Complete List of 3GPP Technical Specifications and Reports
(38 Series- Radio technology beyond LTE)

#	Specification Number	Title	Initial Planned Release
1	38.101	NR; User Equipment (UE) radio transmission and reception	Release 15
2	38.101-1	NR; User Equipment (UE) radio transmission and reception; Part 1: Range 1 Standalone	Release 15
3	38.101-2	NR; User Equipment (UE) radio transmission and reception; Part 2: Range 2 Standalone	Release 15
4	38.101-3	NR; User Equipment (UE) radio transmission and reception; Part 3: Range 1 and Range 2 Interworking	Release 15
5	38.101-4	NR; User Equipment (UE) radio transmission and reception; Part 4: Performance requirements	Release 15
6	38.101-5	NR; User Equipment (UE) radio transmission and reception; Part 5: Satellite access Radio Frequency	Release 17
7	38.104	NR; Base Station (BS) radio transmission and reception	Release 15
8	38.106	NR repeater radio transmission and reception	Release 17
9	38.108	NR; Satellite Access Node radio transmission and reception	Release 17
10	38.113	NR; Base Station (BS) ElectroMagnetic Compatibility (EMC)	Release 15
11	38.114	NR; Repeaters ElectroMagnetic Compatibility (EMC)	Release 17
12	38.115-1	NR; Repeater conformance testing- Part 1: Conducted conformance testing	Release 17
13	38.115-2	NR; Repeater conformance testing- Part 2: Radiated conformance testing	Release 17
14	38.124	NR; Electromagnetic compatibility (EMC) requirements for mobile terminals and ancillary equipment	Release 15
15	38.133	NR; Requirements for support of radio resource management	Release 15
16	38.141	NR; Base Station (BS) conformance testing	Release 15
17	38.141-1	NR; Base Station (BS) conformance testing - Part 1: Conducted conformance testing	Release 15
18	38.141-2	NR; Base Station (BS) conformance testing - Part 2: Radiated conformance testing	Release 15
19	38.151	NR; User Equipment (UE) Multiple Input Multiple Output (MIMO) Over-the-Air (OTA) performance	Release 17
20	38.161	NR; User Equipment (UE) TRP (Total Radiated Power) and TRS (Total Radiated Sensitivity)	Release 17
21	38.171	NR; Requirements for support of Assisted Global Navigation Satellite System (A-GNSS)	Release 15

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#	Specification Number	Title	Initial Planned Release
22	38.173	TDD operating band in Band n48	Release 16
23	38.174	NR; Integrated Access and Backhaul (IAB) radio transmission and reception	Release 16
24	38.175	NR; Integrated Access and Backhaul (IAB) Electromagnetic Compatibility (EMC)	Release 16
25	38.176-1	NR; Integrated Access and Backhaul (IAB) conformance testing;	Release 16
26	38.176-2	NR; Integrated Access and Backhaul (IAB) conformance testing;	Release 16
27	38.181	NR; Satellite Access Node conformance testing	Release 17
28	38.201	NR; Physical layer; General description	Release 15
29	38.202	NR; Services provided by the physical layer	Release 15
30	38.211	NR; Physical channels and modulation	Release 15
31	38.212	NR; Multiplexing and channel coding	Release 15
32	38.213	NR; Physical layer procedures for control	Release 15
33	38.214	NR; Physical layer procedures for data	Release 15
34	38.215	NR; Physical layer measurements	Release 15
35	38.300	NR; NR and NG-RAN Overall description; Stage-2	Release 15
36	38.304	NR; User Equipment (UE) procedures in Idle mode and in RRC Inactive state	Release 15
37	38.305	NG Radio Access Network (NG-RAN); Stage 2 functional specification of User Equipment (UE)	Release 15
38	38.306	NR; User Equipment (UE) radio access capabilities	Release 15
39	38.307	NR; Requirements on User Equipments (UEs) supporting a release-independent frequency band	Release 15
40	38.314	NR; Layer 2 measurements	Release 16
41	38.321	NR; Medium Access Control (MAC) protocol specification	Release 15
42	38.322	NR; Radio Link Control (RLC) protocol specification	Release 15
43	38.323	NR; Packet Data Convergence Protocol (PDCP) specification	Release 15
44	38.331	NR; Radio Resource Control (RRC); Protocol specification	Release 15
45	38.340	NR; Backhaul Adaptation Protocol (BAP) specification	Release 16
46	38.351	NR; Sidelink Relay Adaptation Protocol (SRAP) Specification	Release 17
47	38.355	NR; Sidelink Positioning Protocol (SLPP); Protocol Specification	Release 18

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48	38.401	NG-RAN; Architecture description	Release 15
49	38.410	NG-RAN; NG general aspects and principles	Release 15
50	38.411	NG-RAN; NG layer 1	Release 15
51	38.412	NG-RAN; NG signalling transport	Release 15
52	38.413	NG-RAN; NG Application Protocol (NGAP)	Release 15
53	38.414	NG-RAN; NG data transport	Release 15
54	38.415	NG-RAN; PDU session user plane protocol	Release 15
55	38.420	NG-RAN; Xn general aspects and principles	Release 15
56	38.421	NG-RAN; Xn layer 1	Release 15
57	38.422	NG-RAN; Xn signalling transport	Release 15
58	38.423	NG-RAN; Xn Application Protocol (XnAP)	Release 15
59	38.424	NG-RAN; Xn data transport	Release 15
60	38.425	NG-RAN; NR user plane protocol	Release 15
61	38.455	NG-RAN; NR Positioning Protocol A (NRPPa)	Release 15
62	38.460	NG-RAN; E1 general aspects and principles	Release 15
63	38.461	NG-RAN; E1 layer 1	Release 15
64	38.462	NG-RAN; E1 signalling transport	Release 15
65	38.463	NG-RAN; E1 Application Protocol (E1AP)	Release 15
66	38.470	NG-RAN; F1 general aspects and principles	Release 15
67	38.471	NG-RAN; F1 layer 1	Release 15
68	38.472	NG-RAN; F1 signalling transport	Release 15
69	38.473	NG-RAN; F1 Application Protocol (F1AP)	Release 15
70	38.474	NG-RAN; F1 data transport	Release 15
71	38.475	NG-RAN; F1 interface user plane protocol	Release 15
72	38.508-1	5GS; User Equipment (UE) conformance specification; Part 1: Common test environment	Release 15
73	38.508-2	5GS; User Equipment (UE) conformance specification; Part 2: Common Implementation Conformance	Release 15
74	38.509	5GS; Special conformance testing functions for User Equipment (UE)	Release 15

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#	Specification Number	Title	Initial Planned Release
75	38.521-1	NR; User Equipment (UE) conformance specification; Radio transmission and reception;	Release 15
76	38.521-2	NR; User Equipment (UE) conformance specification; Radio transmission and reception;	Release 15
77	38.521-3	NR; User Equipment (UE) conformance specification; Radio transmission and reception;	Release 15
78	38.521-4	NR; User Equipment (UE) conformance specification; Radio transmission and reception;	Release 15
79	38.521-5	NR; User Equipment (UE) conformance specification; Radio transmission and reception;	Release 17
80	38.522	NR; User Equipment (UE) conformance specification; Applicability of radio transmission, radio	Release 15
81	38.523-1	5GS; User Equipment (UE) conformance specification; Part 1: Protocol	Release 15
82	38.523-2	5GS; User Equipment (UE) conformance specification; Part 2: Applicability of protocol test cases	Release 15
83	38.523-3	5GS; User Equipment (UE) conformance specification; Part 3: Protocol Test Suites	Release 15
84	38.533	NR; User Equipment (UE) conformance specification; Radio Resource Management (RRM)	Release 15
85	38.551	NR; User Equipment (UE) Multiple Input Multiple Output (MIMO) Over-the-Air (OTA) performance;	Release 17
86	38.561	NR; User Equipment (UE) conformance specification; UE TRP (Total Radiated Power) and TRS (Total	Release 17
87	38.716-01-01	NR intra band Carrier Aggregation (CA) Rel-16 for xCC Down Link (DL) / yCC Up Link (UL) including	Release 16
88	38.716-02-00	NR inter-band Carrier Aggregation (CA) / Dual Connectivity (DC) Rel-16 for 2 bands Down Link (DL) /	Release 16
89	38.716-03-01	NR inter-band Carrier Aggregation (CA) / Dual Connectivity (DC) Rel-16 for 3 bands Down Link (DL) /	Release 16
90	38.716-03-02	NR inter-band Carrier Aggregation (CA) / Dual Connectivity (DC) Rel-16 for 3 bands Down Link (DL) /	Release 16
91	38.716-04-01	NR inter-band Carrier Aggregation (CA) Rel-16 for 4 bands Down Link (DL) / 1 bands Up Link (UL)	Release 16
92	38.717-01-01	Rel-17 NR intra band Carrier Aggregation for xCC DL/yCC UL including contiguous and non-contiguous	Release 17
93	38.717-02-01	Rel-17 NR Inter-band Carrier Aggregation/Dual Connectivity for 2 bands DL with x bands UL (x=1,2)	Release 17
94	38.717-03-01	Rel-17 NR inter-band Carrier Aggregation for 3 bands DL with 1 band UL	Release 17

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#	Specification Number	Title	Initial Planned Release
95	38.717-03-02	Rel-17 NR inter-band Carrier Aggregation/Dual Connectivity for 3 bands DL with 2 bands UL	Release 17
96	38.717-04-01	Rel-17 NR inter-band Carrier Aggregation for 4 bands DL with 1 band UL	Release 17
97	38.717-04-02	Rel-17 NR inter-band Carrier Aggregation/Dual connectivity for DL 4 bands and 2UL bands	Release 17
98	38.717-05-01	Rel-17 NR inter-band Carrier Aggregation for 5 bands DL with x bands UL (x=1, 2)	Release 17
99	38.718-00-02	NR Carrier Aggregation band combinations with two SUL cells	Release 18
100	38.718-01-01	Rel-18 NR intra band Carrier Aggregation for xCC DL/yCC UL including contiguous and non-contiguous	Release 18
101	38.718-02-01	NR inter-band Carrier Aggregation/Dual connectivity for 2 bands DL with x bands UL (x=1,2)	Release 18
102	38.718-03-01	NR inter-band Carrier Aggregation/Dual Connectivity for 3 bands DL with x bands UL(x=1,2)	Release 18
103	38.741	Non-Terrestrial Networks (NTN) L-/S-band for NR	Release 18
104	38.743	Study on enhancements for Artificial Intelligence (AI)/Machine Learning (ML) for NG-RAN	Release 19
105	38.744	Study on Artificial Intelligence (AI)/Machine Learning (ML) for mobility in NR	Release 19
106	38.751	UE RF requirement for NR frequency range 2 (FR2) multi-Rx chain DL reception	Release 18
107	38.761	Measurements of Multiple Input Multiple Output (MIMO) Over-the-Air (OTA) performance of User	Release 18
108	38.769	Study on solutions for Ambient IoT (Internet of Things) in NR	Release 19
109	38.785	User Equipment (UE) radio transmission and reception for enhanced NR sidelink	Release 17
110	38.786	User Equipment (UE) radio transmission and reception for NR sidelink evolution	Release 18
111	38.787	User Equipment (UE) radio transmission and reception for NR Sidelink supporting intra-band CA in ITS	Release 19
112	38.799	Study on Additional Topological Enhancements for NR	Release 19
113	38.801	Study on new radio access technology: Radio access architecture and interfaces	Release 14
114	38.802	Study on new radio access technology Physical layer aspects	Release 14
115	38.803	Study on new radio access technology: Radio Frequency (RF) and co-existence aspects	Release 14
116	38.804	Study on new radio access technology Radio interface protocol aspects	Release 14
117	38.805	Study on new radio access technology; 60 GHz unlicensed spectrum	Release 14
118	38.806	Study of separation of NR Control Plane (CP) and User Plane (UP) for split option 2	Release 15
119	38.807	Study on requirements for NR beyond 52.6 GHz	Release 16
120	38.808	Study on supporting NR from 52.6 GHz to 71 GHz	Release 17
121	38.809	NR; Background for integrated access and backhaul radio transmission and reception	Release 16

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#	Specification Number	Title	Initial Planned Release
122	38.810	NR; Study on test methods	Release 15
123	38.811	Study on New Radio (NR) to support non-terrestrial networks	Release 15
124	38.812	Study on Non-Orthogonal Multiple Access (NOMA) for NR	Release 15
125	38.813	New frequency range for NR (3.3-4.2 GHz)	Release 15
126	38.814	New frequency range for NR (4.4-5.0 GHz)	Release 15
127	38.815	New frequency range for NR (24.25-29.5 GHz)	Release 15
128	38.816	Study on Central Unit (CU) - Distributed Unit (DU) lower layer split for NR	Release 15
129	38.817-01	General aspects for User Equipment (UE) Radio Frequency (RF) for NR	Release 15
130	38.817-02	General aspects for Base Station (BS) Radio Frequency (RF) for NR	Release 15
131	38.818	General aspects for Radio Resource Management (RRM) and demodulation for NR	Release 15
132	38.819	LTE Band 65 for NR (n65)	Release 16
133	38.820	Study on the 7 to 24 GHz frequency range for NR	Release 16
134	38.821	Solutions for NR to support Non-Terrestrial Networks (NTN)	Release 16
135	38.822	NR; User Equipment (UE) feature list	Release 15
136	38.823	Study of further enhancement for disaggregated gNB	Release 16
137	38.824	Study on physical layer enhancements for NR ultra-reliable and low latency case (URLLC)	Release 16
138	38.825	Study on NR industrial Internet of Things (IoT)	Release 16
139	38.826	Study on evaluation for 2 receiver exception in Rel-15 vehicle mounted User Equipment (UE) for NR	Release 16
140	38.827	Study on radiated metrics and test methodology for the verification of multi-antenna reception	Release 16
141	38.828	Cross Link Interference (CLI) handling and Remote Interference Management (RIM) for NR	Release 16
142	38.829	Study on Narrow-Band Internet of Things (NB-IoT) / enhanced Machine Type Communication (eMTC)	Release 17
143	38.830	Study on NR coverage enhancements	Release 17
144	38.831	User Equipment (UE) Radio Frequency (RF) requirements for Frequency Range 2 (FR2)	Release 16
145	38.832	NR; Study on enhancement of Radio Access Network (RAN) slicing	Release 17
146	38.833	Further enhancement on NR demodulation performance	Release 17
147	38.834	Measurements of User Equipment (UE) Over-the-Air (OTA) performance for NR FR1; Total Radiated	Release 17
148	38.835	Study on XR enhancements for NR	Release 18

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#	Specification Number	Title	Initial Planned Release
149	38.836	Study on NR sidelink relay	Release 17
150	38.837	UE RF Requirements for Transparent Tx Diversity (TxD) for NR	Release 17
151	38.838	Study on XR (Extended Reality) evaluations for NR	Release 17
152	38.839	Principles and requirements for simultaneous Rx/Tx band combinations for NR CA/DC, NR SUL and	Release 17
153	38.840	Study on User Equipment (UE) power saving in NR	Release 16
154	38.841	High power UE for NR inter-band Carrier Aggregation with 2 bands downlink and x bands uplink	Release 17
155	38.842	High power User Equipment (UE) (power class 2) for NR inter-band Carrier Aggregation (CA) and	Release 17
156	38.843	Study on Artificial Intelligence (AI)/Machine Learning (ML) for NR air interface	Release 18
157	38.844	Study on Efficient utilization of licensed spectrum that is not aligned with existing NR channel	Release 17
158	38.845	Study on scenarios and requirements of in-coverage, partial coverage, and out-of-coverage NR	Release 17
159	38.846	Study on simplification of band combination specification	Release 18
160	38.847	New frequency range for NR (47.2 – 48.2 GHz)	Release 17
161	38.848	Study on Ambient IoT (Internet of Things) in RAN	Release 18
162	38.849	Introduction of 6GHz NR unlicensed operation	Release 17
163	38.850	Rel-18 High power UE (power class 2) for FR1 NR FDD band in UL of NR inter-band CA/DC combinations	Release 18
164	38.851	User Equipment (UE) Further enhancements of NR RF requirements for frequency range 2 (FR2)	Release 17
165	38.852	Introduction of 1900MHz NR band for Europe for Rail Mobile Radio (RMR)	Release 17
166	38.853	Introduction of 900MHz NR band for Europe for Rail Mobile Radio (RMR)	Release 17
167	38.854	NR support for high speed train scenario in frequency range 2 (FR2)	Release 17
168	38.855	Study on NR positioning support	Release 16
169	38.856	Study on local NR positioning in NG-RAN	Release 16
170	38.857	Study on NR positioning enhancements	Release 17
171	38.858	Study on evolution of NR duplex operation	Release 18
172	38.859	Study on expanded and improved NR positioning	Release 18
173	38.860	Study on extended 600MHz NR band	Release 17

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#	Specification Number	Title	Initial Planned Release
174	38.861	Study on high power UE (power class 2) for one NR FDD band	Release 17
175	38.862	Study on band combination handling in RAN4	Release 17
176	38.863	Non-terrestrial networks (NTN) related RF and co-existence aspects	Release 17
177	38.864	Study on network energy savings for NR	Release 18
178	38.865	Study on further NR RedCap UE complexity reduction	Release 18
179	38.866	Study on remote interference management for NR	Release 16
180	38.867	Study on NR Network-controlled Repeaters	Release 18
181	38.868	Study on optimizations of pi/2 BPSK uplink power in NR	Release 17
182	38.869	Study on low-power Wake-up Signal and Receiver for NR	Release 18
183	38.870	Enhanced Over-the-Air (OTA) test methods for NR FR1 Total Radiated Power (TRP) and Total Radiated	Release 18
184	38.871	Study on NR frequency range 2 (FR2) Over-the-Air (OTA) testing enhancements	Release 18
185	38.872	Study on enhancement for 700/800/900MHz band combinations	Release 18
186	38.873	Time Division Duplex (TDD) operating band in Band n48	Release 16
187	38.874	NR; Study on integrated access and backhaul	Release 15
188	38.875	Study on support of reduced capability NR devices	Release 17
189	38.876	Air-to-ground network for NR	Release 18
190	38.877	Study on NR mmWave MB-BS	Release 18
191	38.878	NR demodulation performance evolution	Release 18
192	38.879	Study on enhancement for Resiliency of gNB-CU-CP	Release 18
193	38.880	UE requirements for 3Tx inter-band UL CA and EN-DC	Release 18
194	38.881	Lower MSD for inter-band CA/EN-DC/DC combinations	Release 18
195	38.882	Study on requirements and use cases for network verified UE location for Non-Terrestrial-Networks	Release 18
196	38.883	Study on support of NR downlink 256 Quadrature Amplitude Modulation (QAM) for frequency range 2	Release 16
197	38.884	Study on enhanced test methods for Frequency Range 2 (FR2) NR User Equipment (UE)	Release 16
198	38.885	Study on NR Vehicle-to-Everything (V2X)	Release 16
199	38.886	V2X Services based on NR; User Equipment (UE) radio transmission and reception	Release 16
200	38.887	TDD operating band in Band n259	Release 16

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201	38.888	Adding wider channel bandwidth in NR band n28	Release 16
202	38.889	Study on NR-based access to unlicensed spectrum	Release 15
203	38.890	Study on NR QoE (Quality of Experience) management and optimizations for diverse services	Release 17
204	38.891	User Equipment (UE) Further enhancements of NR RF requirements for frequency range 2 (FR2) for	Release 18
205	38.892	APT 600 MHz NR band	Release 18
206	38.893	Study on UE support of regionally-defined subsets of an NR band	Release 18
207	38.894	Requirements for simultaneous Rx/Tx band combinations for NR CA/DC, NR SUL and LTE/NR DC	Release 18
208	38.895	High power UE (power class 1.5) for NR FR1 TDD single band	Release 18
209	38.896	High power for FR1 for FDD single band(s) with power class 2	Release 18
210	38.897	High power UE for NR TDD intra-band carrier aggregation in frequency range FR1	Release 18
211	38.898	High power UE for FR1 for DC_R18_xBLTE_yBNR_zDLnUL with power class m (x= 1, 2, 3, 4; y=1, 2; m<3)	Release 18
212	38.899	High power UE for FR1 NR inter-band CA/DC or NR SUL (supplementary uplink) band combination with	Release 18
213	38.900	Study on channel model for frequency spectrum above 6 GHz	Release 14
214	38.901	Study on channel model for frequencies from 0.5 to 100 GHz	Release 14
215	38.903	NR; Derivation of test tolerances and measurement uncertainty for User Equipment (UE) conformance	Release 15
216	38.905	NR; Derivation of test points for radio transmission and reception User Equipment (UE) conformance	Release 15
217	38.912	Study on New Radio (NR) access technology	Release 14
218	38.913	Study on scenarios and requirements for next generation access technologies	Release 14
219	38.918	Study on 5G NR User Equipment (UE) full stack testing for Network Slicing	Release 17
220	38.921	Study on International Mobile Telecommunications (IMT) parameters for 6.425 - 7.025 GHz, 7.025 -	Release 17
221	38.922	Study on International Mobile Telecommunications (IMT) parameters for 4400 - 4800 MHz, 7125 -	Release 19