
XACRO Basics

Estimated time to completion: **1 minute**

7.1 Introduction

Welcome to **Unit 7: XACRO Basics**! By now, you've worked extensively with **URDF files** to define your robot models. However, as you might have noticed, even simple robots can result in large, repetitive URDF files. That's where **XACRO (XML Macros)** comes in!

In this unit, you'll learn how to use XACRO to simplify and organize your robot descriptions. You'll explore:

- The basics of **XACRO files** and their advantages over standard URDF.
- How to spawn **XACRO-defined robots** in the simulation.
- Key features like **properties, macros, and includes** to reduce redundancy.
- Converting the `my_box_bot` robot description into a cleaner, modular XACRO version.

By the end of this unit, you'll be able to write more **efficient, reusable, and maintainable** robot description files, making it easier to manage complex robot models. Let's dive in!

The official documentation is here: [Using XACRO to clean up your code \(https://docs.ros.org/en/humble/Tutorials/Intermediate/URDF/Using-Xacro-to-Clean-Up-a-URDF-File.html\)](https://docs.ros.org/en/humble/Tutorials/Intermediate/URDF/Using-Xacro-to-Clean-Up-a-URDF-File.html).

