

TAKO Deployment Guide

Introduction

TAKO is an on-premise vacuum pump monitoring system built for semiconductor fabs, hard drive manufacturers, and other industrial facilities where vacuum system availability is critical to production. It continuously collects operational data from vacuum pumps — temperature, pressure, amperage, vibration, and pump-specific parameters — and uses that data to detect early warning signs of failure, trigger real-time alerts, and generate long-term health reports.

TAKO supports pumps from the major industrial vacuum pump brands used in subfab environments, including Ebara, Pfeiffer, Leybold, Edwards, Busch, Kashiya, Becker, Airtech, and Alcatel. Each pump is monitored 24/7 without disrupting operation, and alerts are delivered via email, Microsoft Teams, or Slack the moment a threshold is breached or a fault condition is detected.

This guide covers the deployment of a complete TAKO system: the per-pump Device Kits, the PoE switch infrastructure, and the TAKO Server that ties it together. It is written as a planning resource to help you estimate effort, coordinate the right teams, and avoid the most common causes of delay — not as a step-by-step installation manual. Detailed technical instructions are included with your order.

System Overview

A complete TAKO Vacuum Pump Monitoring System deployment consists of three component types:

- one or more **TAKO Device Kits** (one per pump)
- a **PoE Ethernet switch**
- a **TAKO Server**

All TAKO components are included in the shipment.

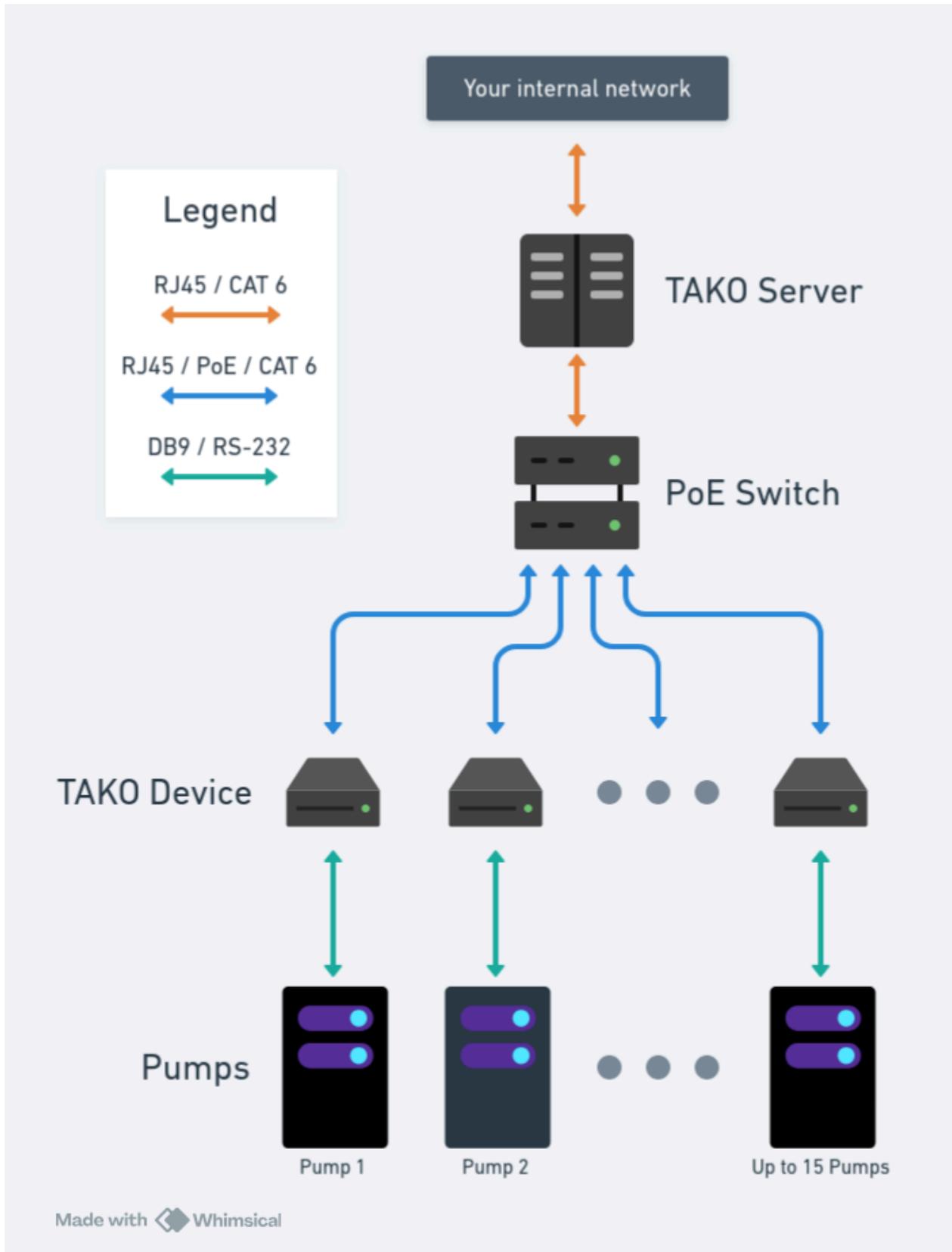
The deployment has two phases: hardware installation and server configuration.

Scope of This Guide

This document is a planning guide to help estimate deployment effort, timeline, and team involvement. It is not a step-by-step installation manual. Detailed technical installation instructions are provided with your order.

Refer to the Deployment Overview diagram on page 2 as the first step.

Deployment Reference Diagram



Quick Effort Estimate

Use this section to estimate whether deployment will take minutes, hours, or days.

Scenario	Typical elapsed time	Hands-on effort
Cabling already in place, IT info ready	1-2 hours total	~1 minute per pump + 30-45 minutes server setup
Minor cabling/network coordination needed	Half day	1-3 hours active work + coordination time
New cable runs and/or IT approvals required	1-3 days (calendar time)	Usually a few hours of work spread across teams

Time depends mainly on cable readiness and IT/network approvals, not TAKO hardware complexity.

Should You Self-Install?

You can likely self-install if most answers are "yes":

- Do you already have Ethernet cable runs from the planned switch location to each pump area?
- Can facilities mount/connect hardware and route cables safely?
- Can IT provide a network port and basic network details (DHCP/static IP) on install day?
- Can IT provide SMTP credentials or webhook endpoint details (if notifications are needed)?
- Can someone on-site record Device IDs and the matching pump names during installation?

If multiple answers are "no" or "not sure," plan for Datova assistance.

We can ship you a kit for self-installation, or a Datova technician can install and configure the complete system for you. Contact us at <https://www.datova.ai/tako/support>.

What You'll Need to Provide

The TAKO shipment includes all TAKO-specific components. Your facility needs to provide:

- a **power outlet** (110V-240V) near the server location
- a **power outlet** (110V-240V) near the PoE switch location
- **Ethernet cabling** between the PoE switch and each pump location (see Ethernet Cabling)
- a **network port** on your internal network for the TAKO Server (for notifications and remote access)
- your IT team's availability for 15-30 minutes of server configuration

What Usually Causes Delays

Most schedule slip comes from prerequisites outside TAKO hardware:

- Ethernet cabling is not in place yet
- IT network changes are pending (port assignment, static IP policy, firewall rules, remote access policy)
- SMTP credentials or webhook endpoints are not ready
- Device IDs were not mapped to pumps during hardware installation

Roles and Responsibilities

Team	Typical responsibilities
Facilities / maintenance	Mount/connect Device Kits, install/route Ethernet cables, place switch/server power
IT	Network access, DHCP/static IP settings, SMTP/webhook information, user access setup
Datova (optional)	Full install + configuration support, cabling consultation, integration guidance

Phase 1 — Hardware Installation

No pump downtime is required. Pumps can keep running during installation.

TAKO Device Kit (one per pump)

Each TAKO Device Kit ships with the correct interface cable for your pump model (typically RS-232 with a DB-9 connector, but may vary). Installation requires connecting two cables:

1. Interface cable from the Device Kit to the pump
2. Ethernet cable from the Device Kit to the PoE switch

The Device Kit is powered over Ethernet (PoE), so no separate power supply is needed. No device-side configuration is required.

Each Device Kit has a unique **Device ID** printed on its label. Record which Device ID is connected to which pump during installation. You will use this mapping during server configuration.

Ethernet Cabling

The TAKO shipment includes short (3 ft) Ethernet patch cables for bench testing and nearby connections. In most subfab deployments, the distance between the PoE switch and each pump is much greater, so you will need to provide your own Ethernet cabling or order custom lengths from Datova.

We recommend CAT-6, but existing CAT-5e is usually acceptable.

Most facilities prefer to install Ethernet cabling themselves before TAKO installation, since they already know local cable paths, labels, and topology. If you want Datova to handle cabling, contact us at <https://www.datova.ai/tako/support> to review your layout.

Maximum cable distance between the PoE switch and a Device Kit is 300 ft (100 m). For longer runs, additional switches or a custom power + data setup can be used.

PoE Switch

The included PoE Ethernet switch is plug-and-play. Connect power, then connect Ethernet lines from Device Kits and the TAKO Server. The PoE switch creates a dedicated, isolated network for the TAKO Device Kits.

TAKO Server

The TAKO Server is an industrial server and comes in three different variants:

- in a standard 19" rack
- on a DIN rail
- or as a standalone unit.

It needs three connections:

1. Power cable to a wall outlet (country-specific adapter included)
2. Ethernet cable to the PoE switch
3. Ethernet cable to your internal network

The DIN and standalone version of the server can also be powered from an existing industrial DC power supply. Contact us at <https://www.datova.ai/tako/support> for details.

Phase 1 Complete When

- every pump has a connected Device Kit
- all Device Kit Ethernet links are connected to the PoE switch
- TAKO Server power and both Ethernet links are connected
- Device ID to pump mapping has been recorded

Phase 2 — Server Configuration

No specialized software installation is required. The TAKO Server has a built-in web interface accessible from any modern browser.

To access the interface, connect to the PoE switch or reach it through your internal network. Configuration includes:

- **Admin account setup** — create login credentials
- **Network configuration** — DHCP by default; static IP if preferred
- **Device pairing** — enter each Device ID and assign it to the connected pump/tool
- **User enrollment** — add users who need access or notifications
- **Notifications** — configure email (requires SMTP server credentials) and/or webhook endpoints

IT typically provides network and notification details. Device pairing can be done by anyone with web access and the Device ID mapping.

Phase 2 Complete When

- admins can log in successfully
- each installed Device Kit is paired to the correct pump/tool
- required users are added
- email and/or webhook notifications have been tested

Integrations

TAKO Server supports email and webhook notifications out of the box. We also offer custom integration with existing systems such as Building Management Systems (BMS). Contact us at <https://www.datova.ai/tako/support> to discuss your environment.