Project: Token
Software: v1.9.5.1
Board: CASH-Interface2
Date: 3. September 2018

SPECIFICATION:

With the TOKEN-Package it is possible to realize a simple vending machine for example sell car wash token. The control of the cash devices is done with the CASH-Interface2. This way its possible to connect a bill acceptor, a coin acceptor, and up to three hoppers as well as a receipt printer.

FEATURES:

- Simultaneous operation of a coin and bill validator and up to 3x hopper.
- Number of paid token is freely adjustable for each cash channel.
  Thus, for example bonus tokens are possible with a larger purchase.
- Accumulate function or direct pay out on cash in.
- With only one type of token it can be paid out alternately from hopper 1 and hopper 2,
  or the hopper number is directly adjusted in the settings for each cash channel
- User screen can use and switch through individual images, loaded by timer setting.
- Print receipt via external push button (illuminated) possible.
  The text for receipt is freely adjustable. The installed windows default printer is used.
- Bookkeeping with statistics.
- Log file.
- CSV file for all transactions.
- Send e-mail with log file and statistics.
- Send e-mail on hopper empty.
- Works on the USB (with USB to Serial converter) or serial port.
  Using a USB to Serial converter be sure to use one with FTDI chipset to avoid problems!
- Error indicator via OUT2, flushes if hopper empty.

OPERATION:

In normal mode the number of coins is paid directly when one of the 6 cash channels was detected. In accumulate mode every cash in is added and after a 5 second timeout the payout starts. The software calculates the optimal coins pay out for the customer, e.g. 5 EUR gives 5 token, 10 EUR gives 12 token, the customer inserts 4x 5 EUR, the software calculates 2x 10 EUR and pays out 24 token.

With the accumulate function it is possible to have for example token costs at 1 Euro, and the customer can insert smaller coins like 50 cent. As soon as we reach the costs of one channel the token number is bigger than 0 we do a payout.

The software can operate without or with a user screen. If the user screen is activated there is a screen visible for the user showing images. On cash in the sum of inserted cash is shown with image “credits.jpg”. While pay out is done it shows the image “payout.jpg”. In IDLE mode the images “1.jpg”, “2.jpg”, “3.jpg” and so on are showed by timer. The time can be adjusted in the settings. It is possible to load all images from a USB stick, so there can be different images just by using an other USB stick.

In special “hopper 3” mode all pay outs are done via hopper 3 with the separate hopper 3 token numbers. This can be selected by software setting or external input (a switch connected to CASH-Interface2 input IN2). There are even separate images used in “hopper 3” mode, e.g. “h3_1.jpg”, “h3_2.jpg”, “h3_3.jpg” and so on.

DEVICES:

The protocol for coin and bill validator must be PARALLEL.
We can monitor 6 channels, so using bill and coin validator we suggest this setup:
#1 – 5 EUR bill
#2 – 10 EUR bill
#3 – 20 EUR bill
#4 – 0,50 EUR coin
#5 – 1 EUR coin
#6 – 2 EUR coin

- Bill validator of the type NV9, NV10 or pin compatible (like PYRAMID TRILOGY), GBA ST2 via adapter possible.

- Coin validator of the type NRI-G13 or RM5 or EMP800 or pin compatible (like MEI CASHFLOW 330) .

- Nayax credit card reader.

- Hopper of the type Azkoyen U-II, or NRI currenca h2 or HS-2012 (STD) via MK4 adapter or UNIVERSAL HOPPER MK2/3/4 via MK4-Adapter or ND300-Adapter. Protocol: PULSE.

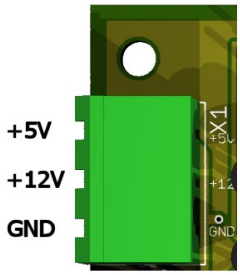
- (Hopper) Note dispenser ND300KM or compatible via ND300KM adapter. Protocol: PULSE.

- Relays output NO 200 VDC, 15W (CI2 REL connector), Push button print receipt illumination.

- OUT 2, +12V DC / 1A output (CI2 OUT2 connector), Error illumination, flushing when active.

Using a coin sorter the external control via hopper full signal is done by coin validator output line 5.
e.g. EMP 800.00/P V6 /O or. /N /X Pin4 Low sorter control and SRT 800.2X or SRT 800.3X

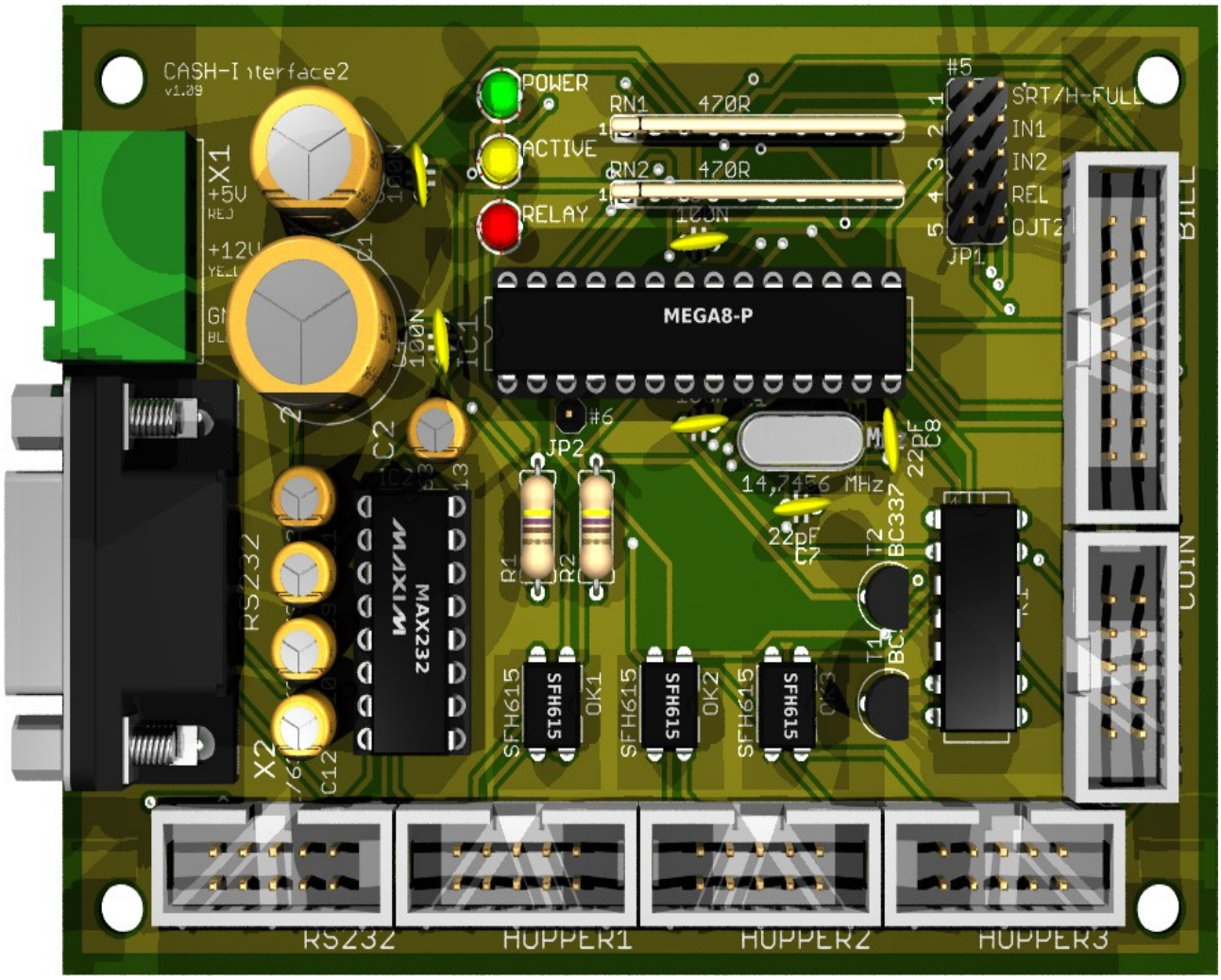
POWER SUPPLY:



The power supply is connected to clamp X1.

The CASH-Interface2 needs a supply voltage of +5V and +12V DC. The ground connections (GND) of both voltage must be connected. The interfacing of +5V, +12V and GND is printed on the board.

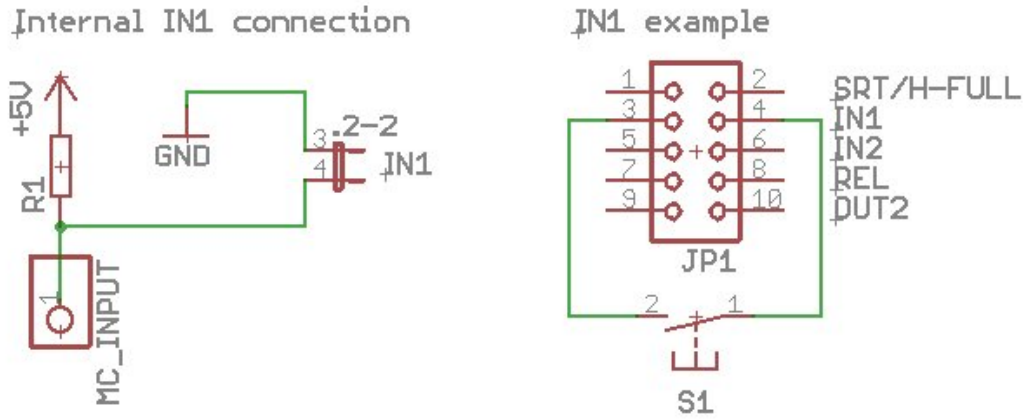
BOARD v1.09:



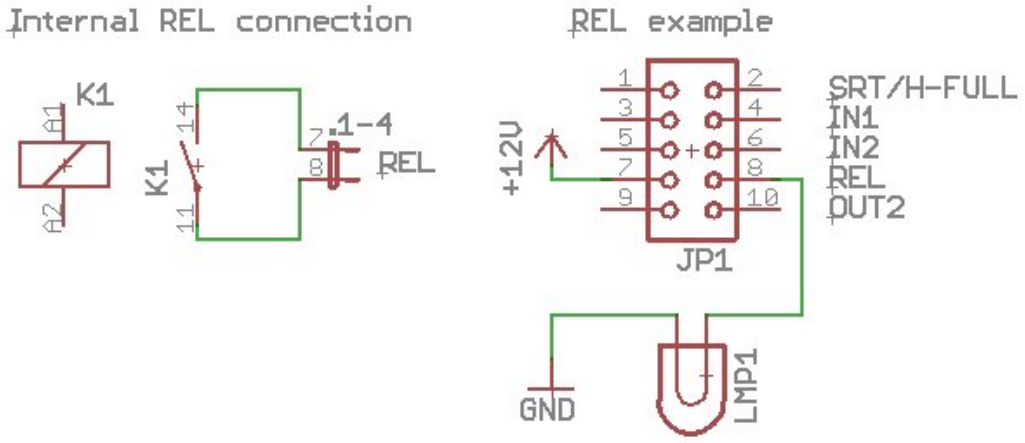
JUMPER:

JP1.1 – Hopper1-3 FULL	monitor hopper FULL
JP1.2 – IN1	external push button, print receipt
JP1.3 – IN2	external push button, select hopper3 mode or “out of order”
JP1.4 – RELAYS	illumination print receipt push button
JP1.2 – OUT2	illumination error (blinker)

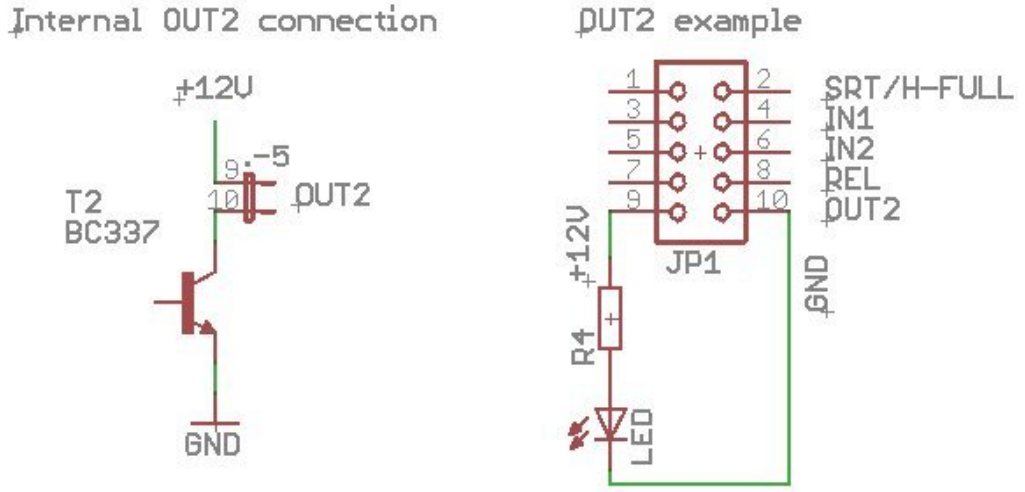
IN1+2 connector:



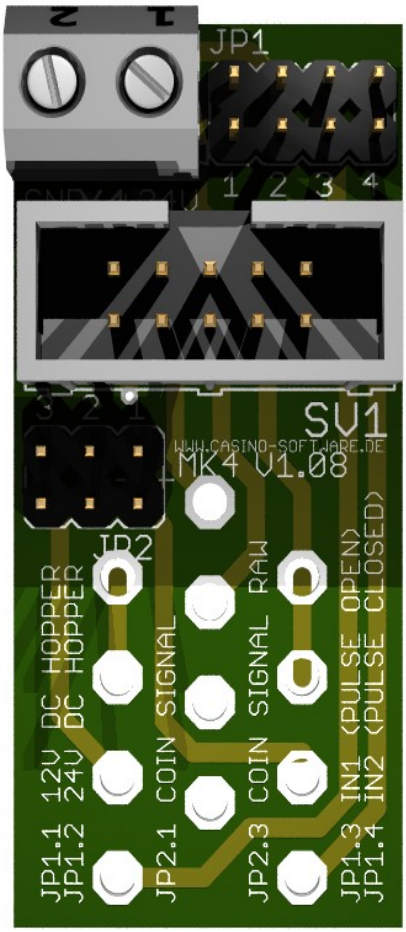
REL connector:



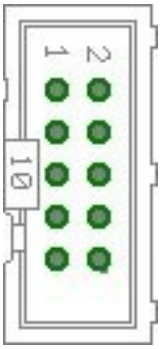
OUT2 connector:



MK4-ADAPTER:



Occupation of the 10 pole plug (Azkoyen compatible):



Pin 1,2,3 = +V (+12V o. +24V DC)
Pin 4,5 = -V (GND)
Pin 6 = Full Sensor
Pin 7 = Motor run
Pin 8 = Not used
Pin 9 = Coin signal
Pin 10 = Empty sensor

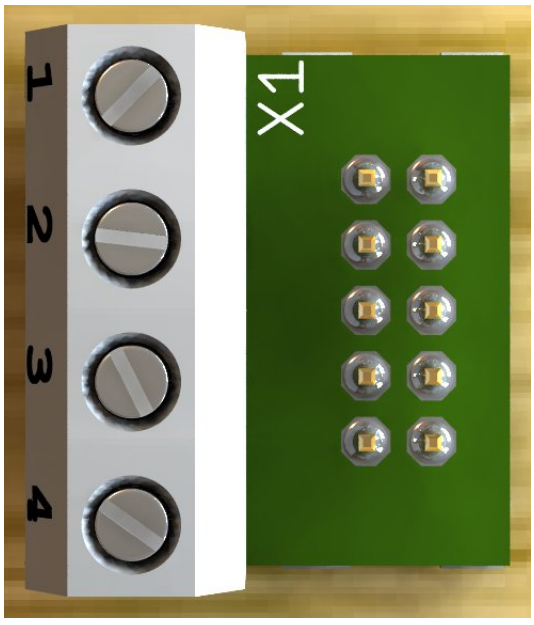
X1-1: +24V DC
X1-2: GND

JP1.1 : +12V Hopper, power from CASH-Interface
JP1.2 : +24V Hopper, power from external power supply on plug X1
JP1.3 : IN1 (mode selector)
JP1.4 : IN2 (mode selector)

Mode 0 (Direct switching 24V) : JP1.3 open + JP1.4 open
Mode 1 (Logic control / motor run) : JP1.3 closed + JP1.4 closed
Mode 2 (Coin counting / pulse) : JP1.3 open + JP1.4 closed

JP2.1 : Coin (µP Sensor Output) => short JP2.1 and JP2.2
JP2.3 : Coin raw (Raw Sensor Output) => short JP2.3 and JP2.2

ND300-ADAPTER:



Connects a ND300 note dispenser on the HOPPER plug.

1 - +12V DC (GRAY)
2 – GND (BLACK)
3 – Motor run / pulse (ORANGE)
4 – Empty (GREEN)