

## **CATV Essential Patent Portfolio**

April 1, 2026

### **Dolby International AB**

JP5562408

### **INFOCITY, Inc.**

JP5247097

JP6310109

JP7125692

### **INFOCITY, Inc. / Nippon Hoso Kyokai**

JP6789553

### **InterDigital CE Patent Holdings, SAS**

JP5877065

JP6176871

### **JVCKENWOOD Corporation**

JP4620788

JP5070979

### **KDDI CORPORATION**

JP5254162

### **LG Electronics Inc.**

JP6291081

JP6392792

### **Maxell, Ltd.**

JP4431598

JP4431599

JP4565049

JP4629789

JP4629790

JP4629791

JP4997362

JP5002370

**Maxell, Ltd.**

JP5063827

JP5081512

JP5095018

JP5095026

JP5111542

JP5111543

JP5114600

JP5156795

JP5188634

JP5223027

JP5223028

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JP5450876

JP5501081

JP5522644

JP5559605

JP5588489

JP5603475

JP5684415

JP5695150

JP5710895

**Maxell, Ltd.**

JP5805835

JP5849126

JP5896436

**MxH Corporation**

JP7206449

JP7542271

JP7598685

**NEC Corporation**

JP5300074

JP5682181

**NHK Foundation**

JP5113954

JP5113955

**Nippon Hoso Kyokai**

JP5156037

JP5156038

JP5156039

JP5156143

JP5156144

JP5175883

JP5269237

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JP5269239

JP5269240

JP5269241

JP5271445

JP5544395

**Nippon Hoso Kyokai**

JP5548726

JP5584729

JP5584730

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JP5586658

JP5586770

JP5923137

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JP6068721

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JP6323805

JP6388295

JP6803357

JP6858303

JP7300250

**Orange SA**

JP5396600

**Panasonic Holdings Corporation**

JP7410107

**Sharp Corporation**

JP4786739

JP6363745

**Sony Group Corporation**

JP5516826

JP5595590

JP5696913

JP5696914

JP5696915

JP5708874

JP5708875

JP5725390

JP5725391

JP5725392

JP5757601

JP5777793

JP5777794

**Toshiba Corporation**

JP5254411

JP5479631

JP5921398

JP6239674

**TVS REGZA Corporation**

JP5087022

JP5132808

JP7230096

JP7230097

JP7230133

JP7230134

**TVS REGZA Corporation**

JP7230135

JP7230136

**Fujitsu Limited**

|           |                             |
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| JP3918329 | * Expired November 24, 2018 |
| JP4603570 | * Expired March 31, 2023    |
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**INFOCITY, Inc.**

|           |                           |
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| JP3759720 | * Expired May 13, 2017    |
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**InterDigital CE Patent Holdings, SAS**

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**JVCKENWOOD Corporation**

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| JP2521160 | * Expired November 7, 2009  |
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**JVCKENWOOD Corporation**

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| JP2874729 | * Expired January 30, 2015   |
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**JVCKENWOOD Corporation / Panasonic Holdings Corporation**

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| JP2924538 | * Expired January 28, 2013 |
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**LG Electronics Inc.**

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| JP4278657 | * Expired March 19, 2018 |
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**Maxell, Ltd.**

|           |                             |
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| JP2760799 | * Expired April 28, 2008    |
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| JP2798087 | * Expired April 28, 2008    |
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| JP3119116 | * Expired June 7, 2015      |
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| JP3652176 | * Expired August 13, 2019   |
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| JP3731379 | * Expired April 8, 2019     |
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**Maxell, Ltd.**

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| JP3780780 | * Expired November 19, 2019 |
| JP3785010 | * Expired December 1, 2019  |
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| JP3922110 | * Expired February 20, 2016 |
| JP4029569 | * Expired January 10, 2021  |
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| JP4192995 | * Expired November 10, 2017 |
| JP4201055 | * Expired January 31, 2022  |
| JP4208033 | * Expired April 19, 2016    |
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| JP4238928 | * Expired January 31, 2022  |
| JP4254903 | * Expired April 20, 2021    |
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| JP4300190 | * Expired July 31, 2017     |
| JP4332284 | * Expired June 9, 2020      |
| JP4340693 | * Expired March 2, 2021     |
| JP4340694 | * Expired March 2, 2021     |
| JP4340702 | * Expired February 16, 2021 |
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| JP4345694 | * Expired April 27, 2015    |
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**Maxell, Ltd.**

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| JP4379528 | * Expired March 28, 2022     |
| JP4400530 | * Expired November 19, 2019  |
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| JP4431635 | * Expired December 17, 2016  |
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| JP4474486 | * Expired December 3, 2023   |
| JP4484840 | * Expired June 9, 2020       |
| JP4484945 | * Expired February 17, 2018  |
| JP4500847 | * Expired December 15, 2020  |
| JP4512664 | * Expired June 9, 2020       |
| JP4538414 | * Expired October 19, 2021   |
| JP4538488 | * Expired July 31, 2017      |
| JP4538489 | * Expired July 31, 2017      |
| JP4547097 | * Expired January 22, 2021   |
| JP4558100 | * Expired February 17, 2018  |
| JP4576066 | * Expired April 10, 2021     |
| JP4576471 | * Expired January 10, 2023   |
| JP4576481 | * Expired January 10, 2023   |
| JP4597229 | * Expired June 25, 2018      |
| JP4597231 | * Expired October 19, 2021   |
| JP4597252 | * Expired February 9, 2021   |
| JP4597266 | * Expired October 19, 2021   |
| JP4613212 | * Expired October 13, 2024   |
| JP4625764 | * Expired December 20, 2025  |
| JP4627790 | * Expired January 22, 2021   |

**Maxell, Ltd.**

|           |                             |
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| JP4637226 | * Expired January 10, 2021  |
| JP4637254 | * Expired March 28, 2022    |
| JP4654302 | * Expired February 28, 2021 |
| JP4654307 | * Expired June 25, 2018     |
| JP4654319 | * Expired February 9, 2021  |
| JP4663601 | * Expired July 28, 2018     |
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| JP4686632 | * Expired December 15, 2017 |
| JP4686641 | * Expired December 15, 2017 |
| JP4709298 | * Expired April 10, 2021    |
| JP4719818 | * Expired February 9, 2021  |
| JP4729634 | * Expired December 3, 2023  |
| JP4729635 | * Expired December 3, 2023  |
| JP4734464 | * Expired February 28, 2021 |
| JP4734482 | * Expired February 28, 2021 |
| JP4740384 | * Expired January 10, 2021  |
| JP4742176 | * Expired June 25, 2018     |
| JP4747223 | * Expired December 15, 2020 |
| JP4751953 | * Expired December 15, 2020 |
| JP4751959 | * Expired April 10, 2021    |
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| JP4790825 | * Expired July 28, 2018     |
| JP4790850 | * Expired January 10, 2023  |
| JP4792543 | * Expired July 28, 2018     |
| JP4797088 | * Expired November 19, 2019 |
| JP4871992 | * Expired October 13, 2024  |
| JP4876189 | * Expired June 21, 2021     |
| JP4901993 | * Expired October 13, 2024  |
| JP4959851 | * Expired June 21, 2021     |
| JP5002699 | * Expired October 13, 2024  |

**Maxell, Ltd.**

|           |                             |
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| JP5017474 | * Expired December 20, 2025 |
| JP5050122 | * Expired October 13, 2024  |
| JP5050129 | * Expired October 13, 2024  |
| JP5063629 | * Expired June 4, 2021      |
| JP5095022 | * Expired December 20, 2025 |
| JP5156803 | * Expired June 4, 2021      |
| JP5292371 | * Expired October 11, 2022  |
| JP5478690 | * Expired June 4, 2021      |

**Maxell, Ltd. / Nippon Hoso Kyokai**

|           |                        |
|-----------|------------------------|
| JP3884881 | * Expired May 21, 2019 |
| JP4414969 | * Expired May 21, 2019 |
| JP4791567 | * Expired May 21, 2019 |

**Mitsubishi Electric Corporation**

|           |                             |
|-----------|-----------------------------|
| JP2935788 | * Expired June 4, 2013      |
| JP3172425 | * Expired February 1, 2016  |
| JP3215952 | * Expired April 7, 2012     |
| JP3216531 | * Expired July 24, 2016     |
| JP3216534 | * Expired August 29, 2016   |
| JP3301055 | * Expired March 29, 2016    |
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| JP3316573 | * Expired April 7, 2012     |
| JP3468115 | * Expired August 4, 2018    |
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| JP3817816 | * Expired March 12, 2017    |
| JP3909947 | * Expired February 16, 2018 |
| JP4040053 | * Expired March 12, 2017    |
| JP4040078 | * Expired March 12, 2017    |

**Mitsubishi Electric Corporation**

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| JP4089714 | * Expired June 13, 2015      |
| JP4096995 | * Expired June 13, 2015      |
| JP4250817 | * Expired August 4, 2019     |
| JP4250832 | * Expired October 14, 2019   |
| JP4270833 | * Expired September 27, 2022 |
| JP4303085 | * Expired October 23, 2023   |
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| JP4553996 | * Expired May 14, 2018       |
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| JP4844588 | * Expired February 1, 2020   |
| JP4888458 | * Expired October 14, 2019   |
| JP4888459 | * Expired October 14, 2019   |
| JP4947192 | * Expired May 14, 2018       |
| JP4947198 | * Expired May 14, 2018       |
| JP5071569 | * Expired February 1, 2020   |
| JP5267707 | * Expired February 1, 2020   |

**NEC Corporation**

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| JP3090137 | * Expired January 29, 2019  |
| JP3332072 | * Expired April 9, 2018     |
| JP3531604 | * Expired November 24, 2020 |
| JP3832321 | * Expired November 20, 2021 |
| JP4045805 | * Expired January 11, 2022  |
| JP4051968 | * Expired March 7, 2022     |
| JP4666231 | * Expired November 30, 2025 |
| JP4973790 | * Expired January 28, 2025  |
| JP5056965 | * Expired October 5, 2015   |

**Nippon Hoso Kyokai**

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| JP2883238 | * Expired February 6, 2012 |
| JP2904986 | * Expired January 31, 2012 |

**Nippon Hoso Kyokai**

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| JP3051729 | * Expired December 11, 2018  |
| JP3096020 | * Expired December 16, 2017  |
| JP3103617 | * Expired June 13, 2011      |
| JP3253524 | * Expired May 28, 2016       |
| JP3691211 | * Expired May 30, 2017       |
| JP3795183 | * Expired May 16, 2017       |
| JP3884869 | * Expired September 25, 2018 |
| JP4266387 | * Expired November 13, 2020  |
| JP4806444 | * Expired May 24, 2021       |

**Orange SA**

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| JP4391412 | * Expired April 30, 2023 |
| JP4673302 | * Expired June 2, 2024   |

**Orange SA / TDF SAS**

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| JP3044899 | * Expired January 17, 2012 |
| JP3827718 | * Expired June 13, 2015    |

**Panasonic Holdings Corporation**

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| JP3008651 | * Expired March 27, 2012     |
| JP3061053 | * Expired March 27, 2012     |
| JP3061054 | * Expired March 27, 2012     |
| JP3109552 | * Expired March 26, 2013     |
| JP3114727 | * Expired March 27, 2012     |
| JP3153188 | * Expired September 14, 2018 |
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| JP3154705 | * Expired March 26, 2013     |
| JP3154706 | * Expired March 26, 2013     |
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| JP3162452 | * Expired February 3, 2012   |
| JP3231035 | * Expired September 24, 2013 |

**Panasonic Holdings Corporation**

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| JP3231036 | * Expired September 24, 2013 |
| JP3233625 | * Expired September 24, 2013 |
| JP3233626 | * Expired September 24, 2013 |
| JP3233850 | * Expired March 13, 2016     |
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| JP3327914 | * Expired March 25, 2014     |
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| JP3366194 | * Expired October 1, 2016    |
| JP3382569 | * Expired October 14, 2019   |
| JP3387769 | * Expired February 21, 2017  |
| JP3408469 | * Expired September 14, 2019 |
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| JP3410078 | * Expired September 24, 2013 |
| JP3410085 | * Expired March 25, 2014     |
| JP3431465 | * Expired September 11, 2017 |
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| JP3482750 | * Expired September 28, 2015 |
| JP3489574 | * Expired February 26, 2018  |
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| JP3523643 | * Expired March 27, 2018     |
| JP3526458 | * Expired October 19, 2019   |
| JP3529395 | * Expired October 23, 2012   |
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| JP3563346 | * Expired April 16, 2018     |

**Panasonic Holdings Corporation**

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| JP3588460 | * Expired March 27, 2012     |
| JP3615685 | * Expired April 6, 2020      |
| JP3643835 | * Expired March 26, 2013     |
| JP3646110 | * Expired May 30, 2017       |
| JP3646113 | * Expired September 1, 2017  |
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| JP3754999 | * Expired December 9, 2017   |
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| JP3829141 | * Expired March 27, 2012     |
| JP3869839 | * Expired March 27, 2012     |
| JP3881679 | * Expired March 25, 2014     |
| JP3881680 | * Expired September 24, 2013 |
| JP3958249 | * Expired December 5, 2017   |
| JP3958250 | * Expired December 5, 2017   |
| JP3965207 | * Expired February 28, 2023  |
| JP3987526 | * Expired March 26, 2013     |
| JP4006357 | * Expired December 5, 2017   |
| JP4028641 | * Expired September 24, 2018 |
| JP4042745 | * Expired July 16, 2023      |
| JP4044077 | * Expired March 23, 2019     |
| JP4065014 | * Expired December 6, 2015   |
| JP4135252 | * Expired March 23, 2019     |
| JP4189017 | * Expired December 5, 2017   |
| JP4257090 | * Expired September 30, 2022 |
| JP4369990 | * Expired July 27, 2020      |
| JP4410307 | * Expired July 27, 2020      |
| JP4744625 | * Expired July 27, 2020      |

**Panasonic Holdings Corporation / Nippon Hoso Kyokai**

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| JP3083159 | * Expired June 30, 2018 |
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**Panasonic Holdings Corporation / Nippon Hoso Kyokai**

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| JP4057603 | * Expired June 30, 2018 |
| JP4197568 | * Expired June 30, 2018 |
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**Pioneer Corporation**

|           |                              |
|-----------|------------------------------|
| JP2829159 | * Expired September 10, 2011 |
| JP2852295 | * Expired May 26, 2017       |
| JP2883866 | * Expired April 21, 2017     |
| JP2963895 | * Expired July 6, 2018       |

**Sanyo Electric Co., Ltd.**

|           |                            |
|-----------|----------------------------|
| JP3108392 | * Expired October 1, 2017  |
| JP3481107 | * Expired December 4, 2017 |

**Sharp Corporation**

|           |                              |
|-----------|------------------------------|
| JP2945569 | * Expired October 27, 2013   |
| JP2981448 | * Expired October 27, 2013   |
| JP3256434 | * Expired March 29, 2016     |
| JP3518739 | * Expired January 30, 2015   |
| JP3524706 | * Expired December 16, 2016  |
| JP3544165 | * Expired March 22, 2020     |
| JP3590511 | * Expired November 21, 2017  |
| JP3659776 | * Expired September 24, 2017 |
| JP3708028 | * Expired May 30, 2021       |
| JP3714886 | * Expired April 24, 2021     |
| JP3720347 | * Expired April 13, 2024     |
| JP3720722 | * Expired March 7, 2021      |
| JP3775937 | * Expired March 18, 2019     |
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| JP3842959 | * Expired June 21, 2020      |
| JP4129408 | * Expired April 16, 2023     |

**Sharp Corporation**

JP4137613 \* Expired December 3, 2022

**Sony Group Corporation**

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JP3082820 \* Expired November 25, 2013  
JP3114339 \* Expired March 13, 2012  
JP3125787 \* Expired December 28, 2015  
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JP3613865 \* Expired December 7, 2015  
JP3617115 \* Expired March 31, 2015  
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JP3644455 \* Expired September 29, 2014  
JP3658919 \* Expired April 15, 2017  
JP3666093 \* Expired December 25, 2015  
JP3689895 \* Expired July 28, 2015  
JP3712063 \* Expired March 28, 2015  
JP3823492 \* Expired November 18, 2017  
JP3835655 \* Expired June 9, 2018  
JP3844527 \* Expired May 31, 2015  
JP3864514 \* Expired September 22, 2017  
JP3901179 \* Expired October 8, 2012  
JP3975473 \* Expired March 25, 2018

**Sony Group Corporation**

|           |                             |
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| JP4046873 | * Expired November 16, 2018 |
| JP4081780 | * Expired April 30, 2018    |
| JP4135241 | * Expired December 18, 2018 |

**Sony Group Corporation / Nippon Hoso Kyokai**

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| JP3940541 | * Expired February 25, 2020 |
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**Sony Group Corporation / Toshiba Corporation / Nippon Hoso Kyokai**

|           |                        |
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| JP2975932 | * Expired July 9, 2018 |
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**The Trustees of Columbia University in the City of New York**

|           |                             |
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| JP4194240 | * Expired January 29, 2019  |
| JP4393591 | * Expired February 13, 2018 |

**Toshiba Corporation**

|           |                              |
|-----------|------------------------------|
| JP2941398 | * Expired September 29, 2010 |
| JP3435277 | * Expired January 30, 2016   |
| JP3474510 | * Expired February 29, 2020  |
| JP3602768 | * Expired April 12, 2020     |
| JP3824574 | * Expired February 29, 2020  |
| JP3824575 | * Expired February 29, 2020  |
| JP3917611 | * Expired April 12, 2020     |
| JP3971346 | * Expired June 16, 2023      |