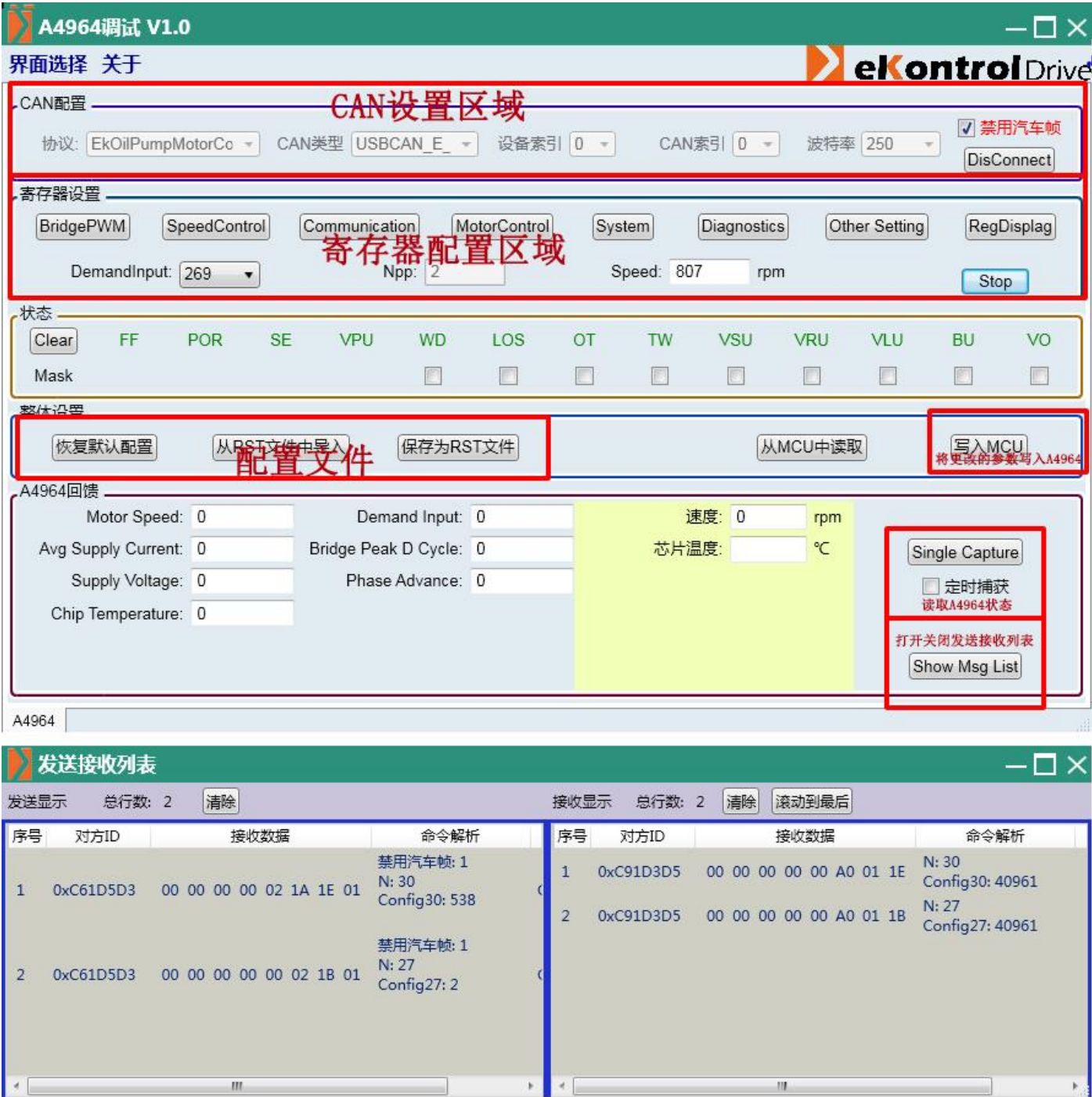


凯博易控电机电控上位机使用说明

——版本 V1.0

一、 功能区简介

总功能区分为 CAN 配置区、寄存器配置区、整体设置区、A4964 回馈区、发送接收列表区。



二、 子窗体说明

寄存器配置区域的各个窗体，每个参数英文显示，鼠标放上去有中文提示，修改完毕按确定保存，然后在主窗体中写入 MCU

Bridge PWM
— □ ×

PWM Configuration

Modulation Mode (MOD) 3-phase ▾
Overmodulation (OVM) none(100%) ▾
Drive Mode (DRM) Sinusoidal ▾
PWM Mode (PMD) Center Aligned ▾
Dead Time (DT) 1600 ns ▾
PWM Fixed Period (PW) 50.50 | 50.45 us ▾
PWM Fixed Period 50.50 us
PWM Dither Freq Step (DP) -0.20 us ▾
PWM Dither Dwell Time (DD) 1 ms ▾
PWM Dither Step Count (DS) Disabled ▾

Gate Drive Configuration

Turn-On Time (TRS) 0 ns ▾
Turn-On Current1 (IR1) 0 mA ▾
Turn-On Current2 (IR2) 0 mA ▾
Turn-On Time (TFS) 0 ns ▾
Turn-Off Current1 (IR1) 0 mA ▾
Turn-Off Current2 (IR2) 0 mA ▾

CurrentLimit Configuration

Current Limit Blk Time (OBT) 1800 ns ▾
Current Limit Ref (VIL) 16/16 ▾
SenseAmp Max Thresh (MIT) 200 mV ▾

确定

取消

Speed Control
— □ ×

Speed Control Loop Configuration

Acceleration Limit (SGL) 38.3 Hz ▾
Gain (SG) 11 ▾
Voltage Compensation (DV) 12 V ▾
Deceleration Factor (DF) 1 ▾
Resolution (SR) 0.1 Hz ▾
Underspeed Thresh (SL) 56 * SR ▾ 5.6 Hz
Over Speed Thresh (SH) 1023 * SR ▾ 102.3 Hz

Udr Spd Th 168 rpm
Ovr Spd Th 3069 rpm

确定

取消

Communication
— □ ×

Steady-State Communication Configuration

Controller Prop Gain (CP) 1 ▾
Controller Int Gain (CI) 1 ▾

Transient Communication Configuration

BEMF Window (BW) 7 deg ▾
BEMF Sampling (BS) 1 ▾
WM BEMF Filter Time (BF) 200 us ▾

Transient Communication Configuration


Controller Prop Gain (CPT) 1/128 ▾
Controller Int Gain (CIT) 1/128 ▾

Phase Advance Select Configuration

Phase Adv Mode (PAM) Manual ▾
Control Gain (KIP) 1 ▾
Phase Advance (PA) 0 deg ▾

确定

取消


MotorControl
— □ ×

Start-up Configuration


Restart Control (RSC)	No Restart	Initial Freq (SF1)	4 Hz
Windmill Mode (WIN)	Disable	Initial Duty (SD1)	50 %
Windmill Min Det Freq (WMF)	6.8	Final Freq (SF2)	27.5 Hz
Windmill Duty Cycle (WBD)	50 %	Final Duty (SD2)	50 %
Align Time (HT)	0.2 s	Step Time (STS)	80 ms
Peak Align Duty (HD)	18.75 %	Frequency Step (SFS)	1 Hz
Align Duty Rise (HR)	0	Start Coast Mode (STM)	Disable

RUN

Rotation Direction (DIR)	Forward	Brake Function (BRK)	Disable
Motor Constant (KM)	0.65		

确定

取消


System
— □ ×

Watchdog Configuration

WD Min Time (WM)	1 ms
WD Cycle Count (WC)	Disabled
WD Window Time (WW)	10 ms

System Voltage Configuration

Logic Reg Voltage (VLR)	5 V
Gate Drive Reg (VRG)	11 V

LIN Configuration

LIN Enable (LEN)	Standby
LIN Baud Rate (LBR)	10 KHz

Sleep/Wake Control

Go To Sleep (GTS)	0
Wake Mode (LWK)	PWM

System Voltage Configuration

Motor Control Mode (CM)	Speed
Operating Mode (OPM)	SPI
PWM Sense (IPI)	Active High
Current Limit (DIL)	Disabled

确定

取消

Diagnostic

Enable Stop on Fail (ESF)

Stop On Fail

VDS OV Threshold (VT)

1.55 V

VDS Qualifier Mode (VDQ)

Debounce

VDS Qualify Time (VQT)

3.15 us

Diag Output (DGS)

Active low fault flag

SDO Output (CKS)

High Impedance

Disable Reset On SerialError (DSR)

Enabled

确定

取消

Other Setting

User Input

Number of pole paris (Npp)

2

Current Sense register
Rsense [mohm]:

010

Set Value

010


Current Limit

20.000 A

Sense Amp Gain Factor (SA)

2.5

SET


Register Setting Display
— □ ×

Register Setting

Reg0: PWM	0x04C	Reg16: Start-up	0x038
Reg1: PWM	0x000	Reg17: Start-up	0x04E
Reg2: Bridge	0x040	Reg18: Start-up	0x0EE
Reg3: Gate Drive	0x000	Reg19: Start-up	0x0EE
Reg4: Gate Drive	0x000	Reg20: Start-up	0x08E
Reg5: Gate Drive	0x000	Reg21: Speed Loop	0x0AA
Reg6: Current Limit	0x0FE	Reg22: Speed Loop	0x100
Reg7: VDS Monitor	0x03E	Reg23: Speed Loop	0x0EE
Reg8: VDS Monitor	0x07E	Reg24: NVM Write	0x000
Reg9: Watchdog	0x000	Reg25: System	0x389
Reg10: Watchdog	0x000	Reg26: Phase Advance	0x000
Reg11: Communication	0x0EE	Reg27: Motor Function	0x002
Reg12: Communication	0x000	Reg28: Mask	0x000
Reg13: BEMF	0x008	Reg29: Readback Select	0x000
Reg14: BEMF	0x002	Reg30: Write Only	0x21A
Reg15: Start-up	0x04A		

Write NVM (SAV)

Write NVM

Idel

修改寄存器值