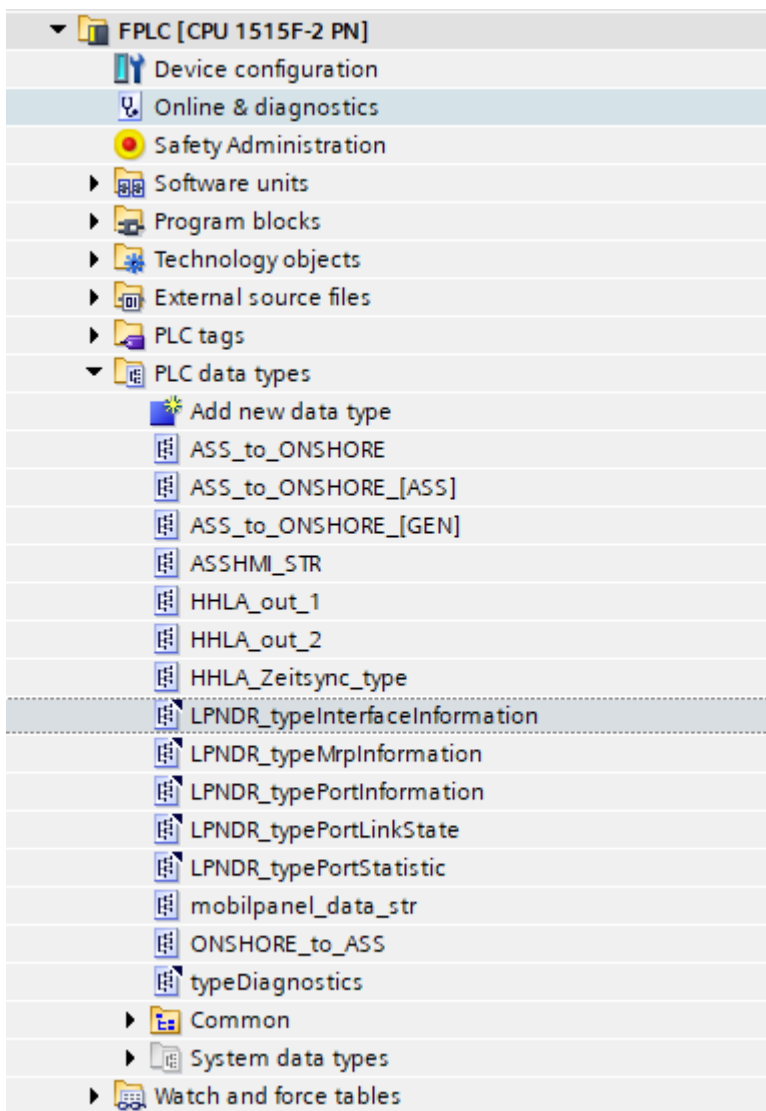




## UDT

The structure of the **UDT** (*User Defined Type*) is identical to that of the **STRUCTURE** type; you can create more complex variables from existing variables, structures, and their arrays. The key difference is that while a **STRUCTURE** is valid within a specific function (FB, FC, OB), a **UDT** is a universal type that must be defined in a separate library within the TIA Portal (*PLC > PLC data types*). Variables created from the **UDT** can be used throughout the entire program, which is especially useful for large-scale functions like communication, where maintaining an identical structure is important. However, when modifying a **UDT**, be aware that it may sometimes cause the program to crash.



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	Name	Data type	Default value	Accessible f...	Writa...	Visible in ...	Setpoint	Comment
1	macAddress	Array[0..5] of Byte		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2	nameOfStation	String	"	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3	ipAddress	Array[0..3] of USInt		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4	subnetMask	Array[0..3] of USInt		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5	gateway	Array[0..3] of USInt		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6	mrp	*LPNDR_typeMrpInforma...		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

The UDTs shown here fall into two categories: The normal UDTs (icon: ) are fully editable and can be modified freely. The locked UDTs (icon: ) are connected to closed (typically system) functions; modifying them could cause major issues in the program.

A locked UDT is also shown by an icon () in the corner of the editor window.

PLC data types (UDT) can be nested up to 8 levels deep. Starting from firmware V4.0, CPUs in the S7-1500 series support nesting up to 26 levels. Each **ARRAY of STRUCT/UDT** uses 3 hierarchy levels.

The UDT type can be imported and exported quickly. To export: right-click on the specific type, choose "Generate source from blocks," and select "Selected blocks only." To import: go to PLC, then External source files, click "Add new external file," right-click the external file, and select "Generate block from source."

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