	27710	2310	QPSK	1	25	9820	2355	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B29	10	66786	2145	LTE B66	20	67236	2190	22.05	22.11
CA 2C-5A-30A	LTE B30	10	27710	2310	QPSK	1	25	9820	2355	LTE B2	20	900	1960	LTE B2	20	700	1940.2	LTE B12	10	5095	737.5	22.05	22.11				
CA 2C-2A-30A	LTE B30	10	27710	2310	QPSK	1	25	9820	2355	LTE B2	20	900	1960	LTE B2	20	702	1940.2	LTE B29	10	9716	722.5	22.06	22.11				
CA 4A-4A-5A-30A	LTE B30	10	27710	2310	QPSK	1	25	9820	2355	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	LTE B5	10	2525	881.5	22.04	22.11				
CA 4A-4A-12A-30A	LTE B30	10	27710	2310	QPSK	1	25	9820	2355	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	LTE B12	10	5095	737.5	22.08	22.11				
CA 4A-4A-2A-30A	LTE B30	10	27710	2310	QPSK	1	25	9820	2355	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	LTE B29	10	9715	722.5	22.07	22.11				
CA 4A-4A-4A-30A	LTE B30	10	27710	2310	QPSK	1	25	9820	2355	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	LTE B29	10	9715	722.5	22.07	22.11				
CA 12A-30A-66A-66A	LTE B30	10	27710	2310	QPSK	1	25	9820	2355	LTE B12	10	5095	2175	LTE B66	20	66786	2145	LTE B66	20	67236	2190	22.08	22.11				
CA 14A-30A-66A-66A	LTE B30	10	27710	2310	QPSK	1	25	9820	2355	LTE B14	10	5330	763	LTE B66	20	66786	2145	LTE B66	20	67236	2190	22.06	22.11				
CA 29A-30A-66A-66A	LTE B30	10	27710	2310	QPSK	1	25	9820	2355	LTE B29	10	9715	722.5	LTE B66	20	66786	2145	LTE B66	20	67236	2190	22.06	22.11				
CA 30A-66A-66A-66A	LTE B30	10	27710	2310	QPSK	1	25	9820	2355	LTE B66	20	66786	2145	LTE B66	20	66536	2120	LTE B66	20	67236	2190	22.08	22.11				
CA 2C-5B-30A	LTE B30	10	27710	2310	QPSK	1	25	9820	2355	LTE B2	20	900	1960	LTE B2	20	702	1940.2	LTE B12	10	2525	881.5	22.06	22.11				
CA 4A-4A-5B-30A	LTE B30	10	27710	2310	QPSK	1	25	9820	2355	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	LTE B5	10	2525	881.5	22.08	22.11				
CA 5B-30A-66A-66A	LTE B30	10	27710	2310	QPSK	1	25	9820	2355	LTE B5	10	2453	874.3	LTE B66	20	66786	2145	LTE B66	20	67236	2190	22.13	22.11				

I.2.11 LTE Band 41 as PCC

Table I-13
Maximum Output Powers

Combination	PCC										SCC 1			SCC 2			SCC 3			Power			
	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC ULR RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA 41A-4B8	LTE B41	10	41490	2680	QPSK	1	49	41490	2680	LTE B48	20	55990	3625	-	-	-	-	-	-	-	-	24.47	24.50
CA 41A-4B8C	LTE B41	10	41490	2680	QPSK	1	49	41490	2680	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	-	-	-	-	24.46	24.50
CA 41A-4B1A-41A	LTE B41	10	41490	2680	QPSK	1	49	41490	2680	LTE B41	20	36750	2506	LTE B41	20	40620	2593	-	-	-	-	24.45	24.50
CA 41A-4B8D	LTE B41	10	41490	2680	QPSK	1	49	41490	2680	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	LTE B48	20	56386	3664.6	24.46	24.50
CA 41A-4B1A-41C	LTE B41	10	41490	2680	QPSK	1	49	41490	2680	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	LTE B48	20	56386	3664.6	24.46	24.50
CA 41A-4B1D	LTE B41	10	41490	2680	QPSK	1	49	41490	2680	LTE B41	20	36750	2506	LTE B41	20	40620	2593	LTE B41	20	36750	2506	24.45	24.50
CA 41A-4B1A-41E	LTE B41	10	41490	2680	QPSK	1	49	41490	2680	LTE B41	20	41349	2656.6	LTE B41	20	41448	2645.8	LTE B41	20	36750	2506	24.45	24.50
CA 41C-41C	LTE B41	10	41490	2680	QPSK	1	49	41490	2680	LTE B41	20	41349	2656.6	LTE B41	20	39948	2525.8	LTE B41	20	39750	2506	24.48	24.50
CA 41E	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	LTE B41	20	41292	2690.2	LTE B41	20	41094	2640.4	LTE B41	20	40898	2620.6	24.47	24.49
CA 41C-41D	LTE B41	10	41490	2680	QPSK	1	49	41490	2680	LTE B41	20	41346	2656.6	LTE B41	20	40146	2545.6	LTE B41	20	39948	2525.8	24.52	24.50
CA 41D-41C	LTE B41	10	41490	2680	QPSK	1	49	41490	2680	LTE B41	20	41346	2656.6	LTE B41	20	41148	2645.8	LTE B41	20	39948	2525.8	24.55	24.50
CA 41F	LTE B41	10	41490	2680	QPSK	1	49	41490	2680	LTE B41	20	41346	2656.6	LTE B41	20	41090	2645.8	LTE B41	20	40950	2626	24.49	24.50

I.2.12 LTE Band 48 as PCC

Table I-14
Maximum Output Powers

Combination	PCC										SCC 1			SCC 2			SCC 3			Power			
	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC ULR RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA 48B	LTE B48	10	56223	3648.3	QPSK	1	25	56223	3648.3	LTE B48	10	56124	3638.4	-	-	-	-	-	-	-	-	20.54	20.52
CA 48A-4B8A	LTE B48	10	56223	3648.3	QPSK	1	25	56223	3648.3	LTE B48	20	55340	3560	LTE B48	20	55990	3625	-	-	-	-	20.55	20.52
CA 41A-4B8D	LTE B48	10	56223	3648.3	QPSK	1	25</td																

I.3 DL CA with DL 4x4 MIMO RF Conduction Powers

This device supports downlink 4x4 MIMO operations for some LTE bands. Uplink transmission is limited to a single output stream. When carrier aggregation was applicable, the general test selection and setup procedures described in Section I.1 were applied.

Per May 2017 TCB Workshop Notes, SAR for 4x4 DL MIMO was not needed since the maximum average output power in 4x4 DL MIMO mode was not more than 0.25 dB higher than the maximum output power with 4x4 DL MIMO inactive. Additionally, SAR for 4x4 MIMO Downlink Carrier Aggregation was not needed since the maximum average output power in 4x4 MIMO Downlink Carrier Aggregation mode was not more than 0.25 dB higher than the maximum output power with 4x4 MIMO Downlink and downlink carrier aggregation inactive.

I.3.1 LTE 4x4 MIMO DL Standalone Powers

**Table I-15
Maximum Output Powers**

LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]	Modulation	RB Size	RB Offset	4x4 DL MIMO Tx. Power [dBm]	Single Antenna Tx. Power [dBm]	Target Power [dBm]
66	5	132322	1745	QPSK	1	0	24.57	24.63	24.0
2	5	18900	1880	QPSK	1	12	24.31	24.40	24.0
25	5	26065	1852.5	QPSK	1	12	24.48	24.51	24.0
30	10	27710	2310	QPSK	1	25	22.05	22.11	22.0
41	10	41490	2680	QPSK	1	49	24.54	24.56	24.0
48	10	56223	3648.3	QPSK	1	25	20.45	20.52	19.6

I.3.2 LTE Band 71 as PCC

**Table I-16
Maximum Output Powers**

Combination	PCC										SCC 1				SCC 2				SCC 3				Power					
	PCC Band	PCC BW [MHz]	PCC (U) Freq. [MHz]	PCC (U) Ch	Mod.	PCC UL RB Offset	PCC UL RB	PCC (DL) Freq. [MHz]	PCC (DL) Ch.	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Freq. [MHz]	SCC (DL) Ch.	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Freq. [MHz]	SCC (DL) Ch.	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Freq. [MHz]	SCC (DL) Ch.	DL Ant. Config.	LTE Tx. Power with DL CA Enabled	LTE Single Carrier Tx Power [dBm]	
CA [148A]1[48A]1-71A	LTE B71	15	133297	680.5	QPSK	1	36	68761	634.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	-	-	-	-	-	-	24.23	24.26
CA [48C]1-71A	LTE B71	15	133297	680.5	QPSK	1	36	68761	634.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56198	3644.8	4x4	-	-	-	-	-	-	24.20	24.26
CA [2A]1[4A]1-71A	LTE B71	15	133297	680.5	QPSK	1	36	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	-	24.22	24.26
CA [2A]1[68A]1[68A]1-71A	LTE B71	15	133297	680.5	QPSK	1	36	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B86	20	66765	2145	4x4	LTE B66	20	67236	2190	4x4	24.19	24.26	
CA [2A]1[68C]1-71A	LTE B71	15	133297	680.5	QPSK	1	36	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B86	20	66766	2145	4x4	LTE B66	20	66984	2164.8	4x4	24.18	24.26	
CA [2A][2A]1[4A]1-71A	LTE B71	15	133297	680.5	QPSK	1	36	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B4	20	2175	2132.5	4x4	24.21	24.26	
CA [2A][2A]1[68A]1[68A]1-71A	LTE B71	15	133297	680.5	QPSK	1	36	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	4x4	24.19	24.26	
CA [2A][68A]1-68A1-71A	LTE B71	15	133297	680.5	QPSK	1	36	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B86	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	24.17	24.26	
CA [2A][68C]1-71A	LTE B71	15	133297	680.5	QPSK	1	36	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B86	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	24.15	24.26	
CA [2A][2A]1[4A]1-71A	LTE B71	15	133297	680.5	QPSK	1	36	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B4	20	2175	2132.5	4x4	24.15	24.26	
CA [2A][2A]1[68A]1-71A	LTE B71	15	133297	680.5	QPSK	1	36	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	4x4	24.13	24.26	
CA [2A][2A]1[4A]1-71A	LTE B71	15	133297	680.5	QPSK	1	36	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	-	24.17	24.26

FCC ID: C3K2077	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Portable Computing Device		APPENDIX I: Page 10 of 18

I.3.3

LTE Band 12 as PCC

Table I-17
Maximum Output Powers

FCC ID: C3K2077	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Portable Computing Device		APPENDIX I: Page 11 of 18

I.3.4

LTE Band 13 as PCC

Table I-18
Maximum Output Powers

135

LTE Band 14 as PCC

Table I-19
Maximum Output Powers

FCC ID: C3K2077	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Portable Computing Device		APPENDIX I: Page 12 of 18

I.3.6 LTE Band 5 as PCC

Table I-20
Maximum Output Powers

FCC ID: C3K2077	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Portable Computing Device		APPENDIX I: Page 13 of 18

I.3.7 LTE Band 26 as PCC

Table I-21
Maximum Output Powers

FCC ID: C3K2077	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Portable Computing Device		APPENDIX I: Page 14 of 18

I.3.8 LTE Band 66 as PCC

Table I-22
Maximum Output Powers

| Combination | PC1 | | | | | | | | | | | | PC2 | | | | | | | | | | | | PC3 | | | | | | | | | | | | PC4 | | | | | | | | | | | | PC5 | | | | | | | | | | | | PC6 | | | | | | | | | | | | PC7 | | | | | | | | | | | | PC8 | | | | | | | | | | | | PC9 | | | | | | | | | | | | PC10 | | | | | | | | | | | | PC11 | | | | | | | | | | | | PC12 | | | | | | | | | | | | PC13 | | | | | | | | | | | | PC14 | | | | | | | | | | | | PC15 | | | | | | | | | | | | PC16 | | | | | | | | | | | | PC17 | | | | | | | | | | | | PC18 | | | | | | | | | | | | PC19 | | | | | | | | | | | | PC20 | | | | | | | | | | | | PC21 | | | | | | | | | | | | PC22 | | | | | | | | | | | | PC23 | | | | | | | | | | | | PC24 | | | | | | | | | | | | PC25 | | | | | | | | | | | | PC26 | | | | | | | | | | | | PC27 | | | | | | | | | | | | PC28 | | | | | | | | | | | | PC29 | | | | | | | | | | | | PC30 | | | | | | | | | | | | PC31 | | | | | | | | | | | | PC32 | | | | | | | | | | | | PC33 | | | | | | | | | | | | PC34 | | | | | | | | | | | | PC35 | | | | | | | | | | | | PC36 | | | | | | | | | | | | PC37 | | | | | | | | | | | | PC38 | | | | | | | | | | | | PC39 | | | | | | | | | | | | PC40 | | | | | | | | | | | | PC41 | | | | | | | | | | | | PC42 | | | | | | | | | | | | PC43 | | | | | | | | | | | | PC44 | | | | | | | | | | | | PC45 | | | | | | | | | | | | PC46 | | | | | | | | | | | | PC47 | | | | | | | | | | | | PC48 | | | | | | | | | | | | PC49 | | | | | | | | | | | | PC50 | | | | | | | | | | | | PC51 | | | | | | | | | | | | PC52 | | | | | | | | | | | | PC53 | | | | | | | | | | | | PC54 | | | | | | | | | | | | PC55 | | | | | | | | | | | | PC56 | | | | | | | | | | | | PC57 | | | | | | | | | | | | PC58 | | | | | | | | | | | | PC59 | | | | | | | | | | | | PC60 | | | | | | | | | | | | PC61 | | | | | | | | | | | | PC62 | | | | | | | | | | | | PC63 | | | | | | | | | | | | PC64 | | | | | | | | | | | | PC65 | | | | | | | | | | | | PC66 | | | | | | | | | | | | PC67 | | | | | | | | | | | | PC68 | | | | | | | | | | | | PC69 | | | | | | | | | | | | PC70 | | | | | | | | | | | | PC71 | | | | | | | | | | | | PC72 | | | | | | | | | | | | PC73 | | | | | | | | | | | | PC74 | | | | | | | | | | | | PC75 | | | | | | | | | | | | PC76 | | | | | | | | | | | | PC77 | | | | | | | | | | | | PC78 | | | | | | | | | | | | PC79 | | | | | | | | | | | | PC80 | | | | | | | | | | | | PC81 | | | | | | | | | | | | PC82 | | | | | | | | | | | | PC83 | | | | | | | | | | | | PC84 | | | | | | | | | | | | PC85 | | | | | | | | | | | | PC86 | | | | | | | | | | | | PC87 | | | | | | | | | | | | PC88 | | | | | | | | | | | | PC89 | | | | | | | | | | | | PC90 | | | | | | | | | | | | PC91 | | | | | | | | | | | | PC92 | | | | | | | | | | | | PC93 | | | | | | | | | | | | PC94 | | | | | | | | | | | | PC95 | | | | | | | | | | | | PC96 | | | | | | | | | | | | PC97 | | | | | | | | | | | | PC98 | | | | | | | | | | | | PC99 | | | | | | | | | | | | PC100 | | | | | | | | | | | | PC101 | | | | | | | | | | | | PC102 | | | | | | | | | | | | PC103 | | | | | | | | | | | | PC104 | | | | | | | | | | | | PC105 | | | | | | | | | | | | PC106 | | | | | | | | | | | | PC107 | | | | | | | | | | | | PC108 | | | | | | | | | | | | PC109 | | | | | | | | | | | | PC110 | | | | | | | | | | | | PC111 | | | | | | | | | | | | PC112 | | | | | | | | | | | | PC113 | | | | | | | | | | | | PC114 | | | | | | | | | | | | PC115 | | | | | | | | | | | | PC116 | | | | | | | | | | | | PC117 | | | | | | | | | | | | PC118 | | | | | | | | | | | | PC119 | | | | | | | | | | | | PC120 | | | | | | | | | | | | PC121 | | | | | | | | | | | | PC122 | | | | | | | | | | | | PC123 | | | | | | | | | | | | PC124 | | | | | | | | | | | | PC125 | | | | | | | | | | | | PC126 | | | | | | | | | | | | PC127 | | | | | | | | | | | | PC128 | | | | | | | | | | | | PC129 | | | | | | | | | | | | PC130 | | | | | | | | | | | | PC131 | | | | | | | | | | | | PC132 | | | | | | | | | | | | PC133 | | | | | | | | | | | | PC134 | | | | | | | | | | | | PC135 | | | | | | | | | | | | PC136 | | | | | | | | | | | | PC137 | | | | | | | | | | | | PC138 | | | | | | | | | | | | PC139 | | | | | | | | | | | | PC140 | | | | | | | | | | | | PC141 | | | | | | | | | | | | PC142 | | | | | | | | | | | | PC143 | | | | | | | | | | | | PC144 | | | | | | | | | | | | PC145 | | | | | | | | | | | | PC146 | | | | | | | | | | | | PC147 | | | | | | | | | | | | PC148 | | | | | | | | | | | | PC149 | | | | | | | | | | | | PC150 | | | | | | | | | | | | PC151 | | | | | | | | | | | | PC152 | | | | | | | | | | | | PC153 | | | | | | | | | | | | PC154 | | | | | | | | | | | | PC155 | | | | | | | | | | | | PC156 | | | | | | | | | | | | PC157 | | | | | | | | | | | | PC158 | | | | | | | | | | | | PC159 | | | | | | | | | | | | PC160 | | | | | | | | | | | | PC161 | | | | | | | | | | | | PC162 | | | | | | | | | | | | PC163 | | | | | | | | | | | | PC164 | | | | | | | | | | | | PC165 | | | | | | | | | | | | PC166 | | | | | | | | | | | | PC167 | | | | | | | | | | | | PC168 | | | | | | | | | | | | PC169 | | | | | | | | | | | | PC170 | | | | | | | | | | | | PC171 | | | | | | | | | | | | PC172 | | | | | | | | | | | | PC173 | | | | | | | | | | | | PC174 | | | | | | | | | | | | PC175 | | | | | | | | | | | | PC176 | | | | | | | | | | | | PC177 | | | | | | | | | | | | PC178 | | | | | | | | | | | | PC179 | | | | | | | | | | | | PC180 | | | | | | | | | | | | PC181 | | | | | | | | | | | | PC182 | | | | | | | | | | | | PC183 | | | | | | | | | | | | PC184 | | | | | | | | | | | | PC185 | | | | | | | | | | | | PC186 | | | | | | | | | | | | PC187 | | | | | | | | | | | | PC188 | | | | | | | | | | | | PC189 | | | | | | | | | | | | PC190 | | | | | | | | | | | | PC191 | | | | | | | | | | | | PC192 | | | | | | | | | | | | PC193 | | | | | | | | | | | | PC194 | | | | | | | | | | | | PC195 | | | | | | | | | | | | PC196 | | | | | | | | | | | | PC197 | | | | | | | | | | | | PC198 | | | | | | | | | | | | PC199 | | | | | | | | | | | | PC200 | | | | | | | | | | | | PC201 | | | | | | | | | | | | PC202 | | | | | | | | | | | | PC203 | | | | | | | | | | | | PC204 | | | | | | | | | | | | PC205 | | | | | | | | | | | | PC206 | | | | | | | | | | | | PC207 | | | | | | | | | | | | PC208 | | | | | | | | | | | | PC209 | | | | | | | | | | | | PC210 | | | | | | | | | | | | PC211 | | | | | | | | | | | | PC212 | | | | | | | | | | | | PC213 | | | | | | | | | | | | PC214 | | | | | | | | | | | | PC215 | | | | | | | | | | | | PC216 | | | | | | | | | | | | PC217 | | | | | | | | | | | | PC218 | | | | | | | | | | | | PC219 | | | | | | | | | | | | PC220 | | | | | | | | | | | | PC221 | | | | | | | | | | | | PC222 | | | | | | | | | | | | PC223 | | | | | | | | | | | | PC224 | | | | | | | | | | | | PC225 | | | | | | | | | | | | PC226 | | | | | | | | | | | | PC227 | | | | | | | | | | | | PC228 | | | | | | | | | | | | PC229 | | | | | | | | | | | | PC230 | | | | | | | | | | | | PC231 | | | | | | | | | | | | PC232 | | | | | | | | | | | | PC233 | | | | | | | | | | | | PC234 | | | | | | | | | | | | PC235 | | | | | | | | | | | | PC236 | | | | | | | | | | | | PC237 | | | | | | | | | | | | PC238 | | | | | | | | | | | | PC239 | | | | | | | | | | | | PC240 | | | | | | | | | | | | PC241 | | | | | | | | | | | | PC242 | | | | | | | | | | | | PC243 | | | | | | | | | | | | PC244 | | | | | | | | | | | | PC245 | | | | | | | | | | | | PC246 | | | | | | | | | | | | PC247 | | | | | | | | | | | | PC248 | | | | | | | | | | | | PC249 | | | | | | | | | | | | PC250 | | | | | | | | | | | | PC251 | | | | | | | | | | | | PC252 | | | | | | | | | | | | PC253 | | | | | | | | | | | | PC254 | | | | | | | | | | | | PC255 | | | | | | | | | | | | PC256 | | | | | | | | | | | | PC257 | | | | | | | | | | | | PC258 | | | | | | | | | | | | PC259 | | | | | | | | | | | | PC260 | | | | | | | | | | | | PC261 | | | | | | | | | | | | PC262 | | | | | | | | | | | | PC263 | | | | | | | | | | | | PC264 | | | | | | | | | | | | PC265 | | | | | | | | | | | | PC266 | | | | | | | | | | | | PC267 | | | | | | | | | | | | PC268 | | | | | | | | | | | | PC269 | | | | | | | | | | | | PC270 | | | | | | | | | | | | PC271 | | | | | | | | | | | | PC272 | | | | | | | | | | | | PC273 | | | | | | | | | | | | PC274 | | | | | | | | | | | | PC275 | | | | | | | | | | | | PC276 | | | | | | | | | | | | PC277 | | | | | | | | | | | | PC278 | | | | | | | | | | | | PC279 | | | | | | | | | | | | PC280 | | | | | | | | | | | | PC281 | | | | | | | | | | | | PC282 | | | | | | | | | | | | PC283 | | | | | | | | | | | | PC284 | | | | | | | | | | | | PC285 | | | | | | | | | | | | PC286 | | | | | | | | | | | | PC287 | | | | | | | | | | | | PC288 | | | | | | | | | | | | PC289 | | | | | | | | | | | | PC290 | | | | | | | | | | | | PC291 | | | | | | | | | | | | PC292 | | | | | | | | | | | | PC293 | | | | | | | | | | | | PC294 | | | | | | | | | | | | PC295 | | | | | | | | | | | | PC296 | | | | | | | | | | | | PC297 | | | | | | | | | | | | PC298 | | | | | | | | | | | | PC299 | | | | | | | | | | | | PC300 | | | | | | | | | | | | PC301 | | | | | | | | | | | | PC302 | | | | | | | | | | | | PC303 | | | | | | | | | | | | PC304 | | | | | | | | | | | | PC305 | | | | | | | | | | | | PC306 | | | | | | | | | | | | PC307 | | | | | | | | | | | | PC308 | | | | | | | | | | | | PC309 | | | | | | | | | | | | PC310 | | | | | | | | | | | | PC311 | | | | | | | | | | | | PC312 | | | | | | | | | | | | PC313 | | | | | | | | | | | | PC314 | | | | | | | | | | | | PC315 | | | | | | | | | | | | PC316 | | | | | | | | | | | | PC317 | | | | | | | | | | | | PC318 | | | | | | | | | | | | PC319 | | | | | | | | | | | | PC320 | | | | | | | | | | | | PC321 | | | | | | | | | | | | PC322 | | | | | | | | | | | | PC323 | | | | | | | | | | | | PC324 | | | | | | | | | | | | PC325 | | | | | | | | | | | | PC326 | | | | | | | | | | | | PC327 | | | | | | | | | | | | PC328 | | | | | | | | | | | | PC329 | | | | | | | | | | | | PC330 | | | | | | | | | | | | PC331 | | | | | | | | | | | | PC332 | | | | | | | | | | | | PC333 | | | | | | | | | | | | PC334 | | | | | | | | | | | | PC335 | | | | | | | | | | | | PC336 | | | | | | | | | | | | PC337 | | | | | | | | | | | | PC338 | | | | | | | | | | | | PC339 | | | | | | | | | | | | PC340 | | | | | | | | | | | | PC341 | | | | | | | | | | | | PC342 | | | | | | | | | | | | PC343 | | | | | | | | | | | | PC344 | | | | | | | | | | | | PC345 | | | | | | | | | | | | PC346 | | | | | | | | | | | | PC347 | | | | | | | | | | | | PC348 | | | | | | | | | | | | PC349 | | | | | | | | | | | | PC350 | | | | | | | | | | | | PC351 | | | | | | | | | | | | PC352 | | | | | | | | | | | | PC353 | | | | | | | | | | | | PC354 | | | | | | | | | | | | PC355 | | | | | | | | | | | | PC356 | | | | | | | | | | | | PC357 | | | | | | | | | | | | PC358 | | | | | | | | | | | | PC359 | | | | | | | | | | | | PC360 | | | | | | | | | | | | PC361 | | | | | | | | | | | | PC362 | | | | | | | | | | | | PC363 | | | | | | | | | | | | PC364 | | | | | | | | | | | | PC365 | | | | | | | | | | | | PC366 | | | | | | | | | | | | PC367 | | | | | | | | | | | | PC368 | | | | | | | | | | | | PC369 | | | | | | | | | | | | PC370 | | | | | | | | | | | | PC371 | | | | | | | | | | | | PC372 | | | | | | | | | | | | PC373 | | | | | | | | | | | | PC374 | | | | | | | | | | | | PC375 | | | | | | | | | | | | PC376 | | | | | | | | | | | | PC377 | | | | | | | | | | | | PC378 | | | | | | | | | | | | PC379 | | | | | | | | | | | | PC380 | | | | | | | | | | | | PC381 | | | | | | | | | | | | PC382 | | | | | | | | | | | | PC383 | | | | | | | | | | | | PC384 | | | | | | | | | | | | PC385 | | | | | | | | | | | | PC386 | | | | | | | | | | | | PC387 | | | | | | | | | | | | PC388 | | | | | | | | | | | | PC389 | | | | | | | | | | | | PC390 | | | | | | | | | | | | PC391 | | | | | | | | | | | | PC392 | | | | | | | | | | | | PC393 | | | | | | | | | | | | PC394 | | | | | | | | | | | | PC395 | | | | | | | | | | | | PC396 | | | | | | | | | | | | PC397 | | | | | | | | | | | | PC398 | | | | | | | | | | | | PC399 | | | | | | | | | | | | PC400 | | | | | | | | | | | | PC401 | | | | | | | | | | | | PC402 | | | | | | | | | | | | PC403 | | | | | | | | | | | | PC404 | | | | | | | | | | | | PC405 | | | | | | | | | | | | PC406 | | | | | | | | | | | | PC407 | | | | | | | | | | | | PC408 | | | | | | | | | | | | PC409 | | | | | | | | | | | | PC410 | | | | | | | | | | | | PC411 | | | | | | | | | | | | PC412 | | | | | | | | | | | | PC413 | | | | | | | | | | | | PC414 | | | | | | | | | | | | PC415 | | | | | | | | | | | | PC416 | | | | | | | | | | | | PC417 | | | | | | | | | | | | PC418 | | | | | | | | | | | | PC419 | | | | | | | | | | | | PC420 | | | | | | | | | | | | PC421 | | | | | | | | | | | | PC422 | | | | | | | | | | | | PC423 | | | | | | | | | | | | PC424 | | | | | | | | | | | | PC425 | | | | | | | | | | | | PC426 | | | | | | | | | | | | PC427 | | | | | | | | | | | | PC428 | | | | | | | | | | | | PC429 | | | | | | | | | | | | PC430 | | | | | | | | | | | | PC431 | | | | | | | | | | | | PC432 | | | | | | | | | | | | PC433 | | | | | | | | | | | | PC434 | | | | | | | | | | | | PC435 | | | | | | | | | | | | PC436 | | | | | | | | | | | | PC437 | | | | | | | | | | | | PC438 | | | | | | | | | | | | PC439 | | | | | | | | | | | | PC440 | | | | | | | | | | | | PC441 | | | | | | | | | | | | PC442 | | | | | | | | | | | | PC443 | | | | | | | | | | | | PC444 | | | | | | | | | | | | PC445 | | | | | | | | | | | | PC446 | | | | | | | | | | | | PC447 | | | | | | | | | | | | PC448 | | | | | | | | | | | | PC449 | | | | | | | | | | | | PC450 | | | | | | | | | | | | PC451 | | | | | | | | | | | | PC452 | | | | | | | | | | | | PC453 | | | | | | | | | | | | PC454 | | | | | | | | | | | | PC455 | | | | | | | | | | | | PC456 | | | | | | | | | | | | PC457 | | | | | | | | | | | | PC458 | | | | | | | | | | | | PC459 | | | | | | | | | | | | PC460 | | | | | | | | | | | | PC461 | | | | | | | | | | | | PC462 | | | | | | | | | | | | PC463 | | | | | | | | | | | | PC464 | | | | | | | | | | | | PC465 | | | | | | | | | | | | PC466 | | | | | | | | | | | | PC467 | | | | | | | | | | | | PC468 | | | | | | | | | | | | PC469 | | | | | | | | | | | | PC470 | | | | | | | | | | | | PC471 | | | | | | | | | | | | PC472 | | | | | | | | | | | | PC473 | | | | | | | | | | | | PC474 | | | | | | | | | | | | PC475 | | | | | | | | | | | | PC476 | | | | | | | | | | | | PC477 | | | | | | | | | | | | PC478 | | | | | | | | | | | | PC479 | | | | | | | | | | | | PC480 | | | | | | | | | | | | PC481 | | | | | | | | | | | | PC482 | | | | | | | | | | | | PC483 | | | | | | | | | | | | PC484 | | | | | | | | | | | | PC485 | | | | | | | | | | | | PC486 | | | | | | | | | | | | PC487 | | | | | | | | | | | | PC488 | | | | | | | | | | | | PC489 | | | | | | | | | | | | PC490 | | | | | | | | | | | | PC491 | | | | | | | | | | | | PC492 | | | | | | | | | | | | PC493 | | | | | | | | | | | | PC494 | | | | | | | | | | | | PC495 | | | | | | | | | | | | PC496 | | | | | | | | | | | | PC497 | | | | | | | | | | | | PC498 | | | | | | | | | | | | PC499 | | | | | | | | | | | | PC500 | | | | | | | | | | | | PC501 | | | | | | | | | | | | PC502 | | | | | | | | | | | | PC503 | | | | | | | | | | | | PC504 | | | | | | | | | | | | PC505 | | | | | | | | | | | | PC506 | | | | | | | | | | | | PC507 | | | | | | | | | | | | PC508 | | | | | | | | | | | | PC509 | | | | | | | | | | | | PC510 | | | | | | | | | | | | PC511 | | | | | | | | | | | | PC512 | | | | | | | | | | | | PC513 | | | | | | | | | | | | PC514 | | | | | | | | | | | | PC515 | | | | | | | | | | | | PC516 | | | | | | | | | | | | PC517 | | | | | | | | | | | | PC518 | | | | | | | | | | | | PC519 | | | | | | | | | | | | PC520 | | | | | | | | | | | | PC521 | | | | | | | | | | | | PC522 | | | | | | | | | | | | PC523 | | | | | | | | | | | | PC524 | | | | | | | | | | | | PC525 | | | | | | | | | | | | PC526 | | | | | | | | | | | | PC527 | | | | | | | | | | | | PC528 | | | | | | | | | | | | PC529 | | | | | | | | | | | | PC530 | | | | | | | | | | | | PC531 | | | | | | | | | | | | PC532 | | | | | | | | | | | | PC533 | | | | | | | | | | | | PC534 | | | | | | | | | | | | PC535 | | | | | | | | | | | | PC536 | | | | | | | | | | | | PC537 | | | | | | | | | | | | PC538 | | | | | | | | | | | | PC539 | | | | | | | | | | | | PC540 | | | | | | | | | | | | PC541 | | | | | | | | | | | | PC542 | | | | | | | | | | | | PC543 | | | | | | | | | | | | PC544 | | | | | | | | | | | | PC545 | | | | | | | | | | | | PC546 | | | | | | | | | | | | PC547 | | | | | | | | | | | | PC548 | | | | | | | | | | | | PC549 | | | | | | | | | | | | PC550 | | | | | | | | | | | | PC551 | | | | | | | | | | | | PC552 | | | | | | | | | | | | PC553 | | | | | | | | | | | | PC554 | | | | | | | | | | | | PC555 | | | | | | | | | | | | PC556 | | | | | | | | | | | | PC557 | | | | | | | | | | | | PC558 | | | | | | | | | | | | PC559 | | | | | | | | | | | | PC560 | | | | | | | | | | | | PC561 | | | | | | | | | | | | PC562 | | | | | | | | | | | | PC563 | | | | | | | | | | | | PC564 | | | | | | | | | | | | PC565 | | | | | | | | | | | | PC566 | | | | | | | | | | | | PC567 | | | | | | | | | | | | PC568 | | | | | | | | | | | | PC569 | | | | | | | | | | | | PC570 | | | | | | | | | | | | PC571 | | | | | | | | | | | | PC572 | | | | | | | | | | | | PC573 | | | | | | | | | | | | PC574 | | | | | | | | | | | | PC575 | | | | | | | | | | | | PC576 | | | | | | | | | | | | PC577 | | | | | | | | | | | | PC578 | | | | | | | | | | | | PC579 | | | | | | | | | | | | PC580 | | | | | | | | | | | | PC581 | | | | | | | | | | | | PC582 | | | | | | | | | | | | PC583 | | | | | | | | | | | | PC584 | | | | | | | | | | | | PC585 | | | | | | | | | | | | PC586 | | | | | | | | | | | | PC587 | | | | | | | | | | | | PC588 | | | | | | | | | | | | PC589 | | | | | | | | | | | | PC590 | | | | | | | | | | | | PC591 | | | | | | | | | | | | PC592 | | | | | | | | | | | | PC593 | | | | | | | | | | | | PC594 | | | | | | | | | | | | PC595 | | | | | | | | | | | | PC596 | | | | | | | | | | | | PC597 | | | | | | | | | | | | PC598 | | | | | | | | | | | | PC599 | | | | | | | | | | | | PC600 | | | | | | | | | | | | PC601 | | | | | | | | | | | | PC602 | | | | | | | | | | | | PC603 | | | | | | | | | | | | PC604 | | | | | | | | | | | | PC605 | | | | | | | | | | | | PC606 | | | | | | | | | | | | PC607 | | | | | | | | | | | | PC608 | | | | | | | | | | | | PC609 | | | | | | | | | | | | PC610 | | | | | | | | | | | | PC611 | | | | | | | | | | | | PC612 | | | | | | | | | | | | PC613 | | | | | | | | | | | | PC614 | | | | | | | | | | | | PC615 | | | | | | | | | | | | PC616 | | | | | | | | | | | | PC617 | | | | | | | | | | | | PC618 | | | | | | | | | | | | PC619 | | | | | | | | | | | | PC620 | | | | | | | | | | | | PC621 | | | | | | | | | | | | PC622 | | | | | | | | | | | | PC623 | | | | | | | | | | | | PC624 | | | | | | | | | | | | PC625 | | | | | | | | | | | | PC626 | | | | | | | | | | | | PC627 | | | | | | | | | | | | PC628 | | | | | | | | | | | | PC629 | | | | | | | | | | | | PC630 | | | | | | | | | | | | PC631 | | | | | | | | | | | | PC632 | | | | | | | | | | | | PC633 | | | | | | | | | | | | PC634 | | | | | | | | | | | | PC635 | | | | | | | | | | | | PC636 | | | | | | | | | | | | PC637 | | | | | | | | | | | | PC638 | | | | | | | | | | | | PC639 | | | | | | | | | | | | PC640 | | | | | | | | | | | | PC641 | | | | | | | | | | | | PC642 | | | | | | | | | | | | PC643 | | | | | | | | | | | | PC644 | | | | | | | | | | | | PC645 | | | | | | | | | | | | PC646 | | | | | | | | | | | | PC647 | | | | | | | | | | | | PC648 | | | | | | | | | | | | PC649 | | | | | | | | | | | | PC650 | | | | | | | | | | | | PC651 | | | | | | | | | | | | PC652 | | | | | | | | | | | | PC653 | | | | | | | | | | | | PC654 | | | | | | | | | | | | PC655 | | | | | | | | | | | | PC656 | | | | | | | | | | | | PC657 | | | | | | | | | | | | PC658 | | | | | | | | | | | | PC659 | | | | | | | | | | | | PC660 | | | | | | | | | | | | PC661 | | | | | | | | | | | | PC662 | | | | | | | | | | | | PC663 | | | | | | | | | | | | PC664 | | | | | | | | | | | | PC665 | | | | | | | | | | | | PC666 | | | | | | | | | | | | PC667 | | | | | | | | | | | | PC668 | | | | | | | | | | | | PC669 | | | | | | | | | | | | PC670 | | | | | | | | | | | | PC671 | | | | | | | | | | | | PC672 | | | | | | | | | | | | PC673 | | | | | | | | | | | | PC674 | | | | | | | | | | | | PC675 | | | | | | | | | | | | PC676 | | | | | | | | | | | | PC677 | | | | | | | | | | | | PC678 | | | | | | | | | | | | PC679 | | | | | | | | | | | | PC680 | | | | | | | | | | | | PC681 | | | | | | | | | | | | PC682 | | | | | | | | | | | | PC683 | | | | | | | | | | | | PC684 | | | | | | | | | | | | PC685 | | | | | | | | | | | | PC686 | | | | | | | | | | | | PC687 | | | | | | | | | | | | PC688 | | | | | | | | | | | | PC689 | | | | | | | | | | | | PC690 | | | | | | | | | | | | PC691 | | | | | | | | | | | | PC692 | | | | | | | | | | | | PC693 | | | | | | | | | | | | PC694 | | | | | | | | | | | | PC695 | | | | | | | | | | | | PC696 | | | | | | | | | | | | PC697 | | | | | | | | | | | | PC698 | | | | | | | | | | | | PC699 | | | | | | | | | | | | PC700 | | | | | | | | | | | | PC701 | | | | | | | | | | | | PC702 | | | | | | | | | | | | PC703 | | | | | | | | | | | | PC704 | | | | | | | | | | | | PC705 | | | | | | | | | | | | PC706 | | | | | | | | | | | | PC707 | | | | | | | | | | | | PC708 | | | | | | | | | | | | PC709 | | | | | | | | | | | | PC710 | | | | | | | | | | | | PC711 | | | | | | | | | | | | PC712 | | | | | | | | | | | | PC713 | | | | | | | | | | | | PC714 | | | | | | | | | | | | PC715 | | | | | | | | | | | | PC716 | | | | | | | | | | | | PC717 | | | | | | | | | | | | PC718 | | | | | | | | | | | | PC719 | | | | | | | | | | | | PC720 | | | | | | | | | | | | PC721 | | | | | | | | | | | | PC722 | | | | | | | | | | | | PC723 | | | | | | | | | | | | PC724 | | | | | | | | | | | | PC725 | | | | | | | | | | | | PC726 | | | | | | | | | | | | PC727 | | | | | | | | | | | | PC728 | | | | | | | | | | | | PC729 | | | | | | | | | | | | PC730 | | | | | | | | | | | | PC731 | | | | | | | | | | | | PC732 | | | | | | | | | | | | PC733 | | | | | | | | | | | | PC734 | | | | | | | | | | | | PC735 | | | | | | | | | | | | PC736 | | | | | | | | | | | | PC737 | | | | | | | | | | | | PC738 | | | | | | | | | | | | PC739 | | | | | | | | | | | | PC740 | | | | | | | | | | | | PC741 | | | | | | | | | | | | PC742 | | | | | | | | | | | | PC743 | | | | | | | | | | | | PC744 | | | | | | | | | | | | PC745 | | | | | | | | | | | | PC746 | | | | | | | | | | | | PC747 | | | | | | | | | | | | PC748 | | | | | | | | | | | | PC749 | | | | | | | | | | | | PC750 | | | | | | | | | | | | PC751 | | | | | | | | | | | | PC752 | | | | | | | | | | | | PC753 | | | | | | | | | | | | PC754 | | | | | | | | | | | | PC755 | | | | | | | | | | | | PC756 | | | | | | | | | | | | PC757 | | | | | | | | | | | | PC758 | | | | | | | | | | | | PC759 | | | | | | | | | | | | PC760 | | | | | | | | | | | | PC761 | | | | | | | | | | | | PC762 | | | | | | | | | | | | PC763 | | | | | | | | | | | | PC764 | | | | | | | | | | | | PC765 | | | | | | | | | | | | PC766 | | | | | | | | | | | | PC767 | | | | | | | | | | | | PC768 | | | | | | | | | | | | PC769 | | | | | | | | | | | | PC770 | | | | | | | | | | | | PC771 | | | | | | | | | | | | PC772 | | | | | | | | | | | | PC773 | | | | | | | | | | | | PC774 | | | | | | | | | | | | PC775 | | | | | | | | | | | | PC776 | | | | | | | | | | | | PC777 | | | | | | | | | | | | PC778 | | | | | | | | | | | | PC779 | | | | | | | | | | | | PC780 | | | | | | | | | | | | PC781 | | | | | | | | | | | | PC782 | | | | | | | | | | | | PC783 | | | | | | | | | | | | PC784 | | | | | | | | | | | | PC785 | | | | | | | | | | | | PC786 | | | | | | | | | | | | PC787 | | | | | | | | | | | | PC788 | | | | | | | | | | | | PC789 | | | | | | | | | | | | PC790 | | | | | | | | | | | | PC791 | | | | | | | | | | | | PC792 | | | | | | | | | | | | PC793 | | | | | | | | | | | | PC794 | | | | | | | | | | | | PC795 | | | | | | | | | | | | PC796 | | | | | | | | | | | | PC797 | | | | | | | | | | | | PC798 | | | | | | | | | | | | PC799 | | | | | | | | | | | | PC800 | | | | | | | | | | | | PC801 | | | | | | | | | | | | PC802 | | | | | | | | | | | | PC803 | | | | | | | | | | | | PC804 | | | | | | | | | | | | PC805 | | | | | | | | | | | | PC806 | | | | | | | | | | | | PC807 | | | | | | | | | | | | PC808 | | | | | | | | | | | | PC809 | | | | | | | | | | | | PC810 | | | | | | | | | | | | PC811 | | | | | | | | | | | | PC812 | | | | | | | | | | | | PC813 | | | | | | | | | | | | PC814 | | | | | | | | | | | | PC815 | | | | | | | | | | | | PC816 | | | | | | | | | | | | PC817 | | | | | | | | | | | | PC818 | | | | | | | | | | | | PC819 | | | | | | | | | | | | PC820 | | | | | | | | | | | | PC821 | | | | | | | | | | | | PC822 | | | | | | | | | | | | PC823 | | | | | | | | | | | | PC824 | | | | | | | | | | | | PC825 | | | | | | | | | | | | PC826 | | | | | | | | | | | | PC827 | | | | | | | | | | | | PC828 | | | | | | | | | | | | PC829 | | | | | | | | | | | | PC830 | | | | | | | | | | | | PC831 | | | | | | | | | | | | PC832 | | | | | | | | | | | | PC833 | | | | | | | | | | | | PC834 | | | | | | | | | | | | PC835 | | | | | | | | | | | | PC836 | | | | | | | | | | | | PC837 | | | | | | | | | | | | PC838 | | | | | | | | | | | | PC839 | | | | | | | | | | | | PC840 | | | | | | | | | | | | PC841 | | | | | | | | | | | | PC842 | | | | | | | | | | | | PC843 | | | | | | | | | | | | PC844 | | | | | | | | | | | | PC845 | | | | | | | | | | | | PC846 | | | | | | | | | | | | PC847 | | | | | | | | | | | | PC848 | | | | | | | | | | | | PC849 | | | | | | | | | | | | PC850 | | | | | | | | | | | | PC851 | | | | | | | | | | | | PC852 | | | | | | | | | | | | PC853 | | | | | | | | | | | | PC854 | | | | | | | | | | | | PC855 | | | | | | | | | | | | PC856 | | | | | | | | | | | | PC857 | | | | | | | | | | | | PC858 | | | | | | | | | | | | PC859 | | | | | | | | | | | | PC860 | | | | | | | | | | | | PC861 | | | | | | | | | | | | PC862 | | | | | | | | | | | | PC863 | | | | | | | | | | | | PC864 | | | | | | | | | | | | PC865 | | | | | | | | | | | | PC866 | | | | | | | | | | | | PC867 | | | | | | | | | | | | PC868 | | | | | | | | | | | | PC869 | | | | | | | | | | | | PC870 | | | | | | | | | | | | PC871 | | | | | | | | | | | | PC872 | | | | | | | | | | | | PC873 | | | | | | | | | | | |
<th colspan="
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

I.3.9 LTE Band 2 as PCC

Table I-23
Maximum Output Powers

FCC ID: C3K2077	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Portable Computing Device		APPENDIX I: Page 16 of 18

I.3.10 LTE Band 25 as PCC

Table I-24
Maximum Output Powers

FCC ID: C3K2077	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Portable Computing Device		APPENDIX I: Page 17 of 18

I.3.11

LTE Band 30 as PCC

Table I-25
Maximum Output Powers

FCC ID: C3K2077	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Portable Computing Device		APPENDIX I: Page 18 of 18

I.3.12 LTE Band 41 as PCC

Table I-26
Maximum Output Powers

FCC ID: C3K2077	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Portable Computing Device		APPENDIX I: Page 19 of 18

I.3.13 LTE Band 48 as PCC

Table I-27
Maximum Output Powers

I.4 Additional Downlink Carrier Aggregation with Uplink Carrier Aggregation Enabled

This device supports uplink carrier aggregation (ULCA) with additional Carrier Aggregation configurations active in the downlink. Power measurements were performed with ULCA active and additional CA configurations active in the downlink for the configuration per Fall 2017 TCB Workshop Notes.

Per FCC Guidance, additional SAR measurements for these configurations were not required since their maximum output power was not more than 0.25 dB higher than the maximum output power for with only CA_66B, CA_66C, CA_41C, or CA_48C ULCA active.

I.4.1 Additional DL Carrier Aggregation RF Conducted Powers with Uplink Carrier Aggregation Enabled

Table I-28
Maximum Output Powers

I.4.2 Additional 4x4 MIMO DL Carrier Aggregation RF Conducted Powers with Uplink Carrier Aggregation Enabled

Note: 4x4 DL MIMO is only operating in the downlink. Uplink transmission is limited to a single output stream for each component carrier of ULCA.

Table I-29

FCC ID: C3K2077	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Portable Computing Device		APPENDIX I: Page 20 of 18

Maximum Output Powers

FCC ID: C3K2077	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Portable Computing Device		APPENDIX I: Page 21 of 18