ThingsCommute — Platform Features & User Guide

ThingsCommute brings farm information, connected-device readings and farm-management tools together in one platform. This guide describes the capabilities visible in the application and what users may achieve with them. It is based on the implemented application, not on a live verification of every farm, device or external service.

The features available to an individual user depend on their account role, selected farm, configured services and connected equipment. Empty maps or readings may mean that no relevant data has arrived; they do not prove that a device or integration is working.

Availability labels

- **Available:** A user-facing view or action is implemented. Its usefulness may still depend on data or account access.
- **Hardware- or service-dependent:** The feature needs a compatible device, telemetry, network, camera or external service.
- **Limited:** Some screens or records are implemented, but the complete action or outcome is not established.
- **Experimental:** The feature is presented as a prototype or depends on external analysis services and may change.
- **Planned:** The application presents the feature as not yet available.

1. Dashboard and monitoring

Home

Availability: Available as a navigation hub. Home provides links to the platform's main monitoring and farm-management areas. It is a starting point rather than a consolidated live-data dashboard.

What you can achieve: Move to the part of the platform that matches your current task, such as checking a farm overview, viewing sensors or managing devices.

Farm Overview

Availability: Limited; depends on a selected farm, device data and map services. The overview brings a farm map, device-import options and alert areas into one screen. The page depends on supporting data and overview services to populate these areas.

What you can achieve: Review farm and device locations, bring devices into the overview, and see alerts available to the platform. Treat an empty or incomplete view as a prompt to check farm selection and data availability.

Charts

Availability: Available for supported metrics when readings exist. Charts can display historical readings for a selected device, metric and period. Metrics without an implemented chart or available readings may show a coming-soon or no-data state.

What you can achieve: Look for changes and patterns in recorded measurements over time. The charts describe received data; they do not by themselves diagnose a crop or recommend an action.

2. Livestock and asset monitoring

Livestock Tracker

Availability: Hardware- and telemetry-dependent. The tracker can show livestock on a map, with herd summaries, recent activity, location freshness and geofence alerts when the required tracking data is available. Users can manage livestock geofences.

What you can achieve: See reported animal locations and identify animals that have crossed configured boundaries. A “live” indication is based on data freshness; missing or stale GPS information may be shown as unknown or historical. Live health analytics are not available.

Asset Tracker

Availability: Limited and hardware-dependent. The page can map movable assets, show reported activity and geofence status, and provide asset summaries when telemetry is received.

What you can achieve: Review where tracked assets were reported and whether they are inside configured boundaries. Empty asset states are possible, and live asset-health analytics are not implemented.

3. Sensor operations

Soil Operations

Availability: Available when soil sensors and readings are configured. The page brings together soil measurements such as moisture, temperature, electrical conductivity and battery status, with summaries, alerts, location and historical views. Weather context may also appear when available.

What you can achieve: Compare soil readings, investigate changes and identify areas that may need attention. Readings depend on installed sensors and incoming telemetry; this page should not be treated as an automatic irrigation controller.

Environmental Sensors

Availability: Available when environmental telemetry is received. Users can review environmental sensor status, measurement summaries, alerts, locations and historical metrics. The metrics shown depend on each device's capabilities.

What you can achieve: Monitor reported conditions such as temperature, humidity, light and movement, and compare readings across available sensors. Missing sensors or readings produce incomplete or empty results.

BLE Tracker

Availability: Limited and hardware-dependent. The tracker provides a map and list for received Bluetooth beacon data, with geofences and dashboard summaries where data is available.

What you can achieve: Review reported beacon locations and boundary activity. The feature depends on beacon coverage and BLE data ingestion; no beacon data means there is no live location to display.

4. Video monitoring

Live Camera

Availability: Limited and hardware-dependent. Users can register cameras and open a camera page. The current page displays the latest JPEG snapshot supplied by the camera capture process; it does not play an RTSP video stream in the browser.

What you can achieve: Check a recent still image from a configured camera. A working camera, snapshot capture process and media delivery are required; adding camera details alone does not confirm that a picture is being captured.

5. Farm management

Create Farm

Availability: Limited; account permissions and remote provisioning apply. Authorized account administrators can create a farm and provide its basic details and location. Farm creation also attempts remote LoRaWAN application provisioning and continues into zone setup.

What you can achieve: Establish a farm workspace for organizing devices and zones. Remote provisioning can fail after the farm record has been created, so a successful farm creation does not guarantee that network credentials are ready.

My Farms

Availability: Available to users with farm access. The page lists farms owned by the signed-in user and provides farm selection and links to relevant farm areas and management actions.

What you can achieve: Choose a farm to work with and reach its overview, zones and other available tools. The current list is based on farm ownership; it may not include every farm associated with a wider organization.

6. Devices

My Devices

Availability: Available for the selected farm. This page brings the farm's registered LoRa devices and cameras into one inventory, with links to relevant device actions and details.

What you can achieve: Review which devices are recorded for the current farm and open their available views. The inventory is scoped to the current farm and the user's access.

Add Device

Availability: Available as local device registration; network setup is separate. Farm managers can create a device record with identifying details and, where applicable, associate it with a farm zone.

What you can achieve: Keep a device in the farm's ThingsCommute inventory. This action records the device in the application; it does not by itself register or provision it on TTN.

Add Camera

Availability: Limited and hardware-dependent. Users can save camera details for a farm. The form does not validate that a camera can be reached or that its image capture is working.

What you can achieve: Add a camera entry for later viewing. A separate capture process and working camera are required before the live-camera page can show a snapshot.

7. Network setup

Register on TTN

Availability: Available when the TTN service and device configuration are valid. The setup flow can provision an OTAA device identity through configured TTN services and save the resulting device record.

What you can achieve: Prepare a device's network identity for connection. Registration is not the same as receiving telemetry: transport, device configuration and valid incoming data must also be in place.

Private TTN Setup

Availability: Limited; no separate setup page is provided. The sidebar entry does not lead to an independent workflow. A private-network mode is offered within the TTN setup flow, but it depends on an already configured private TTN service.

What you can achieve: Use the existing TTN onboarding flow with a private-network option only when that service has been configured for your deployment. The sidebar label alone does not mean a private network is ready.

ChirpStack Setup

Availability: Planned. The current page is an informational “Coming Soon” screen rather than a working setup flow.

What you can achieve: No ChirpStack registration or provisioning is currently available through this page.

8. Automation and irrigation

Automation Rules

Availability: Limited; execution is not verified. Users can save threshold rules for selected device measurements and choose an intended alert or irrigation action. The application stores these rules, but an active rule evaluator and resulting hardware action are not established.

What you can achieve: Record automation conditions for a farm. Do not rely on a saved rule to trigger an alert or operate irrigation equipment until the complete integration has been verified for your installation.

Irrigation Control

Availability: Limited and hardware-dependent. The relay-control screen exists and is associated with relay and event records. The inspected implementation does not establish that its controls reliably operate physical irrigation hardware.

What you can achieve: Review the available relay-control interface and related status. Confirm relay configuration and end-to-end operation before using it to control water delivery.

Irrigation Schedules

Availability: Limited. Users can create and view schedule records, including a zone, start time and duration. The schedule endpoint can record an event, but does not enforce the duration or actuate a relay.

What you can achieve: Keep a record of intended irrigation times. A saved schedule should not be treated as proof that watering will start automatically.

Irrigation Zones

Availability: Available for organizing farm areas; watering remains hardware-dependent. Zones can organize parts of a farm and their associated crops or devices. The irrigation-zone view can show assigned devices, recent soil readings and recorded watering status.

What you can achieve: Connect farm areas with the devices and crop information used elsewhere in the platform. A zone alone does not activate a valve or guarantee irrigation.

Irrigation History

Availability: Available as an event log. The page displays stored relay events for the farm.

What you can achieve: Review recorded irrigation-related events. The history is only as complete as the events created by configured services and user actions.

Automation History

Availability: Available as an event log. The page displays stored automation events, with recent events shown first.

What you can achieve: Review events that have been recorded. The presence of a history page does not mean that automation rules are currently being evaluated or executed.

9. Intelligence

Farm Intelligence

Availability: Navigation group, not a separate analysis page. This sidebar heading groups Crop Intelligence, Farm Health, Farm Map and Satellite Analysis.

What you can achieve: Find the platform's crop, device-status and mapping tools in one place. The capabilities are provided by the individual pages, not by a separate Farm Intelligence screen.

Crop Intelligence

Availability: Limited and reading-dependent. Crop Intelligence presents active crop-cycle information such as average temperature, growing-degree indicators, growth stage and harvest progress, using readings associated with farm zones.

What you can achieve: Explore how recorded conditions relate to a crop cycle. Some calculations are simplified summaries of available readings, not time-normalized agronomic models or professional crop advice.

Farm Health

Availability: Available as a device-status summary. The page summarizes device categories and online, offline or idle status, then calculates an overall score from online devices.

What you can achieve: See a high-level view of device connectivity. The score is not a diagnosis of crop, soil, animal or overall farm health.

10. GIS and mapping

Farm Map

Availability: Available when farm and device location data exist. The map displays farm devices and supports opening device analytics and managing device locations.

What you can achieve: Understand where recorded devices are located and connect map markers to their available information. Results depend on accurate location data.

Satellite Analysis

Availability: Experimental. The page is identified as a prototype and can work with farm or zone boundaries, satellite-observation information and NDVI/NDMI analysis when external mapping and satellite services are available. Some controls are disabled or conditional.

What you can achieve: Explore vegetation patterns and request imagery for supported areas when the required services and observations are available. Results are not guaranteed, and the feature should not be treated as a fully supported monitoring service.

11. Data access

My Data Stream

Availability: Available to eligible signed-in users; access is conditional. The page provides a personalized way for authorized clients to request the user's normalized farm telemetry.

What you can achieve: Let an authorized application retrieve recent farm measurements. This is a request-based data service, not a continuous live stream. The page may not provide a URL when an account belongs to multiple organizations, and no data is returned for devices the user is not authorized to access.

Other useful platform features

Account access and recovery

Availability: Implemented, with email delivery required for verification. The application provides account registration, sign-in, email verification and password-reset flows. New accounts are inactive until their email is verified.

What you can achieve: Create and recover access to an account. Successful registration and recovery depend on the account configuration and delivery of the verification or reset email.

Current-farm selection

Availability: Available when the user has farms. The application provides a farm selector for choosing the current farm, and many pages use that selection to scope their data.

What you can achieve: Switch the farm context used by monitoring, maps and device-management pages. Check the selected farm when information appears incomplete.

Display preferences

Availability: Available. The application includes a collapsible sidebar and a dark appearance toggle that remembers the selected theme in the browser.

What you can achieve: Adjust the interface for your viewing preference. These controls change presentation, not farm data or device behavior.

Developer API resources

Availability: Separate from this user guide. The application exposes a developer API portal and documentation for technical integrations. Those resources describe API access and are not covered here.

Important limitations to keep in mind

- A page or sidebar entry does not prove that its hardware, network or external service is configured.
- Sensor charts, maps, livestock/asset tracking and camera images depend on incoming data or a working capture process.
- Saving a rule or schedule does not currently establish that irrigation equipment will be operated automatically.
- Farm Health describes device connectivity, while Crop Intelligence provides data-derived indicators; neither replaces professional agronomic assessment.
- Satellite Analysis is a prototype, and its outputs depend on external data availability and service configuration.
- Which actions appear depends on account permissions, farm ownership or membership, authentication and feature availability.