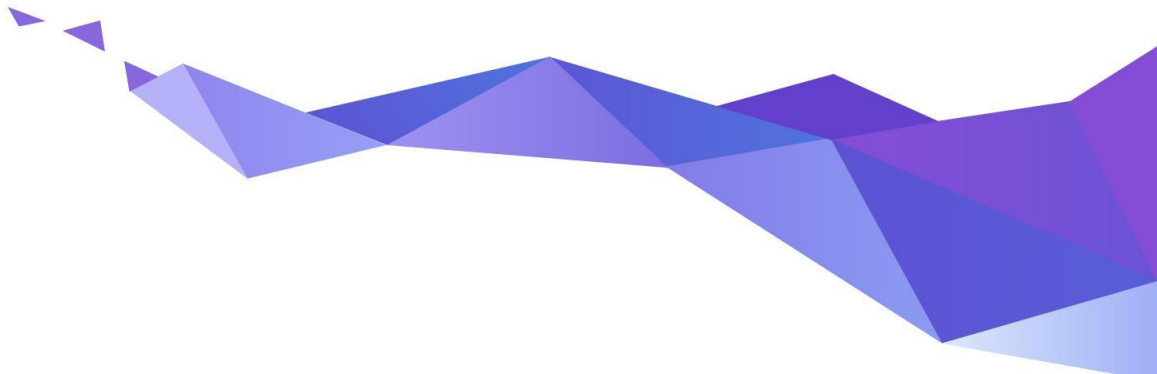


State of Zephyr Project

A proven RTOS ecosystem, by developers, for developers

Kate Stewart,
Zephyr Project Director



Features overview

- **Lightweight kernel & supporting drivers and services**
- **Portable, secure, power-efficient**
- **Highly connected**
 - Bluetooth 5.0 & BLE
 - Wi-Fi, Ethernet, CANbus, ...
 - IoT protocols: CoAP, LwM2M, MQTT, OpenThread, ...
 - USB & USB-C
- **Complete developer environment**
 - Toolchain and HAL management
 - Logging, tracing, debugging
 - Emulation/Simulation
 - Testing framework



Zephyr in the wild... 8K+ Forks!

About

Primary Git Repository for the Zephyr Project. Zephyr is a new generation, scalable, optimized, secure RTOS for multiple hardware architectures.

docs.zephyrproject.org

iot real-time microcontroller
embedded bluetooth bluetooth-le
mcu rtos zephyr zephyros
embedded-c zephyr-rtos

Readme
Apache-2.0 license
Code of conduct
Contributing
Security policy
Activity
Custom properties
13.6k stars
414 watching
8.2k forks

Report repository

Releases 135

Zephyr 4.2.1 Latest
last month

Vestas Wind Systems A/S

Vestas

3 followers <http://www.vestas.com>

Popular repositories

zephyr Public
Forked from [zephyrproject-rtos/zephyr](https://github.com/zephyrproject-rtos/zephyr)

Primary Git Repository for the Zephyr Project. Zephyr is a new generation, scalable, optimized, secure RTOS for multiple hardware architectures.

C 2 1

Source: <https://github.com/vestas-wind-systems>

Source: <https://github.com/zephyrproject-rtos/zephyr>

Operating System	First Commit	Controls Commits	Declared License	Total Contributors	Contributors in last month	Total Commits	Commits in last month
Zephyr	2014/11	community	Apache-2.0	2955	421	126,450	2,598
nuttX	2007/?	community	BSD-variant → Apache-2.0	647	30	59,473	174
RT-Thread	2009/06	community	GPL-2.0 → Apache-2.0	773	26	17,535	132
RIOT	2010/09	community	LGPL-2.1	381	20	48,734	140
Tizen RT	2015/04	Samsung	BSD-variant → Apache-2.0	214	10	11,902	33
Ariel-OS	2020/08	community	Apache-2.0 OR MIT	26	8	3,557	202
myNewt	2015/06	community	Apache-2.0	137	6	11,336	28
SeL4	2014/07	community	GPLv2 AND BSD-2-Clause	115	6	4,789	26
FreeRTOS	2004/07	Richard Barry	GPL-2.0 w/ FreeRTOS → MIT	223	4	3,617	3
Contiki-NG	2017/10	community	BSD-3-Clause	218	1	18,091	1
ThreadX	2020/05	MSFT → community	MSL → MIT	25	0	254	0

Data extracted on 2025-11-05 from github

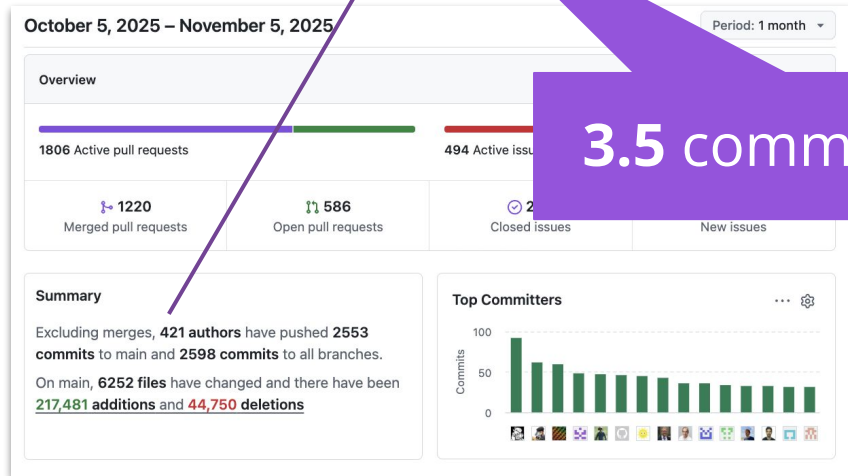
Methodology: Sample from Github

<https://github.com/zephyrproject-rtos/zephyr>

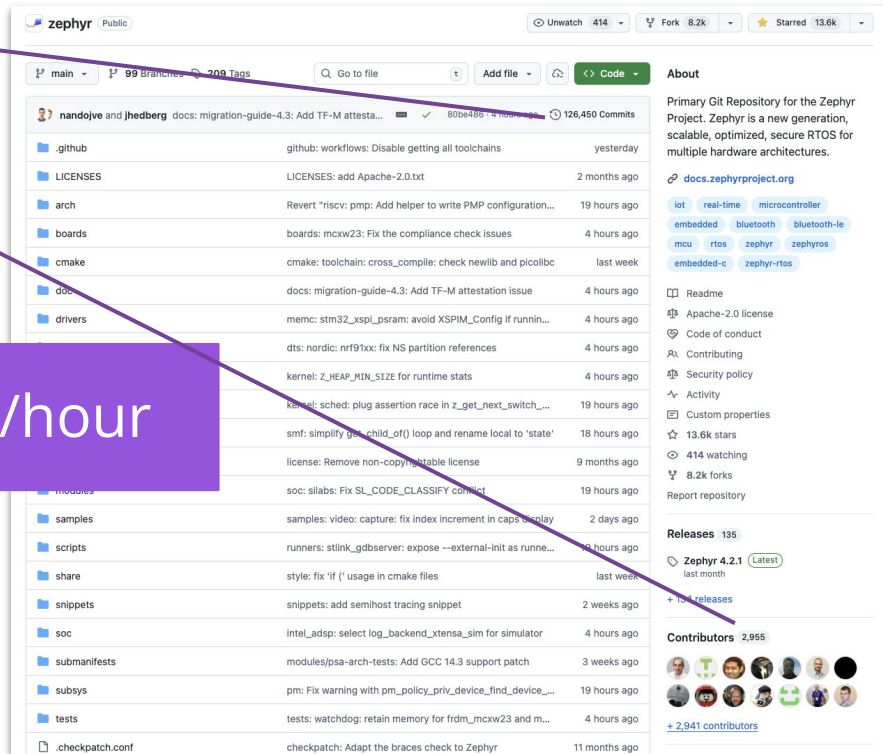
- Total commits: 126,450
- Total contributors: 2,955

<https://github.com/zephyrproject-rtos/zephyr/pulse/monthly>

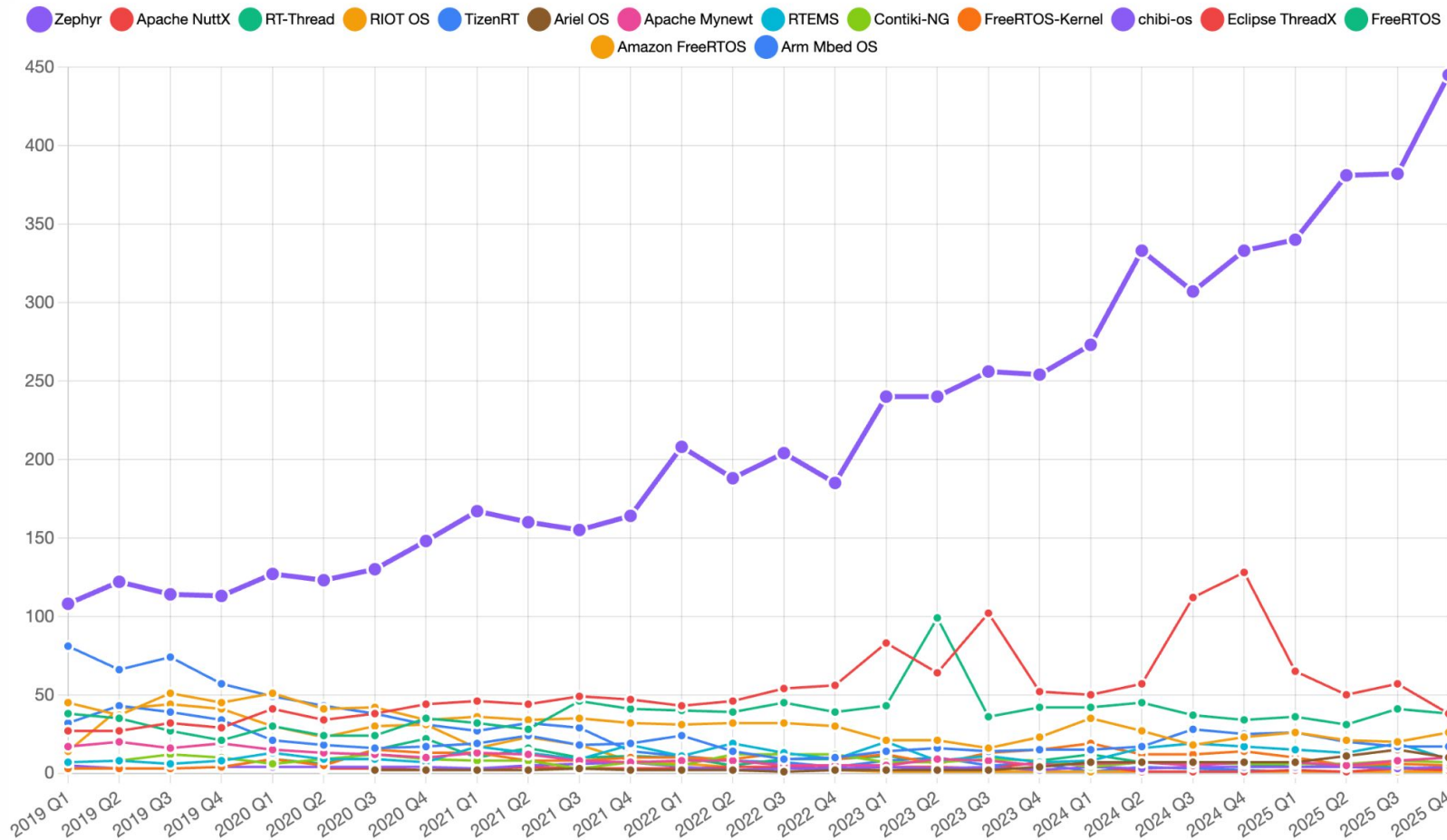
- Monthly contributors: 421
- Monthly commits: 2,598



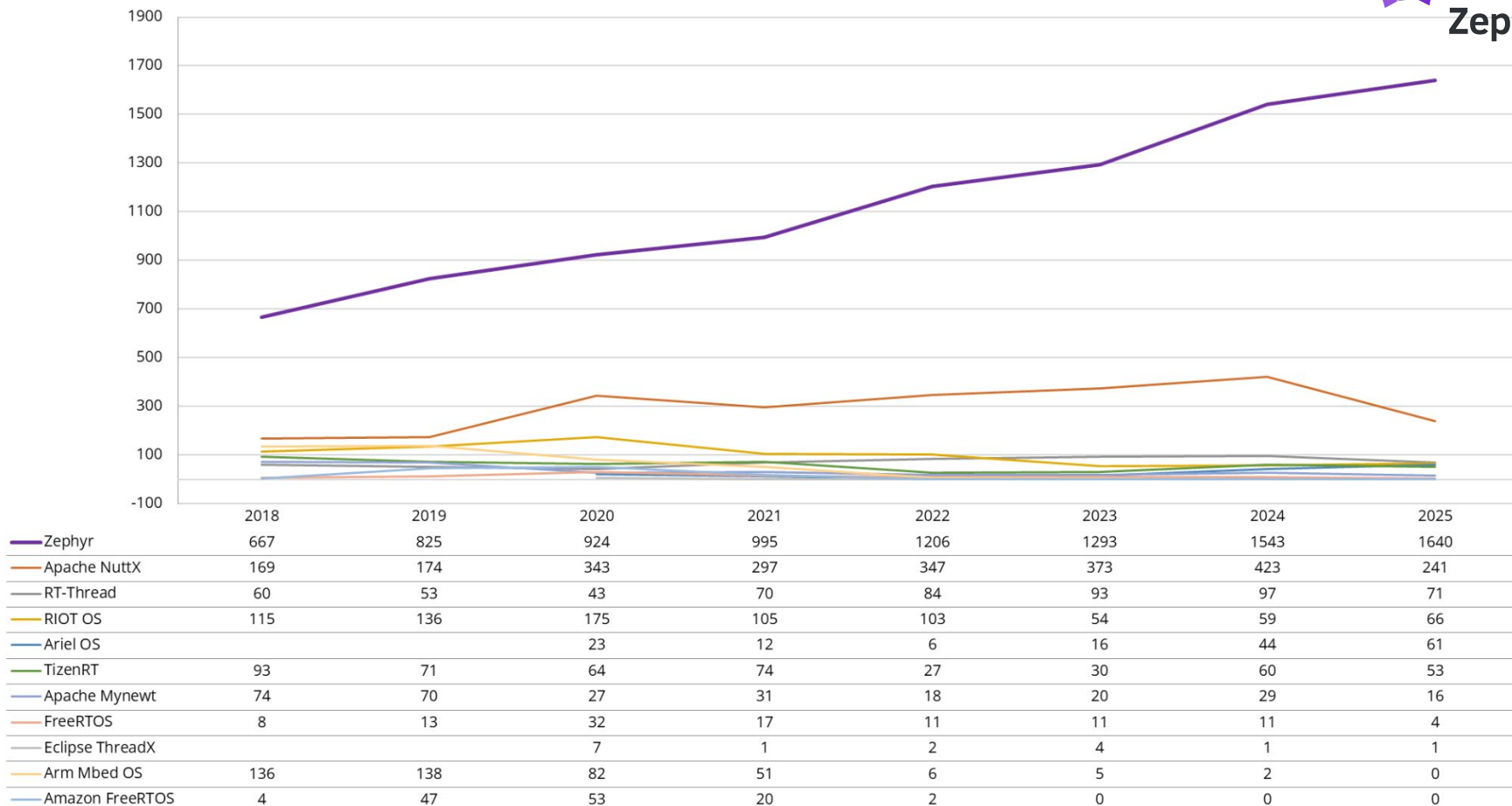
3.5 commits/hour



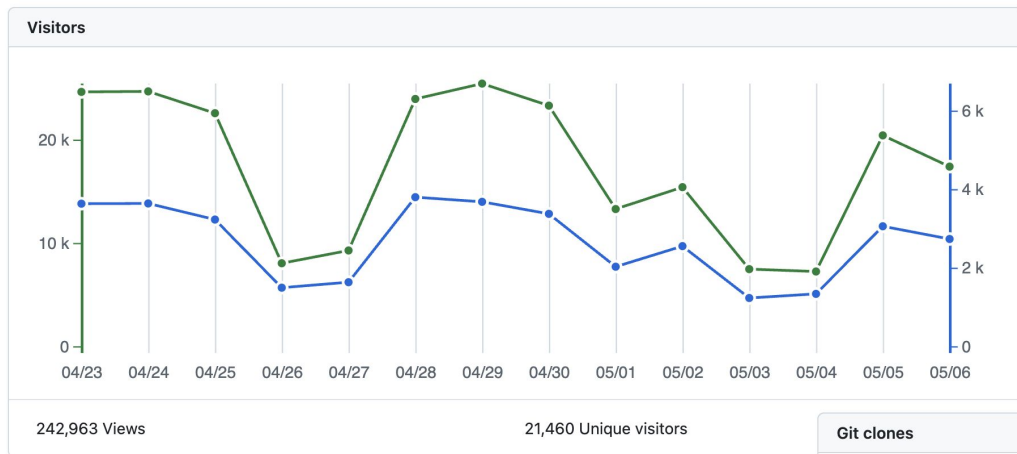
Unique Contributors per Month



Average Number of Commits per Month



GitHub Clones & Unique Visitors



2025-04-23 → 2025-05-06

~1183 unique clones per day
~1532 unique visitors per day



900+ supported boards... and growing



**Arduino Portenta
H7**



ESP32



Sipeed HiFive1



nRF9160 DK



STM32F746G Disco



M5StickC PLUS



TDK RoboKit 1



BBC micro:bit v2



Blues Swan



**Arduino Nano 33
BLE**



Intel UP Squared



**Dragino LSN50
LoRA Sensor Node**



Quicklogic Qomu



Raspberry Pi Pico



Renesas RX130



NXP i.MX8MP EVK



**Adafruit Feather
M0 LoRa**

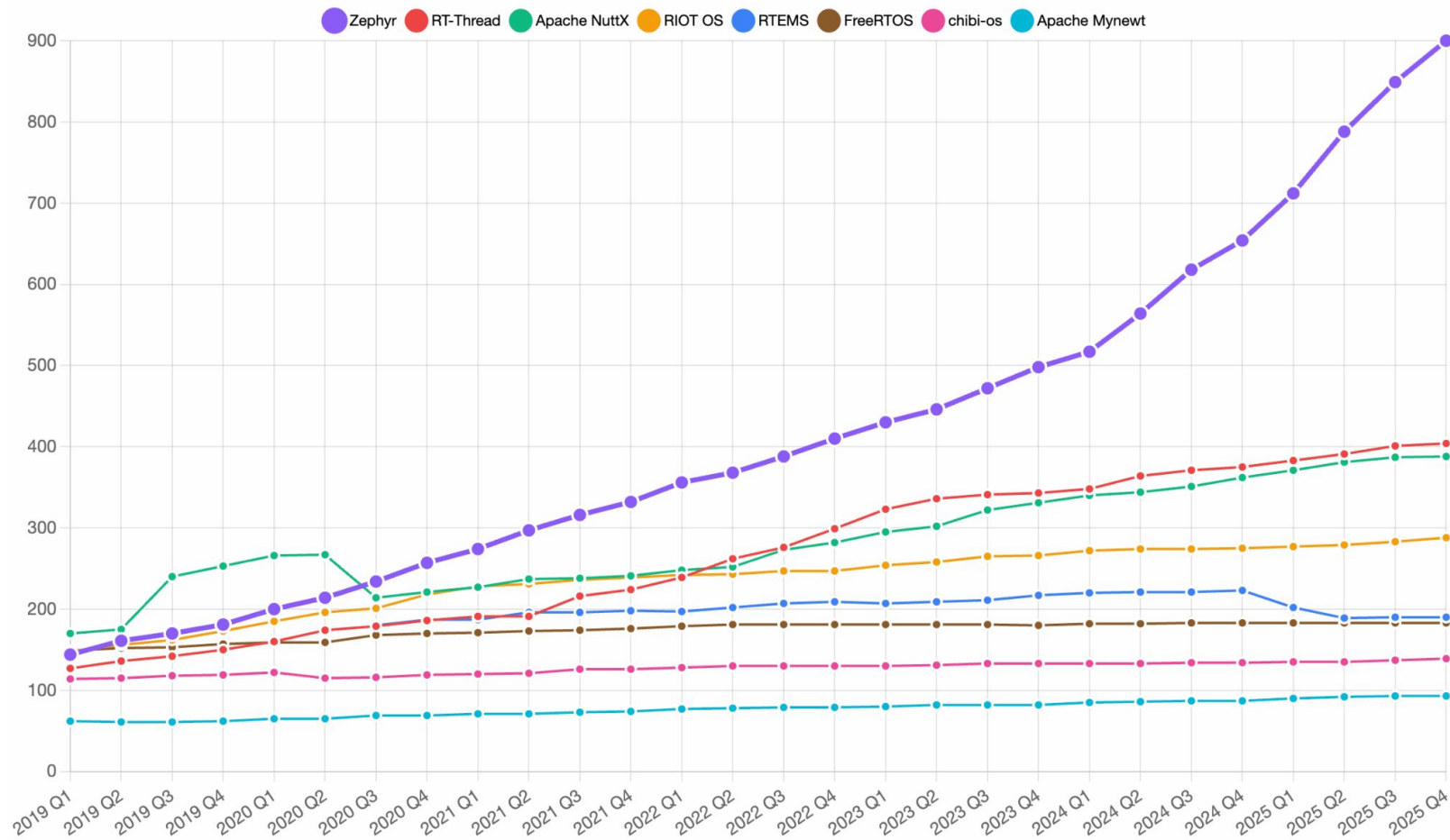


u-blox EVK-NINA-B3



docs.zephyrproject.org/latest/boards/

Supported Boards

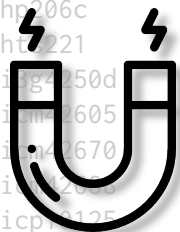


Note: Only the operating systems for which number of supported boards could be easily computed automatically are included on this chart.

280+ Sensors Already Integrated

adt7420
adx1345
adx1362
adx1372
ak8975
amg88xx
ams_as5600
ams_iAQcore
apds9960
bma280
bmc150_magn
bme280
bme680
bmg160
bmi160
bmi270
bmm150
bmp388
bq274xx
ccs811

dht
dps310
ds18b20
ens
esp8266
fdc2x
fxos8600
fxos8601
grove
grow_r502a
hmc5883l
hp206c
ht221
i2c-g4500
i2c-g4505
i2c-g4670
i2c-g4720
icp125
iis2dh
iis2dlpc



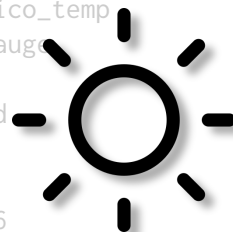
iis2iclx
iis2mdc
iis3dhhc
ina219
ina230
isl2935
ism330dhc
ite_tach_it8xxx2
ite_vcmp_it8xxx2
lis2dh
lis2ds12
lis2dw12
lis2n
lis3n
lm75
lm77
lps22
lps22hh
lps25hb
lsm303dlhc_magn



lsm6ds0
lsm6dsl
lsm6dsx
lsm9ds0
lsm9ds0_mfd
max1705
max17262
max30101
max31875
max44009
max6675
mchp_tach_xec
mcp9804
mcp9808
mcu_lacmp
mhz19
mpr121
mpu6050
mpu9250
ms5607
ms5837



nrf5
nuvoton_adc_cmp_npcx
nuvoton_tach_npcx
nxp_kin
opt3001
pcnt_encoder3
pms7003
qdec_mcp
qdec_nrfx
qdec_sam
qdec_stm32
rpi_pico_temp
sbs_gauge
sgp40
sht3xd
sht4x
shtcx
si7006
si7055
si7060



si7210
sm3511t
stm32_temp
stm32_vbat
stmesc
stts751
sx9500
th02
ti_hdc
ti_hdc20xx
tmp007
tmp108
tmp112
tmp116
vcnl4040
vl53l0x
wsen_hids
wsen_itds



github.com/zephyrproject-rtos/zephyr/tree/main/drivers/sensor

Supported Hardware Architectures



Cortex-M, Cortex-R
& Cortex-A

x86 & x86_64



32 & 64 bit



Xtensa

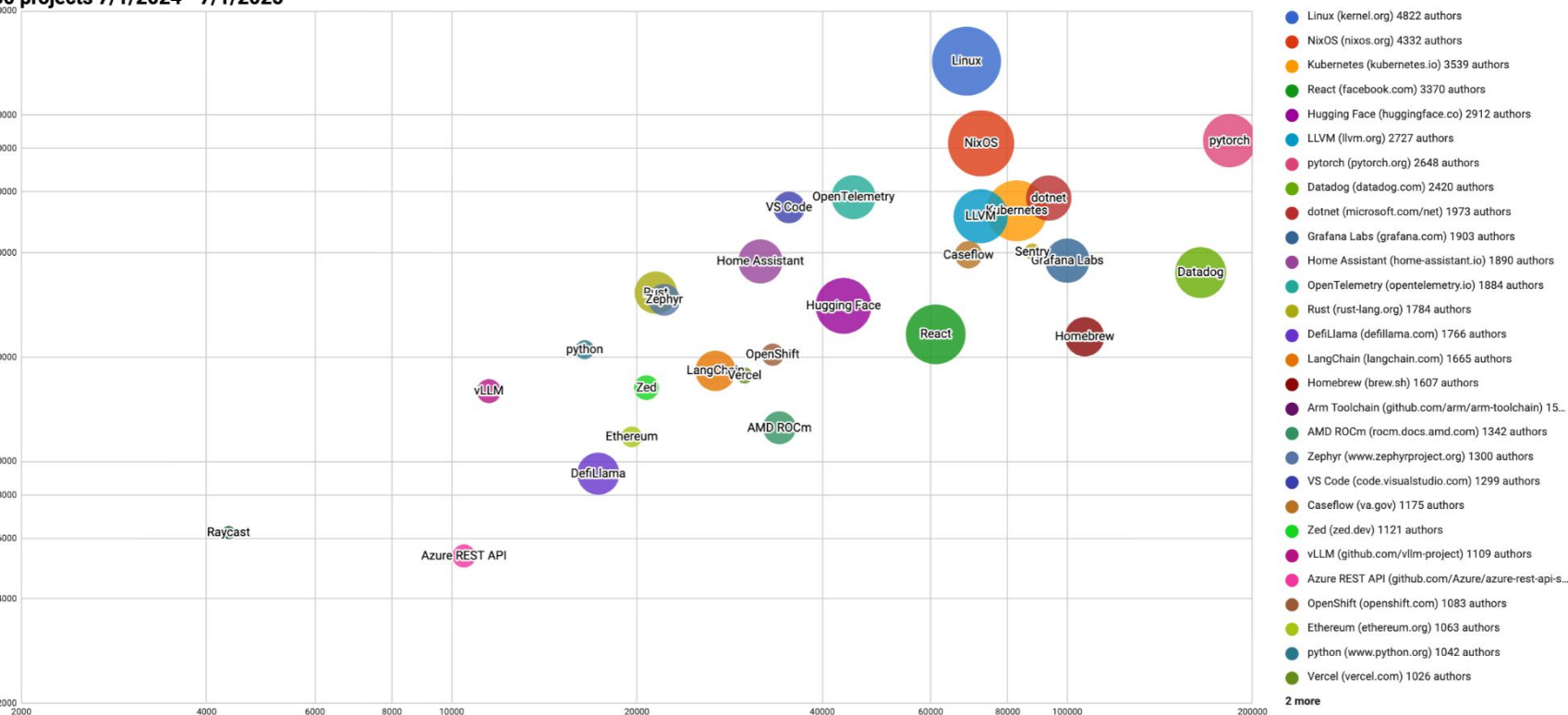


docs.zephyrproject.org/latest/hardware/index.html#hardware-support

OSS Project Velocity: Zephyr #19!



10 projects 7/1/2024 - 7/1/2025



Small Sample of Products Running Zephyr Today



**Oticon More
Hearing Aid**



**Lildog & Lilcat
Pet Tracker**



Livestock Tracker



Moto Watch 100



**Samsung Galaxy
Ring**



Proglove



Adhoc Smart Waste



**Google
Chromebook**



Framework laptop



Keeb.io BDN9



Hati-ACE



**Blackhole™
PCIe AI Accelerator**



**BLiXT solid state
circuit breaker**



**Aethero Deimos
Satellite**



PHYTEC Distancer



**Laird Connectivity
sensors & gateways**



**BeST pump
monitoring**

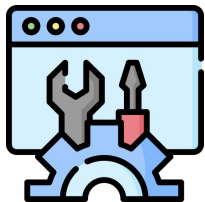


**Vestas Wind
Turbines**



zephyrproject.org/products-running-zephyr

Vibrant Ecosystem



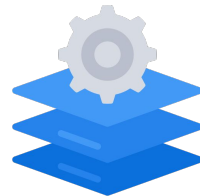
Development Tools



Governing Board

Technical Steering
Committee

Contributors



**Applications &
Middlewares**



**Training &
Consulting**



**Firmwares &
Libraries**

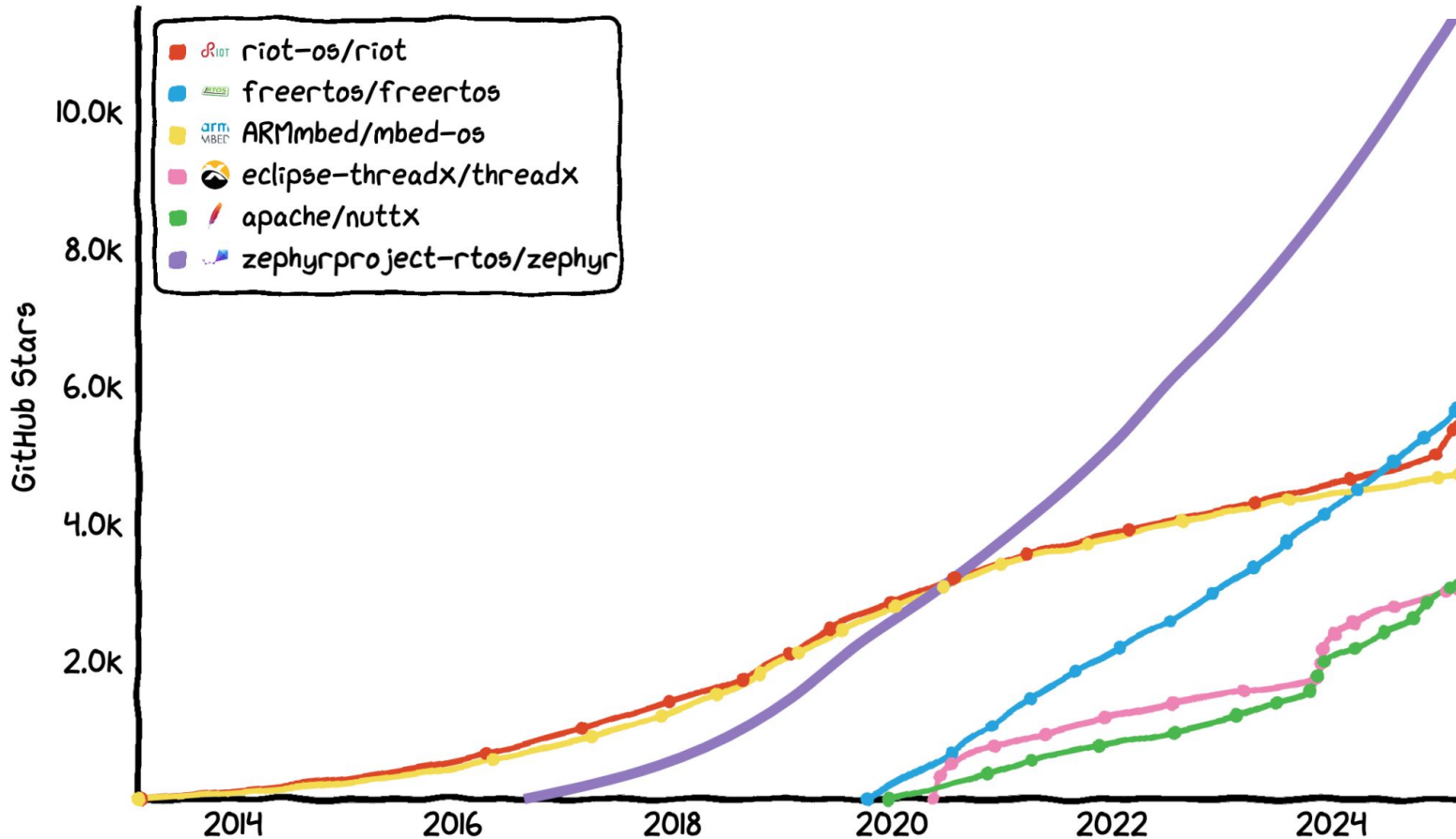
Star History



Starred 13.6k



Zephyr®



Ecosystem // Developer Tools



Development Tools



Training & Consulting



Firmwares & Libraries



Applications & Middlewares

IDE



Compilers



Emulation / Simulation



Ecosystem // Training & Consulting



Development Tools



Training & Consulting



Firmwares & Libraries



Applications & Middlewares

Training



Services & Consulting



Ecosystem // Firmwares & Libraries



Development Tools



Training & Consulting

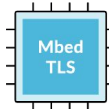


Firmwares & Libraries



Applications & Middlewares

Security



TrustedFirmware.org

TinyML



emlearn

Language runtimes



Others



Ecosystem // Apps & Middlewares



Development Tools



Training & Consulting



Firmwares & Libraries



Applications & Middlewares

Remote Management



Graphical Interfaces



Robotics



Zephyr 4.3 (Nov. 2025) – What's new?



 **CPU load monitoring & dynamic frequency scaling**

 **Instrumentation** subsystem

 **OCPP 1.6** support

 **Twister display harness** for automated testing of displays/GUIs

 **Developer Experience improvements** – Several new tools to help with debugging/troubleshooting ([DT doctor](#), [traceconfig](#))

Zephyr Project: Platinum Members



Zephyr Project: Silver Members



Getting started – Important links

- Check out the official [Getting Started Guide](#)
- Dig into the hundreds of **code samples**
- Check the catalog of 100s of available Devicetree bindings
 - No driver for your HW? Chances are a similar driver already exists and writing one is not as hard or daunting as you would think!
- Reach out to the community on **Discord**

Zephyr Participation Information



zephyrproject.org



github.com/zephyrproject-rtos

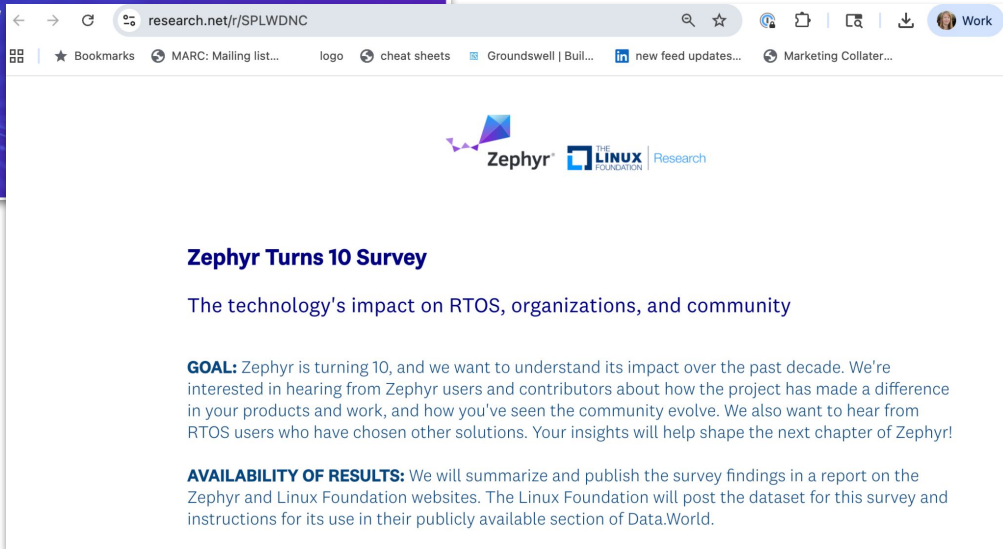
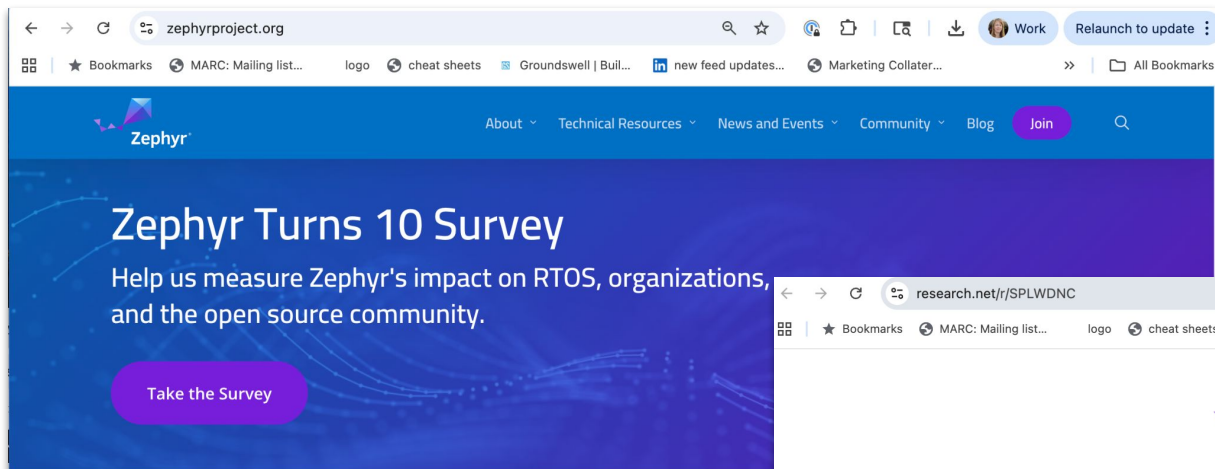


lists.zephyrproject.org



chat.zephyrproject.org

Help Zephyr figure out where to focus next!





zephyrproject.org

