



BUILD • LAUNCH • SOAR

Community Update

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px4
autopilot

**DEVELOPER
SUMMIT 2026**



THE LINUX FOUNDATION
OPEN SOURCE SUMMIT



**Embedded Linux
Conference**

NORTH AMERICA



whoami

Ramón Roche

General Manager

Dronecode / Linux Foundation

- 13+ years working with drones
- Community Leader
- (Still) an individual contributor
- PX4 Autopilot / Pixhawk Maintainer



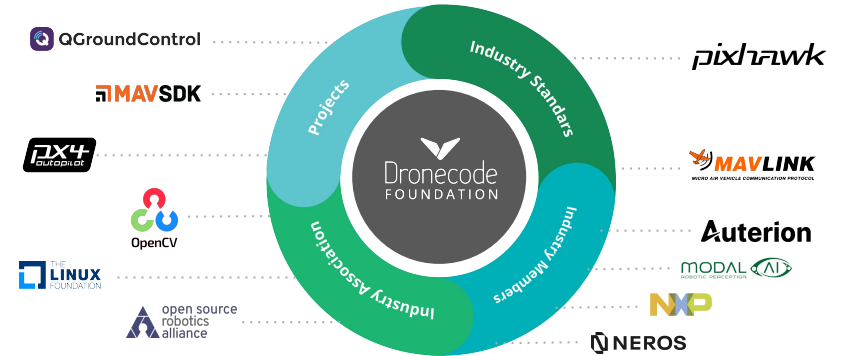
The Open Source UAV Ecosystem

We are setting the standards in the drone industry with open-source

The Dronecode Ecosystem

- **Open source** aerial robotics ecosystem
- **Global community** of 15,000+ contributors
- **Broad hardware, sensor and vehicle support** across air, land, and sea platforms
- **Vendor neutral governance** under the Linux Foundation
- **Permissively licensed** - BSD and Apache 2.0
- **Production ready** with industry-setting standards used by over 1 million drones worldwide

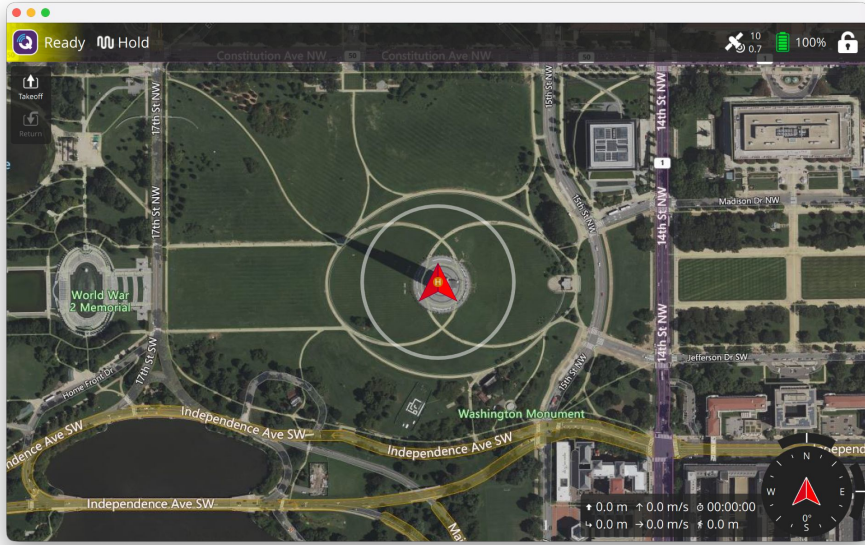
The open ecosystem





Lifting the Industry

Open Source Autonomy Firmware
and Compute Platforms



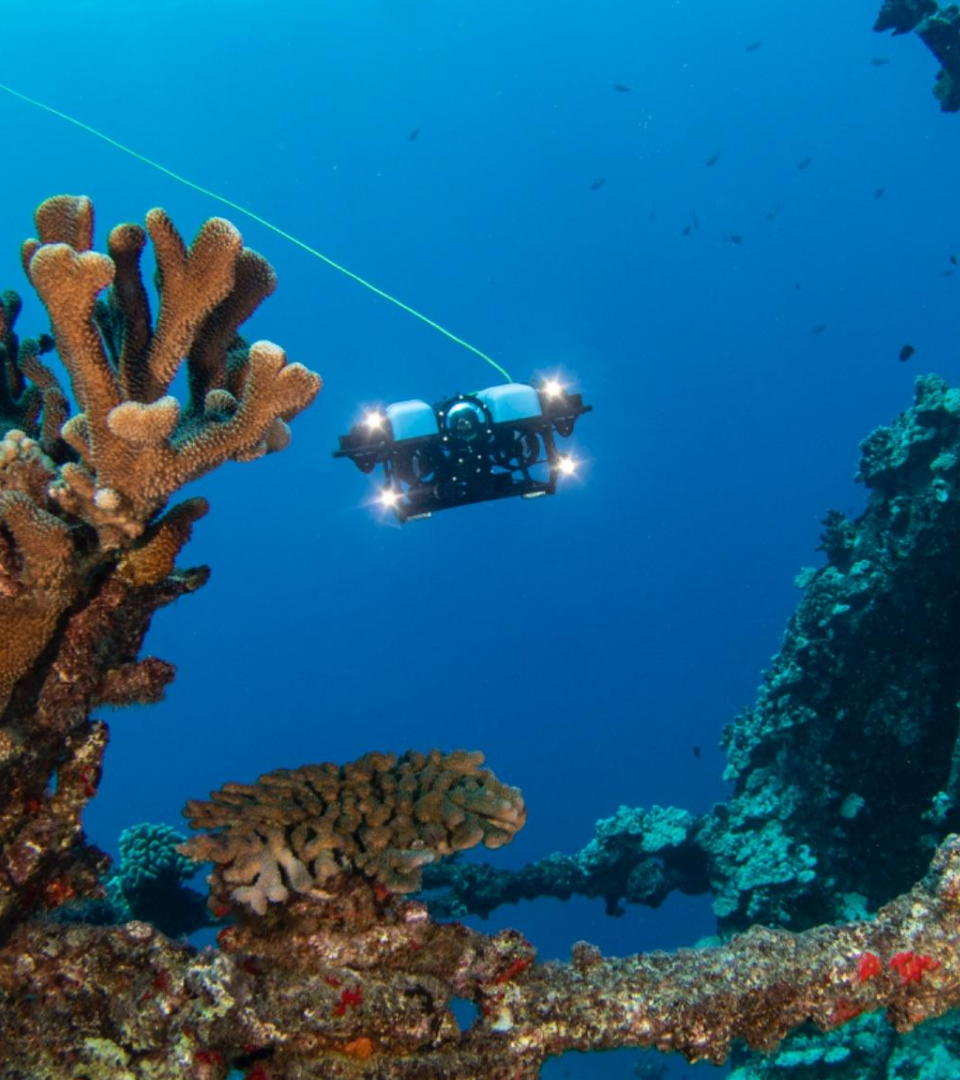
Lifting the Industry

Open Source Mission Planning and Telemetry



Lifting the Industry

Open Source Development
Platforms



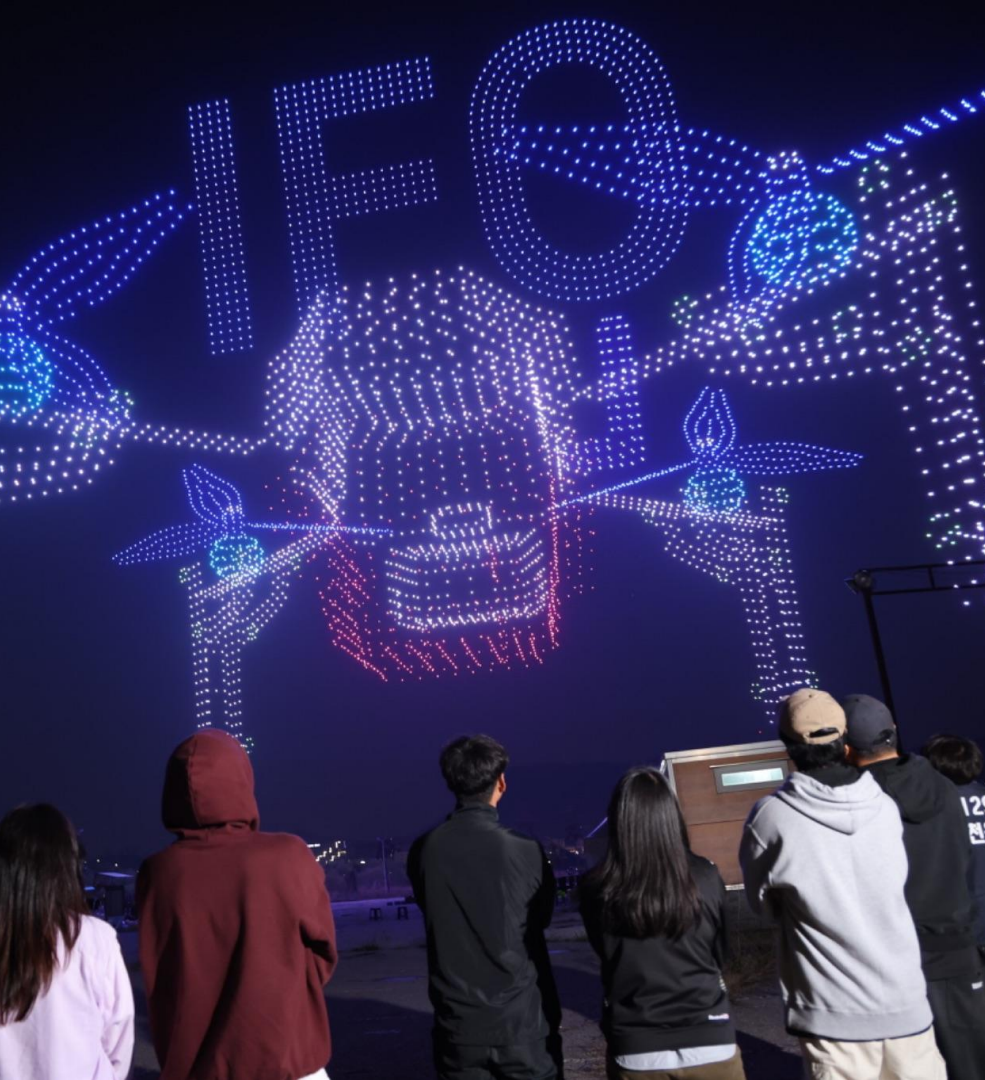
Lifting the Industry

Limitless vehicle type support from air to ground to under surface



Lifting the Industry

Highly reliable VTOLs of all sizes



Lifting the Industry

Guinness record breaking drone swarms



Lifting the Industry

Battlefield tested drone swarms

Putting things into perspective

Lifetime Achievements

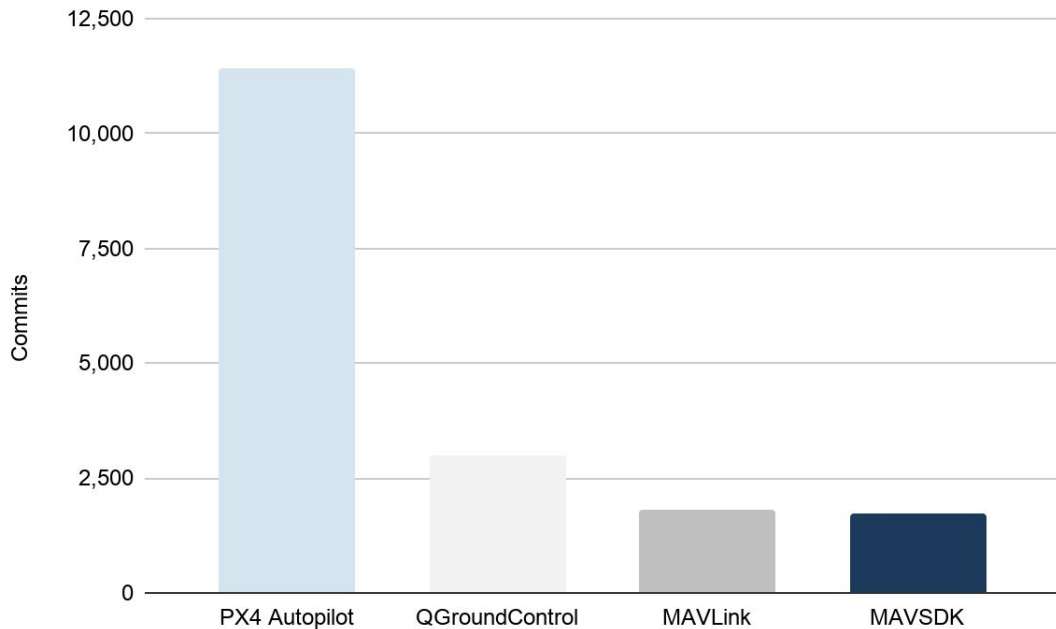
- \$800M Project Value
- +60M Total Lines of Code
- +15K Total Unique Contributors



Data Provided by



Contribution Distribution by Project (2025)

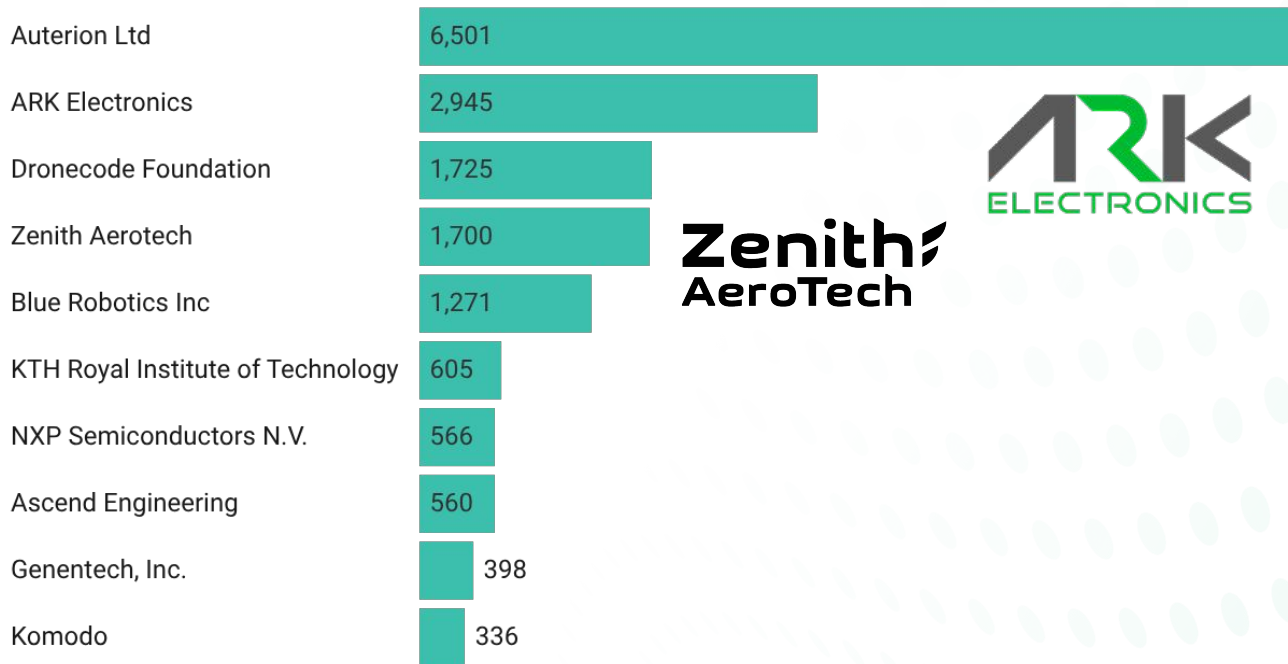


Numbers from 2025

- +17,900 Commits
- +3,300 PRs submitted
- +2,800 PRs merged
- +650 Contributors
- +99 Organizations



Top Contributing Organizations (2025)



Auterion



**Zenith
AeroTech**

Top Contributing Developers (2025)

Rank	Contributor	Contributions	Primary Project	Organization
1	Hamish Willee	3,688	PX4 / MAVLink	Auterion
2	Julian Oes	3,117	MAVSDK / PX4	Unaffiliated
3	Don Gagne	2,943	QGC	Unaffiliated
4	Holden Ramsey	2,859	QGC	Ascend Engineering
5	Jacob Dahl	2,584	PX4	ARK Electronics
6	Ramon Roche	1,705	PX4	Dronecode Foundation
7	Silvan Fuhrer	1,393	PX4	Auterion
8	Beat Küng	991	PX4	Auterion
9	Matthias Grob	956	PX4	Auterion
10	Mahima Yoga	747	PX4	Auterion

2025 Annual Report: Year In Review

Read the full report for contribution metrics, project information, membership roster, and event reports



About the Unaffiliated. Own Your Contributions

Note on Unaffiliated contributions

- 7,273 Contributions (28%)
- Some contributors have no data attached to their profile.

"Unaffiliated" contributions aren't credited to your org.

Visit openprofile.dev to update your profile →


Data Provided by



What you can control:

- Organization affiliation (claim your employer)
- Connect GitHub to link your contributions
- Connect LinkedIn to auto-populate work history
- Add all your email addresses used for commits
- Set profile visibility (public/private)


Own Your Contributions

LF Individual Dashboard Tools ? 



PROFILE PROGRESS Complete ▶


- Home
- Profile
- LF Events
- Meetings
- ▶ Purchases
- ▶ Settings
- ▶ Help


Are you missing any technical contributions? [REVIEW EMAIL ADDRESSES](#) ✕

About Me ⓘ 

I am an open-source enthusiast and maintainer. I learned a lot from the open-source community, and I love how collaboration and knowledge sharing happened through open-source.

Technical Contributions ⓘ  






Contribution History Less  More Year: 2023 ▼

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Mon											
Wed											
Fri											


Rita John ⓘ

Open Source Developer at Intel Corporation










 Pune , India

Profile Visibility: Public ⓘ

Public profile URL 

Badges ⓘ

-  
-  
-  
- 
- 
- 

Own Your Contributions

LFX Individual Dashboard Tools ?

PROFILE PROGRESS Complete ▶

- Home
- Profile
- LF Events
- Meetings
- ▶ Purchases
- ▼ Settings
 - Basic Information
 - Connected Accounts
 - Password
 - Email Management
 - My Work History**
 - Profile Visibility
- ▶ Help

MY WORK HISTORY

Ensure your open source contributions are automatically affiliated by connecting your LinkedIn profile or manually populating your work history.

Organization **Start** **End**

I am presently working at this company [Delete](#)

[Cancel](#) [Add Position](#) [Save](#)

LinkedIn

Work history may be populated based on your profile. Please connect and sync LinkedIn


[Sync with LinkedIn](#)

Own Your Contributions

Claim your contributions...

Link your GitHub and LinkedIn accounts to show off your open source accomplishments, including maintainer badges.

[Link GitHub Account](#) [Set up later...](#)



Progress bar:

- Name & Email
- Claim Code Contributions
- Link Work History

Own Your Contributions

Setup your account today

OLFX | Insights



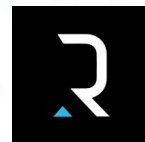
Member Community

These are the member companies that play an integral role in shaping the future of the industry.

Platinum

Auterion

Silver



New Membership Benefits Launching TODAY

Member Services Directory

- Member product / service directory on dronecode.org.
- Members submit products / services with link-back to their pages.
- A trusted source of information for our community.

Consulting + Flight Testing

- Flight Testing on your hardware
 - Testing pre-releases
 - Testing feature branches at the PR-level
- 15h of consulting to help you ship faster
- Priority PR review

Flight Testing + Consulting Benefits

Platinum + Gold Tiers

- Priority + speed flight testing
- Feature-branch flight testing
- Custom test cards
- Priority PR review
- Plus everything in silver

Silver Tier

- Pre-release flight testing
- 15 hrs / yr private consulting



Ascend
Engineering

Dronecode Flight Test & Consulting Team

The team at **Ascend Engineering** (Chicago) runs flight testing for the PX4 community. They validate pull requests and release candidates across multiple airframes and hardware configurations, providing flight logs and feedback to developers.



Ascend
Engineering



Membership Benefits

Platinum

Exclusive Benefits

Technical Steering Committee
Seat (TSC)

Direct Seat on the Board of
Directors

Includes all benefits from Gold

\$150,000

Gold

Featured Benefits

Elect a board representative

Priority Pull Request Review

Priority Flight Testing

Includes all benefits from Silver

\$50,000

Silver

Featured Benefits

Elect a board representative

Join & Create Workgroups

Access to Pixhawk Documents

15h Consulting

PX4 Flight Testing

**\$5,000 -
\$20,000**

*based on organization size

Funding Distribution

Where the money comes from

- Member dues, the majority of our budget
- Event sponsorships from the Dev Summit, regional meetups, and partner events
- Registrations from the Dev Summit and workshops

What we spend in

- Leadership and coordination: staff, governance, working groups, release shepherding
- Events, developer programs, regional meetups
- Test flight services: contracted flight validation against every PX4 release
- Operations: infrastructure, websites, build and CI services, dev tooling
- Legal and trademark, including IP stewardship
- Marketing, business development, and G&A

The board sets the budget and approves where every dollar goes. Member companies hold those seats.

Board Directors 2026



Dr. Lorenz Meier
Chairman



Ryan Johnston
Silver Director



Andrew Wilkins
Silver Director



Robb Cheek
Silver Director



Daniel Agar
TSC



Technical Steering Committee 2026



Member
Representatives

Project
Maintainers

Auterion +Future Platinum Members

Let's talk about PX4 Autopilot Releases



Let's talk about PX4 versions

We don't strictly follow semantic versioning for historical reasons.

v1.[major].[minor]

Examples

- v1.16.2
- v1.17.0

First Stable Release

v1.0.0

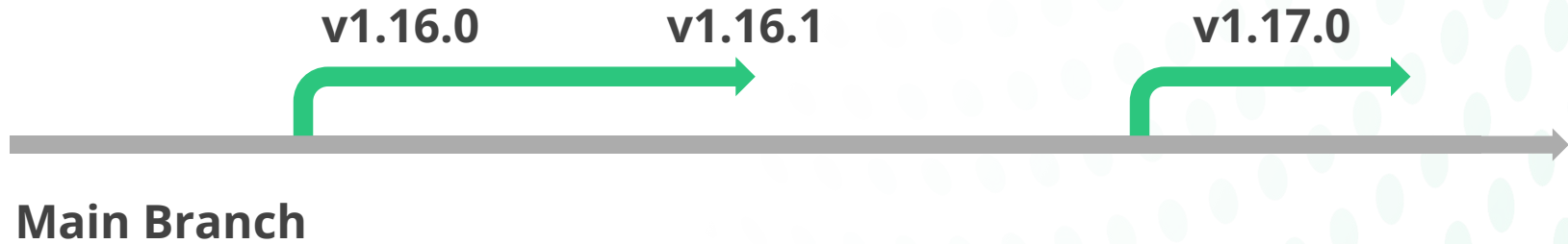
Current Stable Release

v1.17.0

Total Stable Releases

18

How do releases work in PX4?



How do releases work in PX4?

Current Release **v1.17.0**


- Bugfixes only
- Minor release bump (v1.17.1-2)

Next Release **v1.18.0**

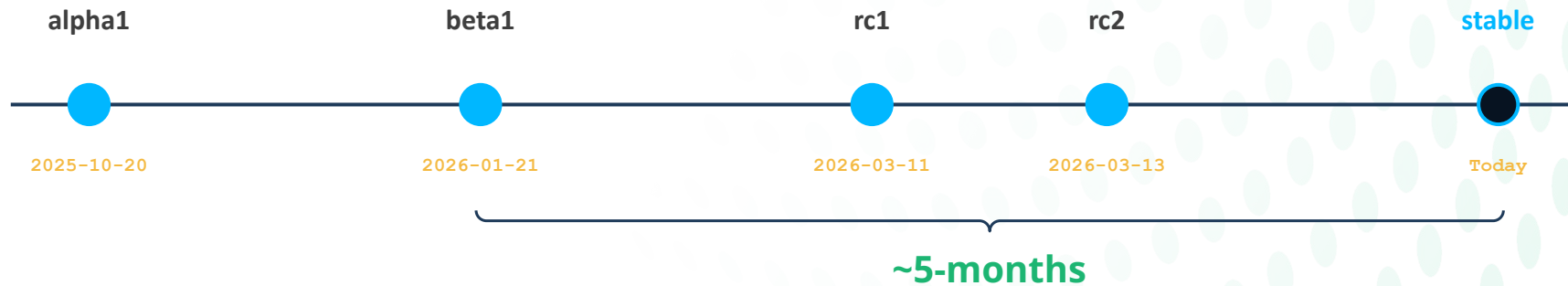
- Starts with an early alpha as soon as v1.17.0 is released
- We create a release branch
``release/1.18``
- Fixes only branch. Not new features. Not new hardware.
- Flight tested rigorously by actual humans.
- beta1, rc1, rc2... → stable release

But what happens in the main branch then?

Upcoming Release **v1.18.0**

- All PRs merged to main become part of v1.18.0
- Starts with an early alpha today
- We create a release branch
``release/1.18``
- Fixes only branch. Flight Tested
-  We repeat the cycle

Stable Release Timeline



github.com/orgs/PX4/projects/45

By Status · PX4 v1.17 Release

By Status / PX4 v1.17 Release

Type to search

PX4 v1.17 Release

Add status update

Insights

Workflows 3

By Status

By patch version

New view

Filter by keyword or by field

View

In Progress 2

This is actively being worked on

- PX4-Autopilot #26271
[v1.17 Release Candidate] - Flight Testing & Flight Issues (log archive)
- PX4-Autopilot #27225
docs(releases): draft v1.17.0 release notes

Blockers 0

Done 59

This has been completed

- PX4-Autopilot #25658
[BACKPORT 1.16] Correction of routing issue of mavlink parameter messages to CAN nodes
- PX4-Autopilot #25657
[BACKPORT 1.16] serial: nuttx: revert tcdrain back to fsync
- PX4-Autopilot #25698
[BACKPORT 1.16] platform: serial: add bytesAvailable() function
- PX4-Autopilot #25546
[BACKPORT 1.16] cuav_7-nano: use new sensors (#25098)
- PX4-Autopilot #25726

Push to Next

- PX4-Autopilot #25658
[Bug] Arming De Mode
- PX4-Autopilot #25657
[Bug] v1.17.0 - A mode
- PX4-Autopilot #25698
fix(ekf2): remove limiting
- PX4-Autopilot #25546
fix(sagetechnology): decoder against
- PX4-Autopilot #25726
fix(mavlink): handle against smlink

github.com/PX4/PX4-Autopilot/issues/26271

PX4 v1.17 Release Issue #26271 · PX4/PX4-Autopilot

Code Issues 991 Pull requests 473 Agents Actions Projects Security and quality 29 Insights Settings

[v1.17 Release Candidate] - Flight Testing & Flight Issues (log archive) #26271

Edit New issue

Open

mrpollo opened on Jan 14 · edited by mrpollo Edits Member

! About

💡 For the upcoming v1.17 release, we are asking the Community for flight tests. This issue will be used for keeping track of all the tests from the Community.

If you're unsure about upgrading, please read the preliminary release notes on the PX4 docs. Pay close attention to the Upgrade Guide before deciding if v1.16 is right for you.

- [v1.17 Release Notes](#)

? Why we need flight testing

🌍 Thousands of people around the world depend on the stable release of PX4.

👏 Before every major release, as much testing as possible is needed to ensure that our release actually works!

😄 Simply said, **more testing = better release**

👉 We would like to encourage every community member to join us in improving PX4!

Assignees: No one - [Assign yourself](#)

Assign to Agent

Labels: No labels

Type: No type

Projects: PX4 v1.17 Release Status: In Progress

Milestone

Dronecode Flight Test & Consulting Team

- Testing from alpha1 to rc2
- +100 flight logs
- Quadcopter
- Fixed-Wing
- Rover



**Ascend
Engineering**

Release Highlights

PX4 v1.17.0

- Experimental [MC Neural Network Control](#) mode and the on-device [TensorFlow Lite Micro](#) integration.
- New multicopter [Altitude Cruise](#) mode. Vehicle keeps tilt, heading angle, and altitude.
- [Fixed Wing Takeoff](#) keeps climbing to a set height and then enters Hold mode.
- Fixed-wing and rover control via the [PX4 ROS 2 Control Interface](#) (FwLateralLongitudinal, RoverSetpointTypes).
- Experimental [Zenoh](#) middleware maturing toward rmw_zenoh compatibility.

Cool new features coming soon in PX4

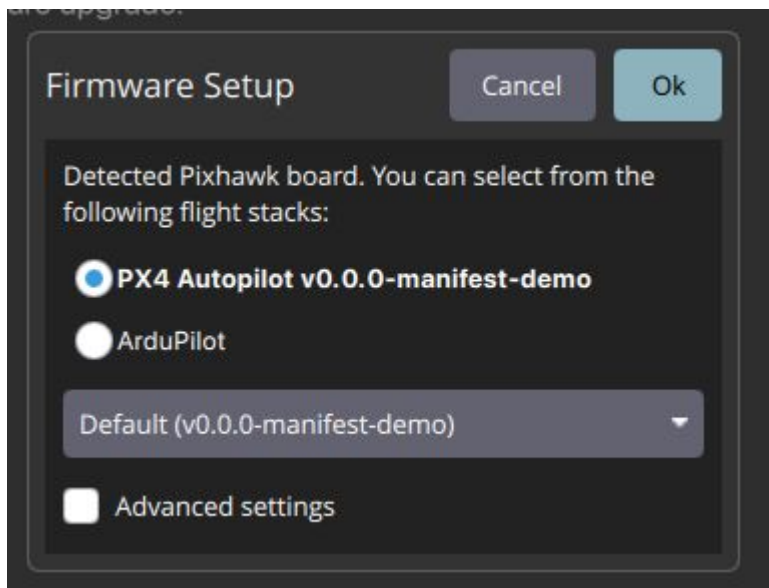
What's coming in v1.18.0?

- Firmware Manifest
- MAVLink Signing
- SPDX SBOM
- SIH SITL default simulator
- SITL *.deb packages
- New Hardware
- Many more...

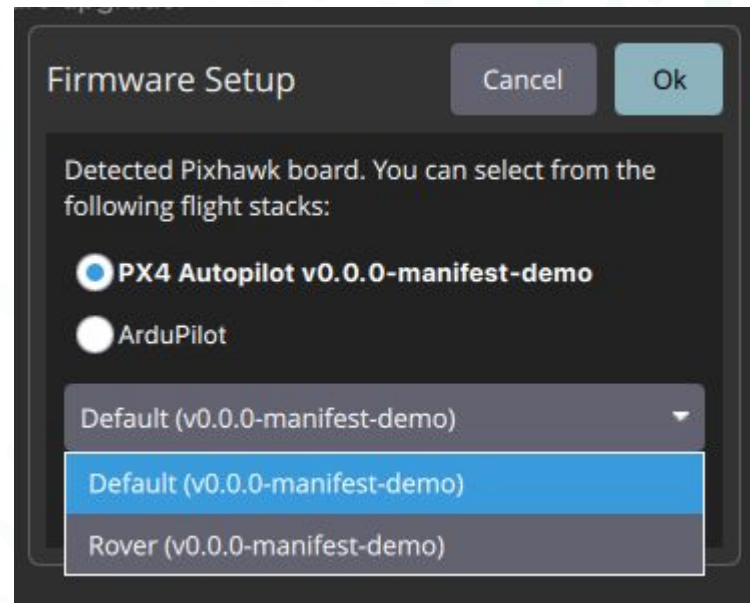


New: Firmware Manifest | QGroundControl + PX4

Installing PX4 via QGC

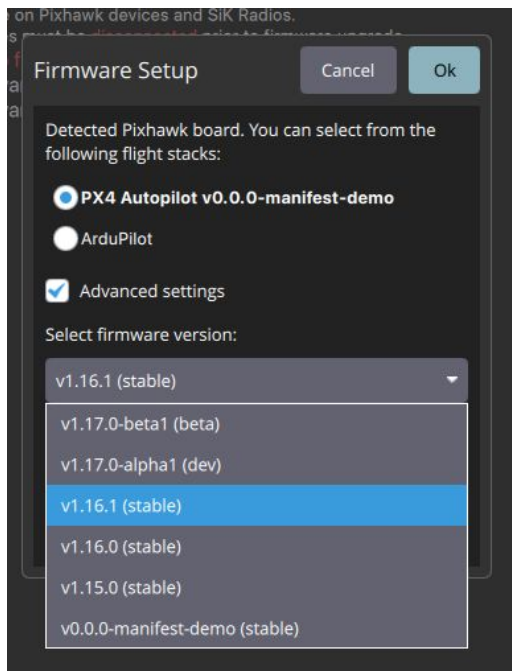


Install Build Variant Options

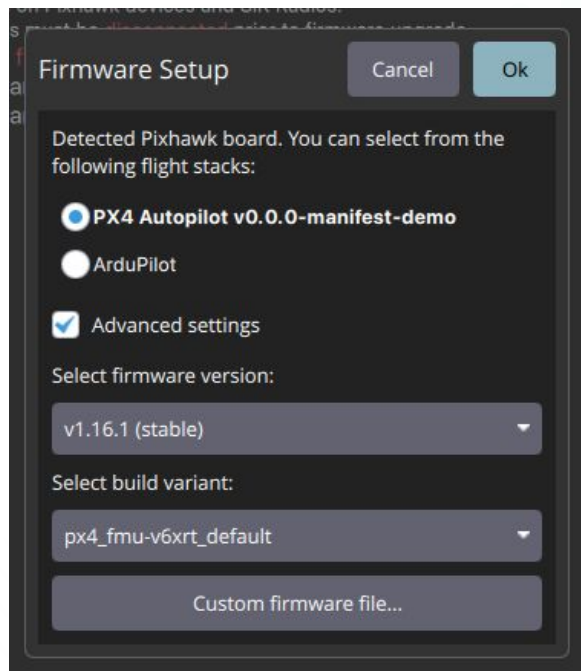


New: Firmware Manifest | QGroundControl + PX4

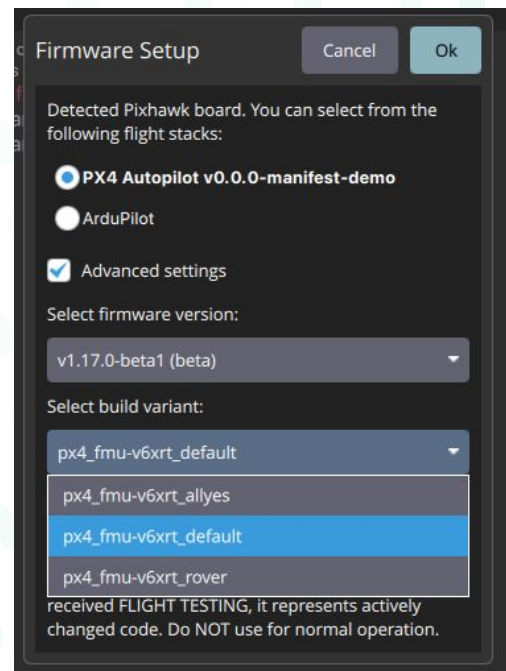
Install older versions



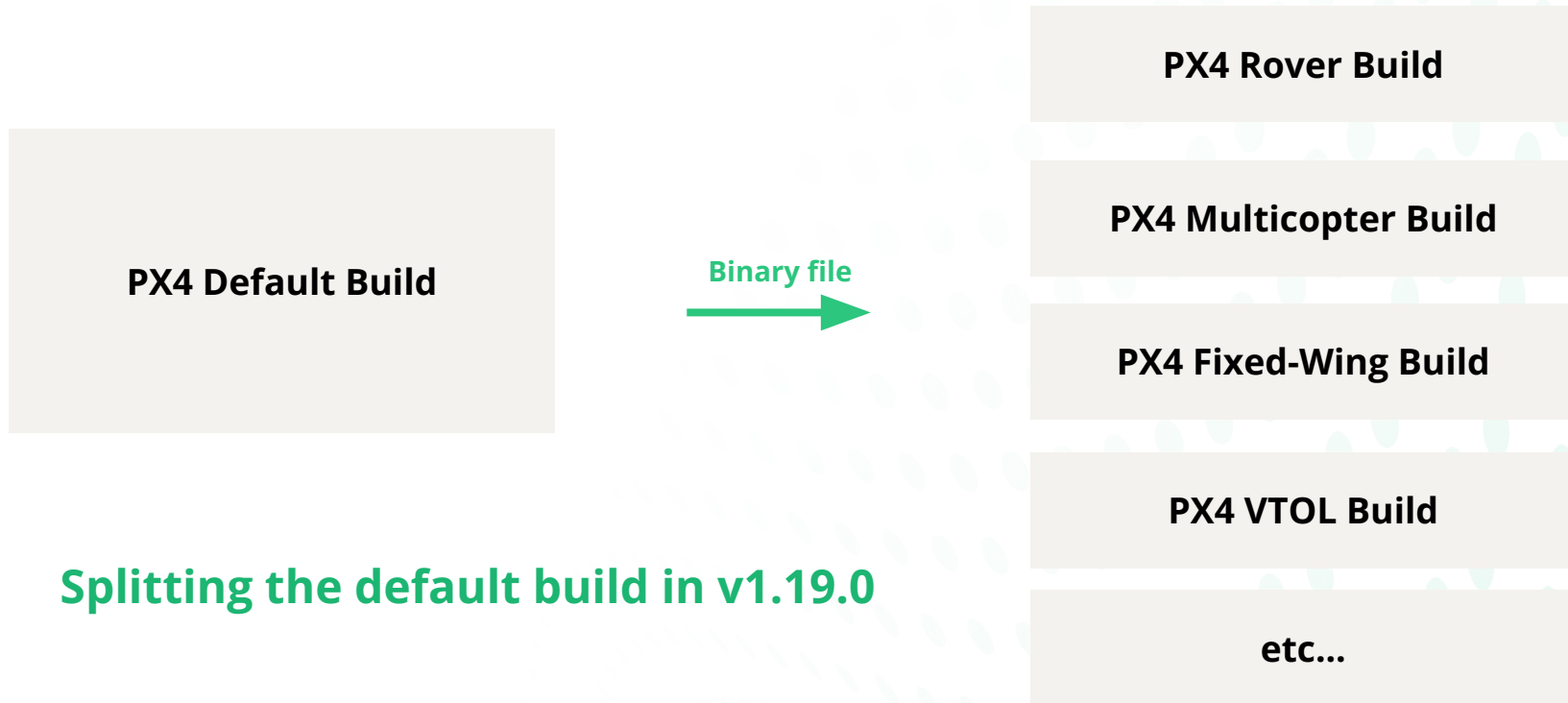
Select version



Select variant



New: Firmware Manifest | Why does this matter?



Splitting the default build in v1.19.0

Pre-packaged SITL

```
$ docker run --rm -it -p 14550:14550/udp px4io/px4-sitl:latest
```

~5 sec

to QGC connected

~100 MB

container image (SIH)

0

build steps

Two SITL paths. Two Debian packages.

Default: Gazebo

- GUI with 3D rendering
- Physics via gz-physics
- Multiple gigabytes worth of dependencies
- Custom plugins, custom sensors, custom environments and models
- Large Gazebo community

Package Size

- 30 mb (~2gb-10gb dependency chain install)

New: SIH

- Headless
- Internal Physics (C++ module, uORB enbaled)
- No dependencies
- Modify C++ source, tune SIH_* params, no custom environments
- New PX4 module

Package Size

- 10 mb (no dependencies)

When to use which?

Default: Gazebo

✓ Full featured simulation with 3D rendering, custom worlds, camera/lidar sensors, or rich sensor ecosystem

New: SIH

✓ Fast headless iteration, controls research, zero dependency setup

PX4 Simulation

Find out more about SIH vs
Gazebo



PX4 Hawkeye

WHAT IT IS

Live SITL + ULog replay + multi-drone swarms

FEATURES

- Live SITL: parses MAVLink HIL_STATE_QUATERNION
- ULog replay: scrub, mark, dead-reckon
- Multi-drone: up to 16 vehicles, ghost overlays
- CUSUM takeoff alignment, Pearson correlation tracking
- Cameras: chase, FPV, free-fly
- HUDs: Console (full telemetry) or Tactical (radar + gimbal)

STACK

Built on

Raylib + MAVLink

Language

C / C++

License

BSD-3-Clause

Platforms

macOS · Linux · Windows

Distribution

Single binary

Dependencies

None at runtime

Plugins

No plugin model

PX4 Hawkeye

PX4 SITL CONTAINER

docker run px4io/px4-sitl

PX4 + SIH physics + MAVLink out

~100 MB · ~5 sec to ready

MAVLink stream → UDP 14550

PX4 ULOG

my-flight.ulg

Previously recorded flight log

~1 MB to ~100 GB

UDP



Binary file



HAWKEYE

./hawkeye

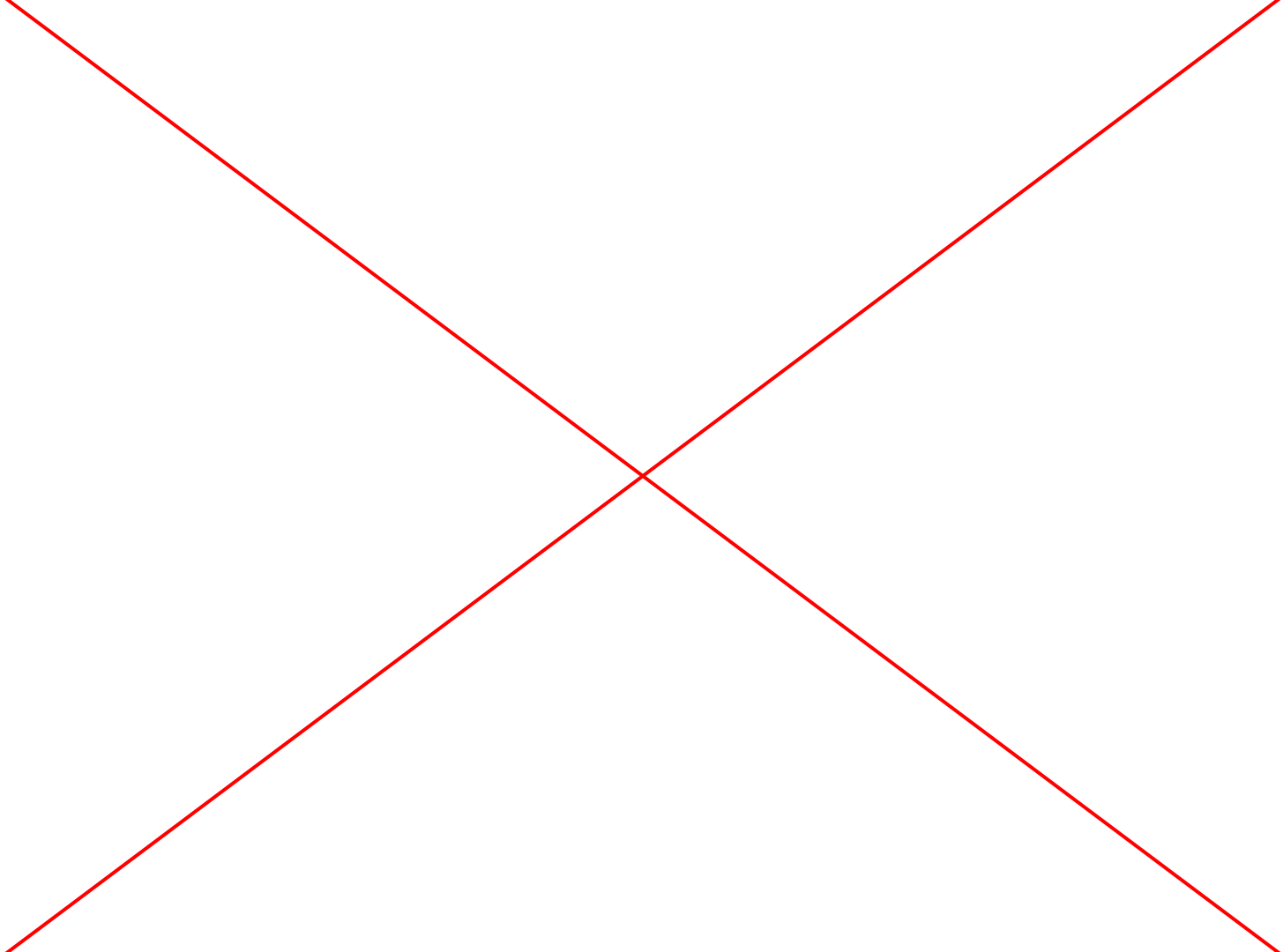
Listens on UDP. Renders 3D scene.

Single binary · no install

./hawkeye --replay my-flight.ulg

Renders 3D scene.

Single binary · no install



PX4 Hawkeye

Project docs and source





 **MAVLINK**
MICRO AIR VEHICLE COMMUNICATION PROTOCOL



MAVLink-M: the defense-shaped extension MAVLink doesn't cover

- Military standard message set
- New dialect on top of common
- Full interoperability with all civilian systems
- Messages for target sets, ESAD / payloads
- Initial messages support common Drone Dominance use case

Interoperability for Military Use Cases

```
<message id="53000" name="TARGET_SET_COORD">
  <description>Defines a circular target set area in WGS84. A target set
  <field type="uint64_t" name="time_usec" units="us">Timestamp (UNIX
  <field type="uint32_t" name="target_set_id" units="us">Unique identif
  <field type="char[50]" name="target_set_name" units="us">Human-readable
  <field type="int32_t" name="lat" units="degE7">Centroid lati
  <field type="int32_t" name="lon" units="degE7">Centroid long
  <field type="float" name="alt" units="m">Centroid altit
  <field type="float" name="radius" units="m">Radius of the
  <field type="uint64_t" name="time_start" units="us">Area validity
  <field type="uint64_t" name="time_end" units="us">Area validity
</message>
```

MAVLink-M: the defense-shaped extension MAVLink doesn't cover

PROPOSAL

Targeting and Engagement

- Target sets and target areas (circular and polygonal)
- Individual target tracking with kinematics and classification
- Fire mission orders with effector assignment and expected impact
- Splash correction feedback for accuracy refinement
- Target handover between systems, with identification media
- Battle damage assessment

Munition safety and arming

- ESAD telemetry: arming, munition, and ignition states
- Fault flags and software identity
- Challenge-response arming command, in-band

Remote weapon systems

- RWS pose: mounting offset, orientation, accuracy
- RWS state: arming status, weapon designation
- Frame-aware mounting for multi-platform integration

MAVLink-M Workgroup

Action Items

- Scan to Join the mailing list
- Let's schedule the next meeting
- Next Meeting via Zoom

[Direct link to mailing list](#)





THE LINUX FOUNDATION OPEN SOURCE SUMMIT



EUROPE

Code. Community. Collaboration.

7-9 OCTOBER 2026
PRAGUE, CZECHIA

#OSSummit

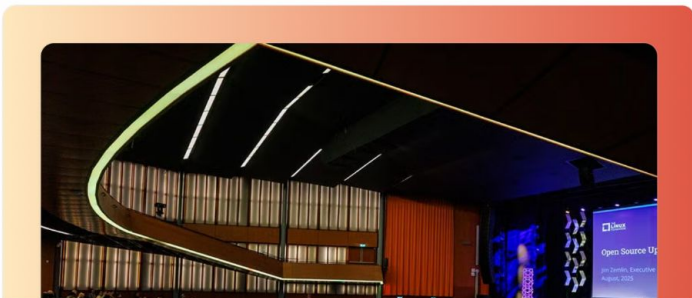
- REGISTER
- SPONSOR
- SUBMIT A PROPOSAL



Open Source Summit is the premier event for open source developers and contributors. It's where maintainers, technologists, and community leaders come together to share knowledge, collaborate on solutions, and push open source projects forward. It's the home for code, community, and the people driving the future of open source.

Why Attend

- **Connect** with the people shaping open source
- **Learn** from maintainers, developers and community leaders
- **Discover** emerging technologies and practical solutions you can use



PX4 Dev Summit Europe 2026

Event Details

October 7-9

Next to the Open Source Summit

Call For Proposals

Closes: Wednesday, 24 June at
23:59 CEST

Notifications: Friday, 24 July

Schedule Out: Wednesday, 29 July



Day 3 - PX4 + ROS Workshop

Before you show up to the workshop!

1. Clone the repo
2. READ THE DOCS
3. Get the container
4. Try things out





Questions?

rroche@linuxfoundation.org

Apply at dronocode.org/membership





Dr. Lorenz Meier
CEO & Founder Auterion

Auterion

PX4
autopilot

**DEVELOPER
SUMMIT 2026**



OPEN SOURCE SUMMIT

THE LINUX FOUNDATION



**Embedded Linux
Conference**

NORTH AMERICA