Saia-Burgess Controls Ltd.
Bahnhofstrasse 18 I CH-3280 Murten I Switzerland
T +41 (0)26 672 71 11 I F +41 (0)26 670 44 43

PCD3.T66x
COSinus FW 1.20.36 Release Note

This document describes important notes for the RIO FW version.

The PCD3.T66x (Ethernet RIO) COSinus FW is available for the following systems:

- PCD3.T665
- PCD3.T666

1 New features for PCD3.T66x COSinus FW 1.20.36

This new firmware version for PCD3.T66x Ethernet RIOs contains a mix of new features as well as enhancements of existing functionality. The main new features or improvements are:

- Several Interpreter extensions
  - 16k Registers / Flags*
  - New possibilities for interpreted Texts encoding (access to the whole Reg / Flags ranges, read of DB element, integration of a text with null termination)*
  - SYSRD 71xx => read UTC Time
  - …
- Integration of L&S NI1000 Temperature Sensors on different W-Module**
- Access to the configuration parameters via TAGs
- File System improvements (e.g. date)
- Improve the reliability of the file system
- New History

* require PG5 V2.1.100

** require PG5 V2.1.100.100

2 Features or restrictions specifications

2.1 General

- Needed Programming Tool
  To program a PCD3.T66x a PG5 V $2.0.151 or newer has to be used.
- FW update
  The FW can be updated with the FWdnld.exe program located in the PG5 directory.
- New configuration with PG5 2.0 Device Configurator: 1.16.00
  - FTP / File system
  - New web-server / HTTP direct
  - TCPIP services
    - DHCP/DNS
    - SNTP
    - PPP
    - SNMP

2.2 Not implemented features on PCD3.T66x

- Profi-S-IO
- PROFIBUS DP
- PROFIBUS FMS
- LON
- S-Bus-RIO as master.
- Mode D
- Mode MM4
- LAN2:
- Program backup to PCD7.R500
- SYSWR 900x

2.3 Memory

- User memory:

System	HW Revision	User memory Code/Text/DB	Onboard File System
T665	-	32 kbytes	512 kbytes
T666	-	128 kbytes	512 kbytes

- EEPROM: **1.16.00**
  - The S-Bus configuration is automatically saved in the EEPROM.
  - There are 50 non-volatile user registers.
- Media:
  - Up to 16383 Registers **1.16.00**

2.4 Instructions

Please refer to the following list which indicates the first firmware version used in production supporting the relevant feature.

- Peripheral instructions **1.16.00**
- PB, FB Temporary Data **1.16.00**
- 2000 FB's, 1000 PB's, 32 COB's **1.16.00**
- FB call depth of 31. **1.16.00**
- IEEE floating point instruction for single and double **1.16.00**
- Signed extension instruction EXTB, EXTW **1.16.00**
- New System Functions (SF)
  - SF read DB/Text length **1.20.36**
  - SF for CRC Calculation **1.20.36**
- SYSRD 71xx (UTC Time) **1.20.36**
- Interpreted Text
  - New $lnnnn and @lnnnn encoding for interpreted Texts Containing Data. **1.20.36**
  - DB for interpreted Texts Containing Data($bxxxx.yyyyy) **1.20.36**
  -

2.5 Communication

- Serial communication (T666 only):
  - Baudrates from 1.2 up to 115k Baud **1.16.00**
  - Serial port
    - The port 1 have a full RS 232 if it is equipped with F121 **1.16.00**

- The port 2 is for RS485 **1.16.00**
- Up to 8 additional serial port with PCD3.F2xx modules
  - M-Bus with PCD3.F270 **1.16.00**
  - M-Bus with PCD3.F27x **1.16.48**
  - DALI with PCD3.F260 **1.16.48**

- S-Bus
  - USB: S-Bus over USB as PGU port **1.16.00**
  - Ethernet: S-Bus over IP **1.16.00**
    - S-Bus Slave, Master, GWY
    - S-Bus PGU **1.20.36**
  - Serial: S-Bus over serial port 1 &2 **1.16.00**
    - S-Bus Slave, Master, GWY
    - ! no break modes as master and slave
- MODBUS **1.16.00**
  - Ethernet: Modbus over TCP and UDP
  - Serial: Modbus over serial port 1 &2
- "Open Data Mode" over TCP/UDP with max. 32 ports / 32 connections **1.16.00**
- WEB server with HTTP direct connection **1.16.00**
- SNTP (Simple Network Time Protocol) **1.16.00**
- DHCP **1.16.00**
- DNS **1.16.00**
- SNMP **1.16.00**
- PING **1.16.00**

2.6 Miscellaneous

- New features for PG5. **1.16.00**
  - New OUTL and OUTLX instructions
  - New synchronization for a bloc downloads in mode "RUN"
  - Possibility to upload data (SEDIT and SFUP) in a synchronized manner.
- XOB
  - XOB 20-21: interrupt inputs XOB's **1.16.00**
  - XOB 14, 15, 25-29 Time Cyclic Alarm **1.16.00**
    can be executed from 1 ms to 1000s with 1ms steps **1.16.00**
    can be executed only one time with SYSWR 41xx **1.16.00**
  - XOB 17, 18, 19: User XOB's **1.16.00**
    This XOB's which can be provoked via S-BUS telegram (STXM chan, 0, k 4000, k 17..19) or SYSWR command (K4017..K4018). The XOB's are only executed if the CPU is in RUN or CONDITIONAL RUN.
  - XOB 7: System overload XOB **1.16.00**
  - XOB 1 and 2 Status call (see manual) **1.16.00**

- XOB 1 and 2 Status call (see manual) **1.16.00**
- New XOB handling.
  The XOB's are split in 2 priorities. A higher prior XOB can interrupt the lower prior XOB. (see manual)
- XOB 32-63: configurable for CAN (PCD3.M6340, PG5 V$1.3.127) **1.16.00**
- XOB 3 for task and Task data overflow **1.16.00**

- Calculation of week and day number **1.16.00**
  The PCD compute the day and the week number based on the date using the same algorithm as in the PG. The command 'Write Clock' corrects automatically the week number or day number if they are wrong.
- File system. **1.16.00**
  - An Internal Files system is at disposal to store for example Web pages.
- Alarm DB **1.16.00**
- Data Initialisation DBX **1.16.00**
- Integration of L&S NI1000 Temperature Sensors on dif. W- Module **1.20.36**
- New History **1.20.36**