



Tizen

Tizen (/ˈtaɪzən/) is a Linux-based mobile operating system backed by the Linux Foundation, developed and used primarily by Samsung Electronics.

The project was originally conceived as an HTML5-based platform for mobile devices to succeed MeeGo. Samsung merged its previous Linux-based OS effort, Bada, into Tizen and has since used it primarily on platforms such as wearable devices and smart TVs.

Much of Tizen is open source software, although the software development kit contains proprietary components owned by Samsung, and portions of the OS are licensed under the Flora License, a derivative of the Apache License 2.0 that grants a patent license only to "Tizen-certified platforms".

In May 2021, Google announced that Samsung would partner with the company on integrating Tizen features into Google's Android-derived Wear OS and committed to using it on future wearables, leaving Tizen to be mainly developed for Samsung Smart TVs.^[2]

History

The project was initiated as mobile Linux and was launched by Intel in July 2007. In April 2009 the operating system updated to version 2.0 which was based on Fedora. However, in the same month, Intel turned Moblin over to the Linux Foundation for future development. Eventually, the operating system was merged with Nokia Maemo, a Debian based Linux distro, into MeeGo which was mainly developed by Nokia, Intel and Linux Foundation.

In 2011, after Nokia abandoned the project, Linux Foundation initiated the Tizen project as a successor to MeeGo, another Linux-based mobile operating system, with its main backer Intel joining Samsung Electronics, as well as Access Co., NEC Casio, NTT DoCoMo, Panasonic Mobile, SK Telecom, Telefónica, and Vodafone as commercial partners. Tizen would be designed to use HTML5 apps, and target mobile and embedded platforms such as netbooks, smartphones, tablets, smart TVs, and in-car entertainment systems.^[3] U.S. carrier Sprint Corporation (which was a backer of MeeGo) joined the Tizen Association in May 2012.^[4] On September 16, 2012, Automotive Grade Linux announced its intent to use Tizen as the basis of its reference distribution.^[5]

In January 2013, Samsung announced its intent to release multiple Tizen-based phones that year. In February 2013, Samsung merged its Bada operating system into Tizen.^{[6][7]}

In October 2013, the first Tizen tablet was shipped by Systema. The tablet was part of a development kit exclusive to Japan.^{[8][9][10]}

In 2014, Samsung released the Gear 2 smartwatch that used a Tizen-based operating system as opposed to Android.^[11]

On May 14, 2014, it was announced that Tizen would ship with Qt.^[12] This project was abandoned in January 2017.^[13]

On February 21, 2016, Samsung announced the Samsung Connect Auto, a connected car solution offering diagnostic, Wi-Fi, and other car-connected services. The device plugs directly into the OBD-II port underneath the steering wheel.^[14]

On November 16, 2016, Samsung said they would be collaborating with Microsoft to bring .NET Core support to Tizen.^[15]

According to Strategy Analytics research, approximately 21% of the smart TVs sold in 2018 run on the Tizen platform making it the most popular smart TV platform.^[16]

On May 19, 2021, during Google I/O, Google announced that Samsung had agreed to work on integrating features of Tizen with the next version of Wear OS, and that it had committed to using Wear OS for its future wearable products.^{[17][18][19]} Samsung will continue to use Tizen for its

Tizen OS	
	
Developer	Linux Foundation, Samsung Electronics
Written in	HTML5, C, C++
OS family	Linux (Unix-like)
Working state	Current
Source model	Open source with source available and proprietary components
Initial release	April 30, 2012
Latest release	8.0 M2 / October 31, 2023 ^[1]
Repository	review.tizen.org/git / (https://review.tizen.org/git/)
Marketing target	Smart TVs, embedded systems, previously: smartwatches and smartphones
Package manager	RPM Package Manager
Platforms	ARM, ARM64, x86, and x86-64
Kernel type	Monolithic (Linux)
Userland	GNU
Default user interface	Graphical (native and web applications), <u>One UI</u> for Smartwatch and Smartphone
License	Operating system: GPLv2, LGPL, Apache License 2.0, BSD, <u>Flora License</u> SDK: <u>Freeware</u>
Preceded by	Orsay (smart televisions) Bada (smartphones) <u>Android</u>

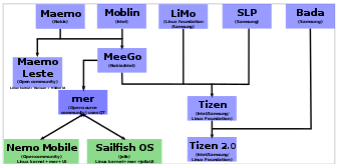
smart TVs.^[20]

On December 31, 2021, the Tizen app store permanently closed.^[21] The last smartphone based on the Tizen operating system is the Samsung Z4 which was released in 2017. The company switched to Google's Wear OS 3 platform on its Galaxy Watch 4 smartwatches.^{[22][23]}

Releases

- Tizen 1.0: April 30, 2012^[24]
- Tizen 2.0: February 18, 2013^[25]
- Tizen 2.1: May 18, 2013^[26]
- Tizen 2.2: July 22, 2013^[27]
 - Tizen 2.2.1: November 9, 2013^[28]
- Tizen 2.3: February 9, 2015^[29]
 - Tizen 2.3.1: September 3, 2015^[30]
 - Tizen 2.3.1 Rev1: November 13, 2015
 - Tizen 2.3.2: September 3, 2016^[31]
 - Tizen 2.3.2 Patch: December 23, 2016
- Tizen 2.4: October 30, 2015^[32]
 - Tizen 2.4 Rev1: December 1, 2015
 - Tizen 2.4 Rev2: December 23, 2015
 - Tizen 2.4 Rev3: February 5, 2016
 - Tizen 2.4 Rev4: March 4, 2016
 - Tizen 2.4 Rev5: April 4, 2016
 - Tizen 2.4 Rev6: May 19, 2016
 - Tizen 2.4 Rev7: June 30, 2016
 - Tizen 2.4 Rev8: August 2, 2016
- Tizen 3.0: January 18, 2017
 - Tizen IVI 3.0 (In-Vehicle Infotainment): April 22, 2014^{[33][34]}
 - Tizen 3.0 Milestones (M1): September 17, 2015^[35]
 - **Tizen 3.0 Public M2: January 18, 2017**^[36]
 - Tizen 3.0 Public M3: July 5, 2017^[37]
 - Tizen 3.0 Public M4: November 30, 2017^[38]
- Tizen 4.0: May 31, 2017
 - Tizen 4.0 Public M1: May 31, 2017^[39]
 - Tizen 4.0 Public M2: November 1, 2017^[40]
 - Tizen 4.0 Public M3: August 31, 2018^[41]
- Tizen 5.0: May 31, 2018
 - Tizen 5.0 Public M1: May 31, 2018^[42]
 - Tizen 5.0 Public M2: October 30, 2018^[43]
- Tizen 5.5: May 31, 2019
 - Tizen 5.5 Public M1: May 31, 2019^[44]
 - Tizen 5.5 Public M2: October 30, 2019^[45]
 - Tizen 5.5 Public M3: August 27, 2020^[46]
- Tizen 6.0: May 31, 2020
 - Tizen 6.0 Public M1: May 31, 2020^[47]
 - Tizen 6.0 Public M2: October 27, 2020^[48]
- Tizen 6.5: May 31, 2021
 - Tizen 6.5 Public M1: May 31, 2021^[49]
 - Tizen 6.5 Public M2: October 31, 2021^[50]
- Tizen 7.0: May 31, 2022

	(smartwatches and smart fridges)
Succeeded by	Wear OS (smartwatches) Android (smartphones)
Official website	tizen.org (https://tizen.org)



Tizen and the mobile software distributions it is related to

- Tizen 7.0 Public M1: May 31, 2022^[51]
- Tizen 7.0 Public M2: October 31, 2022^[52]
- Tizen 8.0: May 31, 2023
 - Tizen 8.0 Public M1: May 31, 2023^[53]
 - Tizen 8.0 Public M2: October 31, 2023^[1]

Compatible devices

Smartwatch

- [Samsung Galaxy Gear](#)
- [Samsung Gear S](#)
- [Samsung Gear S2](#)
- [Samsung Gear S3](#)
- [Samsung Gear 2](#)
- [Samsung Gear Fit 2](#)
- [Samsung Gear Fit 2 Pro](#)
- [Samsung Gear Sport](#)
- [Samsung Galaxy Watch](#)
- [Samsung Galaxy Watch Active](#)
- [Samsung Galaxy Watch Active 2](#)
- [Samsung Galaxy Watch 3](#)



Samsung Galaxy Watch running Tizen

Camera

- [Samsung NX200](#)
- [Samsung NX300](#)
- [Samsung NX1](#)



NX300 camera running Tizen

Smartphone

- [Samsung Z](#)
- [Samsung Z1](#)
- [Samsung Z2](#)
- [Samsung Z3](#)
- [Samsung Z4](#)

Television

- Samsung Smart TVs since 2015^[54]

Appliances

- Family Hub 3.0 Refrigerator^[55]

LED Wall controllers

- SBB-SNOWJ3U^[56]

Controversies

On April 3, 2017, *Vice* reported on its "Motherboard" website that Amihai Neiderman, an Israeli security expert, has found more than 40 zero-day vulnerabilities in Tizen's code, allowing hackers to remotely access a wide variety of current Samsung products running Tizen, such as Smart TVs and mobile phones.^[57] After the article was published, Samsung, whom Neiderman tried to contact months before, reached out to him to resolve the issues.^[57]

TizenRT

In December 2016, Samsung created TizenRT,^[58] a fork of NuttX, a real-time operating system (RTOS), for smart home appliances and IoT devices.

See also

- Comparison of mobile operating systems
- KaiOS
- Sailfish OS

References

- "Tizen 8.0 Public M2" (<https://docs.tizen.org/platform/release-notes/tizen-8-0-m2/>). *tizen.org*.
- Gartenberg, Chaim (2021-05-23). "Google's new Samsung smartwatch partnership looks a lot like giving up" (<https://www.theverge.com/2021/5/23/22448165/google-samsung-wearable-partnership-wear-os-tizen-merge-smartwatch>). *The Verge*. Retrieved 2024-04-30.
- Ricker, Thomas (2011-09-28). "MeeGo is dead: Resurrected as Tizen, the newest Linux-based open source OS" (<https://www.theverge.com/2011/9/28/2456253/meego-is-dead-resurrected-as-tizen-another-new-linux-based-open>). *The Verge*. Retrieved 2019-01-21.
- Robertson, Adi (2012-05-07). "Sprint becomes first North American carrier to join Tizen Association" (<https://www.theverge.com/2012/5/7/3005461/sprint-joins-tizen-association>). *The Verge*. Retrieved 2019-01-21.
- Best, Jo. "Tizen Linux heads for vehicles as car makers and tech firms form workgroup" (<https://www.zdnet.com/article/tizen-linux-heads-for-vehicles-as-car-makers-and-tech-firms-form-workgroup/>). *ZDNet*. Retrieved 2019-01-21.
- Byford, Sam (2013-02-25). "Samsung finally folding Bada OS into Tizen" (<https://www.theverge.com/2013/2/25/4026848/bada-and-tizen-to-merge>). *The Verge*. Retrieved 2019-01-21.
- Souppouris, Aaron (2013-01-03). "Samsung confirms it will launch multiple Tizen handsets this year" (<https://www.theverge.com/2013/1/3/3831064/samsung-multiple-tizen-linux-smartphone-launch-mwc-2013>). *The Verge*. Retrieved 2019-01-21.
- Brown, Eric (June 27, 2013). "World's first Tizen tablet?" (<https://web.archive.org/web/20130702052122/http://linuxgizmos.com/japanese-company-announces-first-tizen-tablet/>). *LinuxGizmos.com*. Archived from the original (<http://linuxgizmos.com/japanese-company-announces-first-tizen-tablet/>) on July 2, 2013. Retrieved February 23, 2014.
- Brown, Eric (25 October 2013). "First Tizen tablet ships to developers" (<https://web.archive.org/web/20131028013925/http://linuxgizmos.com/first-tizen-tablet-ships/>). *LinuxGizmos.com*. Archived from the original (<http://linuxgizmos.com/first-tizen-tablet-ships/>) on October 28, 2013. Retrieved February 23, 2014.
- Buckley, Sean (October 25, 2013). "First Tizen tablet launches in Japan, caters exclusively to developers" (<https://web.archive.org/web/20140125130050/http://www.engadget.com/2013/10/25/first-tizen-tablet-launches-in-japan/>). *Engadget*. Archived from the original (<https://www.engadget.com/2013/10/25/first-tizen-tablet-launches-in-japan/>) on January 25, 2014. Retrieved February 23, 2014.
- Savov, Vlad (2014-02-22). "Samsung drops Android for Tizen in new Gear 2 smartwatches" (<https://www.theverge.com/2014/2/22/5437150/samsung-drops-android-for-tizen-in-new-gear-2-smartwatches>). *The Verge*. Retrieved 2019-01-21.
- "Tizen:Common to Ship with Qt Integrated" (<http://www.tizenexperts.com/2014/05/tizen-common-ships-qt/>). *tizenexperts.com*. 14 May 2014.
- "Tizen - Qt Wiki" (<https://wiki.qt.io/Tizen>). *wiki.qt.io*.
- "Samsung Ushers in a New Era of Driving Experience with Samsung Connect Auto" (<http://www.samsungmobilepress.com/news/samsung-ushers-in-a-new-era-of-driving-experience-with-samsung-connect-auto>). February 21, 2016. Retrieved March 10, 2018.
- "Samsung announces .NET Core support and Visual Studio Tools for Tizen OS" (<https://mspoweruser.com/samsung-announces-net-core-support-and-visual-studio-tools-for-tizen-os/>). *MSPoweruser*. November 16, 2016.
- "Samsung's Tizen OS dominates global smart TV market" (<https://www.fiercevideo.com/video/samsung-s-tizen-os-dominates-global-smart-tv-market>). March 25, 2019. Retrieved August 23, 2019.
- Amadeo, Ron (2021-05-18). "Google, Samsung, and Fitbit team up to save Wear OS" (<https://arstechnica.com/gadgets/2021/05/google-samsung-and-fitbit-team-up-to-save-wear-os/>). *Ars Technica*. Retrieved 2021-05-19.
- "Google and Samsung team up to create a new OS named 'Wear' " (<https://samnext.com/google-samsung-team-up-to-create-a-new-wear-os/>). *SamNext*. 2021-05-18. Retrieved 2021-05-19.
- Welch, Chris (2021-05-18). "Google and Samsung are merging Wear OS and Tizen" (<https://www.theverge.com/2021/5/18/22440483/samsung-smartwatch-google-wearos-tizen-watch>). *The Verge*. Retrieved 2021-05-19.
- Adhikari, Sumit (2021-05-21). "Samsung TVs Will Continue To Use Tizen OS" (<https://www.androidheadlines.com/2021/05/samsung-tvs-will-continue-use-tizen-os.html>). *Android Headlines*. Retrieved 2021-06-15.
- Beguwalla, Esmail (10 January 2022). "Samsung shuts down Tizen app store" (<https://onlytech.com/samsung-shuts-down-tizen-app-store/>). *onlytech.com*. Retrieved 2022-04-21.
- "Samsung shuts down the Tizen app store" (https://www.gsmarena.com/samsung_shuts_down_the_tizen_app_store-news-52598.php). *GSMarena.com*. Retrieved 2022-04-21.
- "Samsung officially shuts down its Tizen app store" (<https://timesofindia.indiatimes.com/gadgets-news/samsung-officially-shuts-down-its-tizen-app-store/articleshow/88803791.cms>). *The Times of India*. 10 January 2022. Retrieved 2022-04-21.
- "Tizen 1.0 Release Notes" (<https://docs.tizen.org/platform/release-notes/tizen-1-0/>). Tizen.org.
- "Tizen 2.0 Release Notes" (<https://docs.tizen.org/platform/release-notes/tizen-2-0/>). Tizen.org.
- "Tizen 2.1 Release Notes" (<https://docs.tizen.org/platform/release-notes/tizen-2-1/>). Tizen.org.

27. "Tizen 2.2 Release Notes" (<https://docs.tizen.org/platform/release-notes/tizen-2-2/>). Tizen.org.
28. "Tizen 2.2.1 Release Notes" (<https://docs.tizen.org/platform/release-notes/tizen-2-2-1/>). Tizen.org.
29. "Tizen 2.3 Release Notes" (<https://docs.tizen.org/platform/release-notes/tizen-2-3/>). Tizen.org.
30. "Tizen 2.3.1 Release Notes" (<https://docs.tizen.org/platform/release-notes/tizen-2-3-1/>). Tizen.org.
31. "Tizen 2.3.2 Release Notes" (<https://docs.tizen.org/platform/release-notes/tizen-2-3-2/>). Tizen.org.
32. "Tizen 2.4 Release Notes" (<https://docs.tizen.org/platform/release-notes/tizen-2-4/>). Tizen.org.
33. "Tizen IVI 3.0 Milestones" (<https://docs.tizen.org/platform/release-notes/tizen-ivi-3-0-milestones/>). Tizen.org.
34. "Tizen Common milestones" (<https://docs.tizen.org/platform/release-notes/tizen-common-milestones/>). Tizen.org.
35. "Tizen 3.0 Milestones" (<https://docs.tizen.org/platform/release-notes/tizen-3-0-milestones/>). Tizen.org.
36. "Tizen 3.0 Public M2" (<https://docs.tizen.org/platform/release-notes/tizen-3-0-m2/>). Tizen.org.
37. "Tizen 3.0 Public M3" (<https://docs.tizen.org/platform/release-notes/tizen-3-0-m3/>). Tizen.org.
38. "Tizen 3.0 Public M4" (<https://docs.tizen.org/platform/release-notes/tizen-3-0-m4/>). Tizen.org.
39. "Tizen 4.0 Public M1" (<https://docs.tizen.org/platform/release-notes/tizen-4-0-m1/>). Tizen.org.
40. "Tizen 4.0 Public M2" (<https://docs.tizen.org/platform/release-notes/tizen-4-0-m2/>). Tizen.org.
41. "Tizen 4.0 Public M3" (<https://docs.tizen.org/platform/release-notes/tizen-4-0-m3/>). Tizen.org.
42. "Tizen 5.0 Public M1" (<https://docs.tizen.org/platform/release-notes/tizen-5-0-m1/>). Tizen.org.
43. "Tizen 5.0 Public M2" (<https://docs.tizen.org/platform/release-notes/tizen-5-0-m2/>). Tizen.org.
44. "Tizen 5.5 Public M1" (<https://docs.tizen.org/platform/release-notes/tizen-5-5-m1/>). Tizen.org.
45. "Tizen 5.5 Public M2" (<https://docs.tizen.org/platform/release-notes/tizen-5-5-m2/>). Tizen.org.
46. "Tizen 5.5 Public M3" (<https://docs.tizen.org/platform/release-notes/tizen-5-5-m3/>). Tizen.org.
47. "Tizen 6.0 Public M1" (<https://docs.tizen.org/platform/release-notes/tizen-6-0-m1/>). Tizen.org.
48. "Tizen 6.0 Public M2" (<https://docs.tizen.org/platform/release-notes/tizen-6-0-m2/>). Tizen.org.
49. "Tizen 6.5 Public M1" (<https://docs.tizen.org/platform/release-notes/tizen-6-5-m1/>). Tizen.org.
50. "Tizen 6.5 Public M2" (<https://docs.tizen.org/platform/release-notes/tizen-6-5-m2/>). Tizen.org.
51. "Tizen 7.0 Public M1" (<https://docs.tizen.org/platform/release-notes/tizen-7-0-m1/>). Tizen.org.
52. "Tizen 7.0 Public M2" (<https://docs.tizen.org/platform/release-notes/tizen-7-0-m2/>). Tizen.org.
53. "Tizen 8.0 Public M1" (<https://docs.tizen.org/platform/release-notes/tizen-8-0-m1/>). Tizen.org.
54. Silva, Robert (31 December 2020). "Samsung's Tizen Smart TV Operating System" (<https://www.lifewire.com/tizen-operating-system-1847192>). *lifewire.com*. Retrieved 21 February 2022.
55. "Side-by-Side Refrigerator with Family Hub (RS27T5561SR) | Samsung US" (<https://www.samsung.com/us/home-appliances/refrigerators/side-by-side/26-7-cu-ft-large-capacity-side-by-side-refrigerator-with-touch-screen-family-hub--in-stainless-steel-rs27t5561sr-a/>). *Samsung Electronics America*. Retrieved 2020-06-25.
56. "accessories | SBB-SNOWJ3U | Samsung Display Solutions" (<https://displaysolutions.samsung.com/led-signage/accessories/detail/1341/SBB-SNOWJ3U>). *displaysolutions.samsung.com*. Retrieved 2019-10-31.
57. Zetter, Kim (April 3, 2017). "Samsung's Android Replacement Is a Hacker's Dream" (https://www.vice.com/en_us/article/xy9p7n/samsung-tizen-operating-system-bugs-vulnerabilities). *Motherboard*. Retrieved 2020-06-30.
58. TizenRT repo (<https://github.com/Samsung/TizenRT>)

External links

- [Official website \(<https://www.tizen.org/>\)](https://www.tizen.org/) 

Retrieved from "<https://en.wikipedia.org/w/index.php?title=Tizen&oldid=1229618554>"