

ICNIRP Measurement Report

This report presents the results of measurements of electromagnetic field emission levels in the vicinity of mobile base stations. Results are presented as percentages of the power density reference levels for general public exposure in the 1998 edition of the Guidelines published by the International Commission on Non-Ionizing Radiation Protection (ICNIRP)¹, with figures provided for individual frequency bands used for base station (downlink) transmissions as well as an overall figure for all other frequency bands between 30 MHz to 6 GHz. The total percentage equals the sum of all individual percentages.

The power density reference levels in the ICNIRP Guidelines are the root mean square (rms) values averaged over six minutes. In this report, we have measured the average E-field strength over a six-minute period in each measurement location.

We have applied a measurement threshold of 3dB above the system noise floor² of the measurement equipment, below which any E-field strength levels measured are deemed not sufficiently above the system noise floor to be valid. In the results tables below, measurement results are shown to a precision of four decimal places. Results which are not sufficiently above the system noise floor to record as a valid measurement are shown as a dash (-). Results which are too small to register to four decimal places are shown as 0.0000%.

Date of Survey:	06/07/2026	Time Survey completed:	15:31
Survey address:	Southport PR8		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	US55240265	31/10/2025
Probe	Agos Aria-6000 Antenna	AGOS-6000-1022	08/07/2025
Cabling	1.7m cable	1405	08/07/2025

¹ <https://www.icnirp.org/cms/upload/publications/ICNIRPemfgdl.pdf>

² The noise floor of the measurement equipment is the level of background noise that is present before detecting any external signals. In other words, it indicates the absolute minimum level of detectable signals.

Broadcast bands covered by this report

Frequency Band	Frequency Range	Technology*
	87.5-108 MHz	FM Radio
	174-230 MHz	DAB
	470-694 MHz	Digital TV

Mobile bands covered by this report

Frequency Band	Frequency Range	Technology*
700 MHz	738-788 MHz	4G, 5G
800 MHz	791-821 MHz	4G
900 MHz	925-960 MHz	2G, 3G, 4G
1400 MHz	1452-1492 MHz	4G (Supplementary downlink)
1800 MHz	1805-1880 MHz	2G, 4G
1900 MHz	1900-1920 MHz	4G
2100 MHz	2110-2170 MHz	3G, 4G
2300 MHz	2350-2390 MHz	4G
2600 MHz TDD	2570-2620 MHz	4G
2600 MHz FDD	2620-2690 MHz	4G
3.4 GHz	3410-3680 MHz	5G, 4G
3.8 GHz	3680-4200 MHz	Various
Others**		

** This is an indication of the type of technologies typically deployed in these bands; not all frequency bands and technologies may be in use at all locations. ** All other frequencies between 30 MHz and 6 GHz.*

Survey locations

The survey was conducted within the area shown in the map below. Measurements were taken at six locations and are presented in the following pages of this report.



Location 1

Measurement time:	14:37
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00871
174-230 MHz	0.00811
470-694 MHz	0.00638
700 MHz	0.00142
800 MHz	0.00742
900 MHz	0.00081
1400 MHz	0.00102
1800 MHz	0.00105
1900 MHz	0.00011
2100 MHz	0.00060
2300 MHz	0.00028
2600 MHz TDD	0.00027
2600 MHz FDD	0.00014
3.4 GHz	0.00117
3.8 GHz	0.00264
Others	0.10737
Total	0.14749

Location 2

Measurement time:	14:50
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00978
174-230 MHz	0.00871
470-694 MHz	0.00683
700 MHz	0.00107
800 MHz	0.00879
900 MHz	0.00207
1400 MHz	0.00046
1800 MHz	0.00055
1900 MHz	0.00012
2100 MHz	0.00045
2300 MHz	0.00029
2600 MHz TDD	0.00030
2600 MHz FDD	0.00015
3.4 GHz	0.00123
3.8 GHz	0.00290
Others	0.12478
Total	0.16851

Location 3

Measurement time:	14:57
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00942
174-230 MHz	0.00879
470-694 MHz	0.00689
700 MHz	0.00222
800 MHz	0.01889
900 MHz	0.00319
1400 MHz	0.00277
1800 MHz	0.00371
1900 MHz	0.00012
2100 MHz	0.00260
2300 MHz	0.00030
2600 MHz TDD	0.00030
2600 MHz FDD	0.00015
3.4 GHz	0.00135
3.8 GHz	0.00296
Others	0.11696
Total	0.18064

Location 4

Measurement time:	15:06
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00991
174-230 MHz	0.00917
470-694 MHz	0.00720
700 MHz	0.00109
800 MHz	0.08638
900 MHz	0.01313
1400 MHz	0.00043
1800 MHz	0.00054
1900 MHz	0.00013
2100 MHz	0.00056
2300 MHz	0.00036
2600 MHz TDD	0.00032
2600 MHz FDD	0.00016
3.4 GHz	0.00129
3.8 GHz	0.00309
Others	0.12188
Total	0.25563

Location 5

Measurement time:	15:17
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01017
174-230 MHz	0.00941
470-694 MHz	0.00747
700 MHz	0.00124
800 MHz	0.00434
900 MHz	0.00067
1400 MHz	0.00045
1800 MHz	0.00078
1900 MHz	0.00014
2100 MHz	0.00056
2300 MHz	0.00033
2600 MHz TDD	0.00033
2600 MHz FDD	0.00017
3.4 GHz	0.00135
3.8 GHz	0.00328
Others	0.12705
Total	0.16773

Location 6

Measurement time:	15:25
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01056
174-230 MHz	0.00994
470-694 MHz	0.00770
700 MHz	0.00159
800 MHz	0.00648
900 MHz	0.00081
1400 MHz	0.00191
1800 MHz	0.00159
1900 MHz	0.00014
2100 MHz	0.00133
2300 MHz	0.00034
2600 MHz TDD	0.00034
2600 MHz FDD	0.00017
3.4 GHz	0.00151
3.8 GHz	0.00342
Others	0.13172
Total	0.17957

Disclaimer: The results detailed in this report apply only to the tests made at the reported time, using the test equipment detailed. They do not indicate that on another date an identical set of results would be achieved, due to changes in local environmental conditions or other factors which may or may not have an effect on the measurement results obtained at that future time.