Firmware Build_FW1049_FF1537 (05.07.2017)

DspFirmware: **Build 1049**
Release Date: **Date: 2017-06-21 15:30:39 +0200 (Mi, 21 Jun 2017)**
SVN Revision: **Revision: 24928**
RLID: **4&5&6 & 16**
Remarks: **supporting TSx5x RevB,RevC&RevD and TSP350&700 Rev0,Rev1 Drives**

Bug Fixes:
- solved problem with invertMotorDirection=true, which can cause iD|Q error (bug was introduced in FW1048)
- solved problem with KTY Temp sensors which did not work anymore since FW1048 on TSP drives.

New features:

Changes:
- apply sine signal during commutation angle search phase fix for 3 signal periods.
- improved stability of angle search controller during ramp up phase when used commutation phasing method is 'RotorAngleSearch'.

FpgaFirmware: **Build 1537**
Release Date: **2017-07-02**

New features:
- cyclic data with two pages for TS -> higher bridge voltage resolution
- rearranging pwm structure and signal flow
- pwm short detection (phase-to-phase and phase-to-earth) for TS150, TS350 and TSP700
  earth short detection with shorter pulse duration due to problems with rotor movements inducing voltage.
  long pulses are suitable to detect earth shorts over an inductance. Since this error is not damaging the drive
  this short test will be ommited. New drive generations will have three phase measurements instead of two and
  the problem of the induced voltage can be solved by summing all three phase currents which cancels out currents
  caused by the rotor movement.
- service device registers (device 0x01
  0x000000 RO [15: 0] : actual duration from receiving data to the begin of the 100kHz cycle
  0x000001 RO [15: 0] : minimum duration value, cleared by reading the register
  0x000001 RO [31:16] : maximum duration value, cleared by reading the register
- Trialink adapter release.

Refactoring:
- Design separation between Artix7 and Spartan3e/Spartan6 (different tools)
- Separation from TSD firmware branch

Bug Fixes:
- refactoring Endat Receive (problems with the synthesis of the counters)
- applying timing constraints for CDC instances
- table feeder device not recognized due to wrong local bus timeout behaviour.
- encoder amplitude error: reporting only when analog encoder used
- artix-7 distributed memory was only 16 bit instead of 32 bit wide