

Dear Valued TRINAMIC Customer,

Due to an end-of-life statement from one of our suppliers of components (MOSFETs) we would like to inform you of a hardware change of the following modules:

TMCM-1140
PD42-1-1140
PD42-2-1140
PD42-3-1140
PD42-4-1140

New modules will already be delivered with the hardware changes listed in detail below. Previous versions are still available on request.

If you have any questions, please contact your sales partner.

Hardware changes

From PCB version V12 to PCB version V13 the following hardware changes have been applied:

- Stepper motor driver MOSFETs: The MOSFETs of the driver stage have been replaced. The new MOSFETs offer less heat dissipation than the previous / currently used ones. Apart from that the performance and settings including driver output current and output waveform are essentially the same.
- General purpose outputs OUT_0 / OUT_1: The MOSFETs used for switching these outputs on / off have been replaced. The new MOSFETs offer less heat dissipation than the previous / currently used ones. Apart from that the functionality and ratings are essentially the same.
- RS485 transceiver: the RS485 transceiver has been replaced with the SN65HVD1781 transceiver offering better fault protection (up-to 70V fault protection) and supporting higher communication speeds (up-to 1Mbit/s) and more nodes per network (up-to 255 with TMCL firmware under optimum conditions).
- *In progress (coming soon):* Conformal coating of both sides of the PCB. Provides improved protection against humidity and dust / swarf (e.g. in case of the motor mounted versions PD42-x-1140: tiny metal parts on the PCB attracted by the encoder magnet might lead to malfunction of the unprotected device).
- The new PCB version is TMCM-1140_V13

Compatibility

Notes on hardware compatibility:

- The new version V1.3 is regarded as fully compatible with the previous version V1.2. Nevertheless, the performance has been improved with regard to heat dissipation (less), RS485 communication speed (higher - up-to 1Mbit/s with V1.3 compared to 115200bit/s with V1.2) and RS485 bus load (less load - up-to 255 nodes per network with TMCL firmware).

Notes on firmware compatibility:

- The new hardware version V1.3 is regarded as fully firmware compatible with previous version V1.2.

Product qualification report is available upon request.

This improvement is classified as a minor change.

Products Affected

Article Name	Affected Article Numbers	NEW Article Numbers
TMCM-1140-TMCL	10-0183	10-0250
TMCM-1140-CANopen	10-0235	10-0251
PD42-1-1140-TMCL	30-0185	30-0244
PD42-2-1140-TMCL	30-0186	30-0245
PD42-3-1140-TMCL	30-0187	30-0246
PD42-4-1140-TMCL	30-0188	30-0247
PD42-1-1140-CANopen	30-0231	30-0248
PD42-2-1140-CANopen	30-0232	30-0249
PD42-3-1140-CANopen	30-0233	30-0250
PD42-4-1140-CANopen	30-0234	30-0251

Timing

Effective date for hardware release	29.08.2014
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