

C2PC letter for the VisionNize pipette manager

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2. Introduction

Due to component discontinuations, changes for the pipette manager will be made soon.
We apply C2PC for the following changes:

- **1004 600.033 Cable Ethernet incl. panel connector:** new Ethernet connector (RJ45 plug)
- **1004 600.009 Cable USB internal:** cable length extended
- **1004 800.008 PCBA Redpine WLAN module:** change of the BOM-List because of alternatives for the Hirose connector (DF14-20P-1.25H(56))
- **Visionize Touch Interface VTI-1:**
 - Reduction of components and circuits on the PCBA, which is not used by any product group -> cost reduction
 - Replaced components due to EOL (End of Life)
 - Update the documents due to component PCN's (Product Change Notice)
 - Improvements in the PCB layout

3. Change 1: Ethernet cable



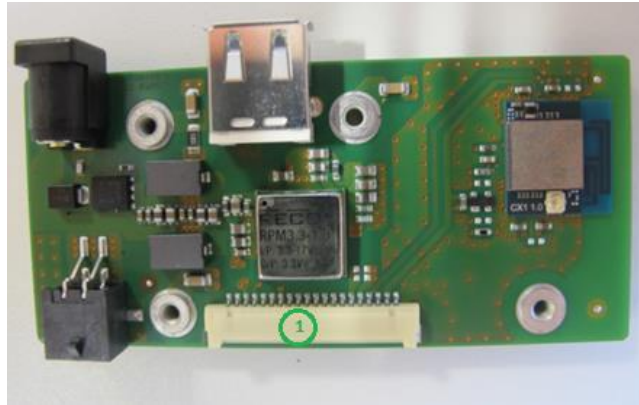
Molex connectors **095043-2881**, **095043-5881** were discontinued and replaced by Molex **449150011**

4. Change 2: internal usb cable



the cable length was extended by 15mm (new length 110mm, cable length before 95mm). the cable contains a shielding!

5. Change 3: WIFI PCBA



Hirose Connector DF14-20P-1.25H(56) was obsoleted (contact material was changed from gloded to others). The connector was replaced by following alternatives:

DF14-20P-1.25H (22), DF14-20P-1.25H (25), DF14-20P-1.25H (26), DF14-20P-1.25H (35), DF14-20P-1.25H (52), DF14-20P-1.25H (55), DF14-20P-1.25H (56), DF14-20P-1.25H (65)

6. Change 4: VisioNize Touch Interface (VTI1-change 2)



- **End of Life of the Touch-Controller:**
Change from Touch Controller TMA300 (Cypress) to PSoC4 (Cypress)

- **Reduced components and circuits on the PCBA, which is not used by any product group:**

JTAG interface (CON33) with peripheral devices removed from the PCBA	Not used
JTAG interface (CON26)	Not used
PT1000 Temp.-Sensor (RTD1) circuit removed from the PCBA	Not used
MIPI interface (CON24) with peripheral devices removed from the PCBA	Not used
Removed the additional voltage supply circuit "VMCU" (IC17, IC22 and peripheral components) for the PSoC power supply and the external VBAT input on CON13 (Pin 2)	Not used
LED2 removed from the PCBA	Not used
UART interface of the PSoC - MAX3311 (IC25)	Not used
Added ferrite (742792022), 1nF capacitors + and output protection (ESD9B5.0ST5G) to the audio amplifier	improvements at the audio output circuit
Changed the both ZIF connectors for the Touch interface (CON14 and CON18) from Würth Elektronik to Hirose 12 Pol.: FH12-12S-0.5SH(55) and 18 Pol.: FH12-18S-0.5SH(55)	improvement at the connection of the touch sensor -> reduction of damage at the contact areas of the touch sensor (multiple plug)
Additional Input-/Output protection components (ESD9B5.0ST5G and SMAJ12CA)	additional protection against transient signals
Changed RTC crystal (Q4) to ABS06-32.768KHZ-1-T (Q4)	crystal with smaller housing
Buzzer circuit: Changed BRC185 Transistor (PNP) to MMUN2211LT1G (NPN)	New Buzzer circuit design: Change from initial state "normal on" to "normal off"
Changed SP485 to SN65HVD72DRBT (IC24, IC27)	RS485 interface (SN65HVD72DRBT) with integrated input protection
Changed RT8010 to RT8070ZSP (IC7) (2V5 voltage supply)	same component as IC6 -> consolidation of components

- **Layout changes**

Due to the reduction of the of components, the layout of the carrier Board had to be changed. components had to be moved and lines had to be re-routed.

7. Performed tests and modified documents

following tests were performed:

For RED:

- EMV Test EN 301 489, fixed Installation
- ESD
- Radiated Emissions
- Radiated immunity
- AC conducted emissions / Ethernet port conducted emission

For FCC Part 15B:

- EMV Test FCC §15B

following Documents were modified:

- Schematics
- Layout
- Parts List

Sincerely,
28.04.2021



(Signed)
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