



TwinCAT Library:Upgrading 1.7.7 to 2.0.0

Software Change Notification

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Table of Contents

1 Summary.....	1	4.1 changed Interface.....	2
2 Products affected.....	2	4.2 Homing.....	3
3 Description of change.....	2	4.3 TIOB.....	3
4 Consequences.....	2	4.4 Publish.....	3

1 Summary

The major release 2.0.0 brings a much different interface. The interface has been simplified, but at the expense of a large impact on customer code.

2 Products affected

Any customer code that used TwinCAT triamec library 1.7.7 or older that is to be upgraded to newer versions. Affected hardware

- TS350, TS351, TS150, TS151 revision C
- TIOB
- TSP350 and TSP700 revision A.

3 Description of change

The old library used a number of function blocks interfacing to triamec drives, which were not really interesting from a user perspective. The following library objects previously (<2.0.0) used in the user code

- Trialink : TL_Trialink_Type (global)
- TL_Boot : TL_Boot (called in MAIN_SLOW)
- Session : TL_SessionHandler (called in MAIN_SLOW)
- rx_iso : TL_Receive_IsoAbos (called in MAIN_FAST)
- FastHandler : TL_FastHandler (called in MAIN_FAST)

Are now (>=2.0.0) replaced by one new object

- Trialink : TL_Trialink (global)

with two actions

- Trialink.CallSlow() to be called in MAIN_SLOW
- Trialink.CallFast() to be called in MAIN_FAST

4 Consequences

4.1 changed Interface

Changes to the user code: In Triamec replace the code

```
Session(pTrialink := ADR(Trialink));  
TL_Boot(nDevId :=1,boot := CommunicationEnable AND NOT(Reset AND (NOT  
CommunicationReady)),Session:=Session);  
SyncWarning:= Session.pTrialink^.SyncWarning;
```

by

```
Trialink.Config.nDevId := 1; (* DPRAM id, see TwinCatSystemManager *)  
Trialink.Execute := CommunicationEnable AND NOT(Reset AND (NOT CommunicationReady));  
Trialink.CallSlow();
```

and remove

```
SyncWarning=Trialink.Trialink.SyncWarning;
```

because it got its own TwinCat warning event. In MAIN_FAST replace

```
FastHandler(Trialink := Trialink );
rx_iso(      Trialink := Trialink);      (* receives the ISO-abos (TIOB) *)
```

by

```
Trialink.CallFast();
```

and replace the following occurrences to be found by a global search

- type of global var Trialink to TL_Trialink
- Session:=Session by Trialink:=Trialink
- Session.pTrialink^.PCI.enabled by Trialink.Trialink.PCI.enabled
- Session.pTrialink^.error by Trialink.error
- Session.pTrialink^.PCI.booted by Trialink.Done
- declaration Session:TL_SessionHandler by Trialink:TL_Trialink;
 and corresponding interface Session:=Session by Trialink:=Trialink
- Session.pTrialink^.slow_ts by Trialink.Trialink.slow_ts
- FastHandler.pll.BufferTime (unit seconds) by
 Trialink.FastHandler.pll.BufferTicks units ticks of MAIN_FAST

4.2 Homing

The homing methods were clarified

- method TL_HomingMethod_None replaced by TL_HomingMethod_Immediate
- new method TL_HomingMethod_Disabled that does not reference

4.3 TIOB

The interface for the Tiob Hardware changed. The previous FBs

- TL_TiobFast
- TL_TiobSlow

are replaced by one FB TL_Tiob (global) with two actions. See AN110

4.4 Publish

The pair TL_AboPublisher and TL_AboSubscriberMaster was replaced by TL_publishSlave2Master, see AN105.

- It is now a global object with calls in MAIN_SLOW and MAIN_FAST
- its input abo_id is not required anymore.
- The interface TL_AboSubscriberMaster is replaced by object "out" of TL_publishSlave2Master.