Power

Program & configure

Y1
NX5032GA-8MHz
Заменить на HC-49
OSC_IN   OSC_OUT
C8   C10
6   6

J1 Power
1 HOT@Always
2 HOT@On
3
+12V 12V
D3 SMBJ18A
Gnd Gnd

Tx 3
Rx 2 J4 UART
1

SWCLK 1
SWDIO 2
3
+3V3 R10 6.8 4 J5 Prog
BOOT0 5
NRST 6

HOT@On
R1 300k D1 1N5819 Ven
Ven VEN
R2 100k D2 1N5819 Power_EN

+3V3
C7 0.1 C9 0.1 C11 0.1 C12 0.1

+3V3

L1 10u 5V +5V C5 47u
C3 1u R7 100 C6 22
U2 MT1470
+12V GND BS 6
SW EN 5 VEN
VIN FB 4
C2 10u
Gnd
R6 19k

NRST 7 NRST
BOOT0 44 BOOT0
R11 10k
OSC_IN 5 PD0
OSC_OUT 6 PD1

U3
STM32F103C6Tx

2 PC13
3 PC14
4 PC15

18 PB0
19 PB1
20 PB2
39 PB3
40 PB4
41 PB5
42 PB6
43 PB7
CAN_Rx 45 PB8
CAN_Tx 46 PB9
21 PB10
22 PB11
UP_DIR 25 PB12
DOWN_DIR 26 PB13
UP_BTN 27 PB14
DOWN_BTN 28 PB15

PA0 10 Vsen
PA1 11 Power_EN
PA2 12 L_UP
PA3 13 R_UP
PA4 14
PA5 15
PA6 16 R_DOWN
PA7 17 L_DOWN
PA8 29
PA9 30 Tx
PA10 31 Rx
PA11 32 DOWN_SW
PA12 33 UP_SW
PA13 34 SWDIO
PA14 37 SWCLK
PA15 38

XC6206PxxxMR
+5V U1 +3V3
C1 0.1 VI V0 C4 47u 3V3
GND

C13 0.1 +5V
+5V
U5 TJA1050
CAN_Tx 1 TXD VDD 3
CAN_Rx 4 RXD CANH 7 CANH
Vref CANL 6 CANL
8 Rs VSS 2

CANH CANH CANL
CANL R21 120 D13 CANL 2 J8
JP1 PESD1CAN CANH 1
Terminal on/off CAN

+3V3 U4 ZXCT1009
1N5819 D8 Vsen sense +12V
R14 330 3 + 2 R20 0.05 5W
R15 100 -
+12V
L+ R17 10k Q2 AOD4185
L_UP R16 100 Q1 2N7002 +12V AOD4185 Q4
L_DOWN R26 10k R17 D10 1N4007 D11 10k R23
R+ R25 100 R_UP
Q3 IRLR7807 1N4007 D9 J7 1N4007 D12 Q6 2N7002 R27 10k R_DOWN
R18 220 R19 10k Q5 IRLR7807 R22 10k R24 220 R-
L-

Connect motor so that (2) of J3
is positive when window goes up!!!

Hall sensors
+3V3
R3 47 1
UP_SW R4 100 2 J2
DOWN_SW R5 100 3
4 Hall

Control by simplest buttons
DOWN_BTN R8 100 1
UP_BTN R9 100 2 Buttons J3
3

Control by car windows manage system
R12 1k UP_DIR
D6 MM3Z3V3
J6 2
1
EXT_MOT R13 1k DOWN_DIR
D7 MM3Z3V3