

Table SINV-49

## USPTO utility patents granted in basic communication processes, by region, country, or economy: 1998–2020

(Number)

Region, country, or economy	Economy by income status	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
World	na	2,672	2,788	3,064	3,337	3,488	3,585	3,669	3,308	4,327	4,145	4,031	4,255	4,899	4,632	4,581	5,064	5,119	4,694	4,722	4,400	3,773	4,842	4,854
North America	na	1,374	1,449	1,628	1,813	1,889	1,969	1,920	1,722	2,142	2,076	1,865	1,931	2,183	1,996	1,971	2,222	2,210	2,072	2,017	1,948	1,617	1,989	1,980
Canada	High	38	42	61	63	60	62	74	67	62	77	67	58	88	84	96	132	130	121	100	105	73	112	105
Mexico	Upper middle	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	1	2	2	3	0	2	3
United States	High	1,336	1,408	1,567	1,750	1,828	1,907	1,845	1,656	2,081	1,999	1,798	1,873	2,094	1,911	1,875	2,088	2,079	1,949	1,915	1,840	1,544	1,876	1,872
Central America and Caribbean	na	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	1	1	0	0	0
Puerto Rico	High	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
South America	na	1	0	0	0	0	1	0	0	2	0	1	1	4	3	4	2	7	5	5	4	8	8	6
Argentina	Upper middle	0	0	0	0	0	0	0	0	2	0	0	1	1	1	1	1	1	1	0	1	4	1	1
Brazil	Upper middle	0	0	0	0	0	0	0	0	0	0	1	1	3	2	3	0	6	4	4	3	4	6	5
Europe	na	379	388	426	461	489	577	527	493	704	592	580	606	694	654	679	747	811	739	782	677	630	773	779
EU-27 + UK <sup>a</sup>	na	362	371	410	440	476	560	508	470	665	568	552	579	655	597	627	688	753	673	713	619	586	712	718
United Kingdom	High	62	65	62	72	82	90	76	79	99	81	62	78	84	83	90	89	108	90	108	84	83	99	110
EU-27 <sup>b</sup>	na	300	305	348	368	394	470	432	391	566	486	490	501	571	514	537	599	645	583	605	534	503	613	607
Austria	High	4	6	7	7	6	16	26	24	42	26	41	42	57	43	32	32	48	43	48	51	44	47	56
Belgium	High	2	3	6	7	7	6	8	10	9	6	8	9	15	10	17	11	10	13	13	10	16	21	16
Denmark	High	1	5	3	4	8	8	11	5	15	8	16	10	10	12	13	8	13	11	7	14	18	15	16
Finland	High	24	21	12	27	35	41	25	28	29	26	13	12	30	20	13	21	21	18	21	13	20	17	17
France	High	68	82	81	65	72	74	86	68	89	87	84	91	96	92	135	150	120	126	115	94	87	105	116
Germany	High	91	93	115	108	119	177	147	150	217	187	199	196	213	164	158	178	194	198	210	179	167	225	191
Hungary	High	1	0	0	0	0	1	1	1	0	1	0	1	2	0	0	1	2	1	0	1	2	2	0
Ireland	High	7	3	5	6	5	14	12	14	18	21	18	8	13	18	16	19	29	26	21	18	22	30	36
Italy	High	45	31	48	57	50	39	33	25	42	33	34	41	43	30	33	38	59	46	53	48	45	49	46
Netherlands	High	38	30	34	38	49	54	45	29	59	58	45	42	48	61	58	76	71	54	57	40	41	43	49
Spain	High	1	1	2	3	0	1	1	1	1	2	3	7	5	2	4	8	6	5	5	7	7	7	6
Sweden	High	21	28	35	47	41	36	35	32	37	24	24	30	29	46	41	42	46	28	42	40	26	35	39
Other Europe	na	17	17	17	20	14	17	18	23	39	24	28	27	40	57	52	60	59	67	69	58	44	61	61
Other Europe-2020 <sup>b</sup>	na	79	83	79	92	96	107	95	103	138	106	90	105	124	140	142	148	166	157	177	142	127	160	172
Belarus	Upper middle	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Moldova	Lower middle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norway	High	2	1	1	4	3	2	1	1	6	6	1	1	8	5	7	10	8	12	12	5	6	10	9
Russia	Upper middle	5	4	4	6	2	3	2	4	3	3	6	4	6	7	16	7	6	10	9	10	6	10	15
Switzerland	High	9	13	12	10	9	12	15	18	28	15	21	22	26	40	21	35	42	40	40	31	30	35	33

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Ukraine	Lower middle	1	0	0	0	0	0	0	0	1	0	0	0	0	1	5	5	2	2	4	4	1	1	1
Asia	na	883	928	981	1,036	1,079	991	1,185	1,043	1,426	1,423	1,531	1,669	1,957	1,915	1,868	1,997	1,988	1,786	1,833	1,689	1,442	1,982	1,994
China	Upper middle	2	5	4	5	7	9	8	10	20	20	42	43	70	75	112	123	156	157	199	191	188	269	312
India	Lower middle	2	3	3	6	9	19	18	36	41	40	40	48	81	55	66	100	101	99	138	105	86	142	162
Japan	High	704	740	756	820	871	762	892	721	915	861	907	926	984	1,036	1,000	1,042	965	892	826	732	631	864	800
Malaysia	Upper middle	0	1	4	1	3	1	2	5	6	12	8	7	13	11	11	10	17	12	11	20	13	19	8
Singapore	High	10	6	16	10	10	12	17	11	19	28	23	34	38	27	22	21	32	29	23	28	18	24	19
South Korea	High	111	122	135	132	116	116	137	150	229	241	289	325	400	396	338	357	359	308	328	356	268	384	355
Taiwan	High	54	51	61	59	63	72	111	109	195	220	220	284	372	315	318	343	356	286	307	252	233	276	337
Middle East	na	26	18	23	24	23	32	27	35	39	36	32	38	51	48	52	82	87	75	72	70	59	73	79
Israel	High	26	18	23	24	22	31	26	33	38	36	31	36	50	46	49	74	75	68	64	61	56	66	68
Africa	na	0	1	3	1	0	1	1	1	0	1	2	0	1	4	2	2	5	6	3	4	5	2	5
South Africa	Upper middle	0	0	2	0	0	1	1	1	0	0	2	0	0	2	1	2	1	2	1	1	1	1	2
Australia and Oceania	na	8	4	3	2	7	14	9	12	14	16	19	11	9	11	6	12	10	10	9	8	12	15	11
Australia	High	5	4	3	2	5	12	8	10	13	14	17	9	6	8	5	10	10	8	9	7	11	14	10
New Zealand	High	3	1	0	0	2	3	1	2	1	3	2	2	3	3	1	1	1	2	0	1	1	1	1
Unclassified	na	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0

na = not applicable, metric not calculated at this level.

EU = European Union; UK = United Kingdom; USPTO = U.S. Patent and Trademark Office.

<sup>a</sup> The United Kingdom was a part of the EU for data purposes from 1973 to 2019.<sup>b</sup> Beginning in 2020, the United Kingdom was no longer a member of the EU.**Note(s):**

USPTO patents are allocated according to patent inventorship information. USPTO patents are fractionally allocated among regions, countries, or economies based on the proportion of residences of all named inventors. Patents are classified under the World Intellectual Property Organization (WIPO) classification of patents, which classifies International Patent Classification (IPC) codes under 35 technical fields. IPC reformed codes take into account changes that were made to the WIPO classification in 2006 under the eighth version of the classification and were used to prepare these data. However, because PatentsView only provides the original IPC codes as they appeared on patents and not the IPC reformed codes, current Cooperative Patent Classification codes on patents were converted back to the most recent IPC classification to prepare these statistics. Fractional counts of patents were assigned to each technological field on patents to assign the proper weight of a patent to the corresponding technological fields under the classification. China includes Hong Kong.

**Source(s):**

National Center for Science and Engineering Statistics; Science-Metrix; PatentsView, USPTO, accessed June 2021.