



Ready Accessibility: Investigate

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8	Central Coast																				
9	Cessnock																				
10	Dungog																				
11	Lake Macquarie																				
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Cover

User Guide

Configurator >>

Model Configurator

Inputs 1 >>

Study Years

Regions

Verticals\_Sectors

Network Parameters

Base Stations Sites

Inputs 2 >>

Base Stations Profiles

Throughput Formulas

Base Station

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ReadyAccessibility: Investigate

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1	Input   Network Parameters																			
2	Network Parameters																			
3																				
5																				
6	NETWORK PARAMETERS																			
7																				
8	Peak Concurrent Devices Traffic (Busy Hours) [Mbps]		0.2																	
9	Busy Hour/Contention Ratio [Mbps]		60																	
10	+ Headroom Extra Capacity		20%																	
11																				
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2	Throughput Formulas																
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[Base Stations Sites](#)
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[Base Stations Parameters](#)
[Sites per ...](#)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	Input   Sites per Region																					
2	Sites per Region																					
3																						
5																						
6		SITES PER REGION																				
7																						
8		Sites	Central Coast	Cessnock	Dungog	Lake Macquarie	Maitland	Muswellbrook	Newcastle	Port Stephens	Singleton	UpperHunter										
9		Standalone 5G Site - 3 Sectors - Auto	317	43	12	163	104	19	162	27	32	40										
10		Standalone 5G Site - 3 Sectors	317	43	12	163	104	19	162	27	32	40										
11		Standalone 5G Site - 2 Sectors - Auto	316	44	15	91	82	30	154	45	26	26										
12		Standalone 5G Site - 2 Sectors	316	44	15	91	82	30	154	45	26	26										
13		Standalone 5G Site - 1 Sector - Auto	351	31	12	68	76	29	66	39	33	35										
14		Standalone 5G Site - 1 Sector	351	31	12	68	76	29	66	39	33	35										
15		Standalone 4G Site - 3 Sectors - Auto	341	45	9	196	114	32	109	38	43	36										
16		Standalone 4G Site - 3 Sectors	341	45	9	196	114	32	109	38	43	36										
17		Standalone 4G Site - 2 Sectors - Auto	311	30	5	186	92	31	154	33	27	35										
18		Standalone 4G Site - 2 Sectors	311	30	5	186	92	31	154	33	27	35										
19		Standalone 4G Site - 1 Sector - Auto	328	48	10	99	103	20	128	39	44	40										
20		Standalone 4G Site - 1 Sector	328	48	10	99	103	20	128	39	44	40										
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3																						
5																						
6		TROUGHPUT																				
7																						
8			2023																	2025		
9			Central Coast																	Central Coast		
10																						
		Verticals/ Sectors		Devices	Throughput [Mbps]							Average Throughput per Device [Mbps]	Peak Concurrent Devices Traffic (Busy Hours) [Mbps]	Busy Hour/Contention Ratio [Mbps]	+ Headroom Extra Capacity			Verticals/ Sectors		Devices		
					0.5	1	2	5	10	50	100	1000		0.2	60	20%						0.5
		Agriculture, forestry, fishing, and hunting, mining, quarrying, and oil and gas extraction		23 815	30%	30%	25%	5%	5%	2%	2%	1.0%	14.7	70 017	1 167	1 400			Agriculture, forestry, fishing, and hunting, mining, quarrying, and oil and gas extraction		32 046	30%
		Utilities		18 319	30%	30%	20%	5%	10%	2%	2%	1.0%	15.1	55 325	922	1 106			Utilities		24 651	30%
		Construction		210 673	5%	15%	15%	25%	22%	10%	5%	3.0%	43.9	1 850 764	30 846	37 015			Construction		283 482	5%
		Manufacturing		108 085	20%	25%	30%	15%	5%	2%	2%	1.0%	15.2	328 577	5 476	6 572			Manufacturing		145 439	20%
		Wholesale trade & Retail trade		227 161	5%	15%	20%	24%	15%	15%	5%	1.0%	25.8	1 171 013	19 517	23 420			Wholesale trade & Retail trade		305 667	5%
		Transportation and warehousing		67 782	12%	10%	10%	20%	30%	10%	5%	3.0%	44.4	601 360	10 023	12 027			Transportation and warehousing		91 207	12%
		Finance and insurance & Real estate and rental and leasing services		89 765	5%	20%	30%	15%	14%	10%	5%	1.0%	23.0	412 471	6 875	8 249			Finance and insurance & Real estate and rental and leasing services		120 788	5%
		Professional, scientific, and technical services		109 916	5%	10%	10%	15%	25%	16%	15%	4.0%	66.6	1 463 538	24 392	29 271			Professional, scientific, and technical services		147 904	5%
		Management of companies and enterprises & Administrative and support services, waste management and remediation services		60 454	30%	25%	25%	10%	5%	2%	2%	1.0%	14.9	180 153	3 003	3 603			Management of companies and enterprises & Administrative and support services, waste management and remediation services		81 347	30%
		Educational services		150 219	10%	12%	12%	10%	18%	20%	15%	3.0%	57.7	1 733 829	28 897	34 677			Educational services		202 135	10%
		Health care and social assistance		326 085	10%	15%	20%	18%	15%	10%	10%	2.0%	38.0	2 478 250	41 304	49 565			Health care and social assistance		438 781	10%
		Arts, entertainment, and recreation & Information and cultural industries		54 958	25%	20%	17%	15%	10%	10%	2%	1.0%	19.4	213 403	3 557	4 268			Arts, entertainment, and recreation & Information and cultural industries		73 952	25%
		Accommodation and food services		128 236	30%	27%	20%	5%	10%	5%	2%	1.0%	16.6	424 974	7 083	8 499			Accommodation and food services		172 554	30%
		Other services (excluding public administration)		69 614	10%	14%	15%	20%	25%	10%	5%	1.0%	24.0	334 007	5 567	6 680			Other services (excluding public administration)		93 672	10%
		Public administration		111 748	10%	15%	20%	22%	20%	10%	2%	1.0%	20.7	462 638	7 711	9 253			Public administration		150 369	10%
		Households & Consumer Goods		1 448 001	5%	5%	10%	10%	15%	20%	25%	10.0%	137.3	39 754 872	662 581	795 097			Households & Consumer Goods		1 492 613	5%
		Visitor Demand		60 135	5%	13%	20%	25%	20%	10%	5%	2.0%	33.8	406 574	6 776	8 131			Visitor Demand		65 669	5%
		Total		3 264 968										51 941 763	865 696.06	1 038 835.27			Total		3 922 274	
														15.90881418	0.265146903	0.318176284						
			2023																	2025		
			Cessnock																	Cessnock		
		Verticals/ Sectors		Devices	Throughput [Mbps]							Average Throughput per Device [Mbps]	Peak Concurrent Devices Traffic (Busy Hours) [Mbps]	Busy Hour/Contention Ratio [Mbps]	+ Headroom Extra Capacity			Verticals/ Sectors		Devices		
					0.5	1	2	5	10	50	100	1000		0.2	60	20%						0.5
		Agriculture, forestry, fishing, and hunting, mining, quarrying, and oil and gas extraction		34 536	30%	30%	25%	5%	5%	2%	2%	1.0%	14.7	101 535	1 692	2 031			Agriculture, forestry, fishing, and hunting, mining, quarrying, and oil and gas extraction		46 471	30%
		Utilities		4 490	30%	30%	20%	5%	10%	2%	2%	1.0%	15.1	13 559	226	271			Utilities		6 041	30%
		Construction		31 773	5%	15%	15%	25%	22%	10%	5%	3.0%	43.9	279 124	4 652	5 582			Construction		42 753	5%
		Manufacturing		25 902	20%	25%	30%	15%	5%	2%	2%	1.0%	15.2	78 741	1 312	1 575			Manufacturing		34 853	20%
		Wholesale trade & Retail trade		41 788	5%	15%	20%	24%	15%	15%	5%	1.0%	25.8	215 418	3 590	4 308			Wholesale trade & Retail trade		56 230	5%
		Transportation and warehousing		14 160	12%	10%	10%	20%	30%	10%	5%	3.0%	44.4	125 624	2 094	2 512			Transportation and warehousing		19 053	12%

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E

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G

H

1

Input | Output Formulas

2

Output Formulas

3

5

6

OUTPUT FORMULAS

7

8

2023

9

Central Coast

10

11

Total per Percentage

Capacity Per Site

12

Sites

Percentages

Active Users

Throughput (Mbps)

Units

Active Users

13

Standalone 5G Site - 3 Sectors - Auto

=ROUNDDOWN(LET(  
data;INDIRECT("'"Troughput!\$B:\$ZZ");  
yearRow;INDEX(data;8;);  
colSite;INDEX(data;;1);  
colC;INDEX(data;;2);  
startCol;MATCH(C\$8;yearRow;0);  
rowRegion;MATCH(C\$9;colC;0);  
VLOOKUP("Total";DROP(data;rowRegion;startCol-2);3;0)  
)\*D13;0)

=LET(  
data;INDIRECT("'"Troughput!\$B:\$ZZ");  
yearRow;INDEX(data;8;);  
colSite;INDEX(data;;1);  
colC;INDEX(data;;2);  
colData;INDEX(data;;15);  
startCol;MATCH(C\$8;yearRow;0);  
rowRegion;MATCH(C\$9;colC;0);  
VLOOKUP("Total";DROP(data;rowRegion;startCol-2);15;0)  
)\*D13

=INDEX('Sites per Region'!\$A:\$Z;  
MATCH(B13;'Sites per Region'!\$B:\$B;0);  
MATCH(C\$9;'Sites per Region'!\$8:\$8;0))

=LET(  
data;'Base Stations Profiles'!\$B:\$E;  
colSite;INDEX(data;;1);  
colData;INDEX(data;;2);  
rowRegion;MATCH(B13;colSite;0);  
rowUser;MATCH("Maximum Simultaneously Active Users per  
Site";DROP(colSite;rowRegion);0);  
INDEX(colData;rowRegion+rowUser))

=G  
0

14

Standalone 5G Site - 3 Sectors

15.0%

489 745

155 825.29

317

2 500

15

Standalone 5G Site - 2 Sectors - Auto

15.0%

489 745

155 825.29

316

1 500

16

Standalone 5G Site - 2 Sectors

15.0%

489 745

155 825.29

316

1 500

17

Standalone 5G Site - 1 Sector - Auto

7.5%

244 872

77 912.64

351

750

18

Standalone 5G Site - 1 Sector

7.5%

244 872

77 912.64

351

750

19

Standalone 4G Site - 3 Sectors - Auto

5.0%

163 248

51 941.76

341

1 500

20

Standalone 4G Site - 3 Sectors

5.0%

163 248

51 941.76

341

1 500

21

Standalone 4G Site - 2 Sectors - Auto

5.0%

163 248

51 941.76

311

800

22

Standalone 4G Site - 2 Sectors

5.0%

163 248

51 941.76

311

800

23

Standalone 4G Site - 1 Sector - Auto

2.5%

81 624

25 970.88

328

400

24

Standalone 4G Site - 1 Sector

2.5%

81 624

25 970.88

328

400

25

Total

100.0%

2 775 219

883 009.98

26

27

28

29

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Verticals\_Sectors

Network Parameters

Base Stations Sites

Inputs 2 >>

Base Stations Profiles

Throughput Formulas

Base Stations Parameters

Sites per Region

Inputs 3 >>

Troughput

Inputs 4 >>

Output Formulas

Outputs

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Verticals\_Sectors Network Parameters Base Stations Sites Inputs 2 >> Base Stations Profiles Throughput Formulas Base Stations Parameters Sites per Region Inputs 3 >> Troughput Inputs 4 >> Output Formulas Outputs ... + : ◀ ▶

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