



CANPLUS 剪叉高空作业平台全球化电控系统

CANPLUS Scissor Lift Global Electronic System



AWP-高空作业平台全电控信息化 增值服务全球合作伙伴

中电股份600072,军工品质

国际标准, 开放型统型设计

超级兼容性



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系统概述 (General Introduction)

本控制系统主要应用于小型高空作业平台，系统由底盘控制系统 ECU，平台控制系统 PCU 和电机驱动系统组成。平台与底盘控制器通过 CAN 通信。系统具有行驶，转向功能，高低速，升降功能；安全限制功能如机器展开、坑洞保护、车体倾斜、超载、下降停顿、低压限制等；各种显示、报警功能。

The system is applied to small-sized scissor lift. The key parts of the system are the platform control unit (PCU), the electronic control unit (ECU) and the driver. PCU and ECU communicate through a CAN-bus system to realize such functions as: driving, steering, high speed, low speed, rise and fall; security restriction function (vehicles extend, pit hole protection, tilting, overload, fall pause, low pressure limit, etc); various display and alarming functions.

高可靠性 全面兼容 即插即用 任意互换



系统主要特点(Main Features):



1 高可靠性
三年质保

1、 高级可靠与稳定性, PCB 板卡提供三年质量保证;
High reliability and stability, 3 years after-sales quality guarantee for PCB board.

2 标准总线
CAN2.0B

2、 内置/外置多重保护与使用防护, 安装后提供 IP65 防护等级;
Integrated/separated multi-protection design , IP 65 protection degree after installation.

3 全面兼容
Ge&SL&DL

3、 标准 can2.0B 总线通讯协议; 可扩展选配的 SAE -J1939 协议;
Standard can2.0B CAN-bus communication protocol.
SAE-J1939 protocol is another expansion option.

4 配置可选
IOT Conn

4、 兼容可选的全电动行走双驱系统;
Compatible with electric propelled scissor lift which is optional.
5、 中英文、状态标示及报警系统;
Chinese-English, status display and alarming system.
6、 全面兼容吉尼电控系统体系如 Smart-Link, Genie-5;
Compatible with the latest system Smart-Link 、 Genie-5 of Terex Genie.

7、 **可选的**远程监管云服务平台, 实时监控设备工况、预报警及区域位置等信息;
Integrated equipment remote management icloud system (optional) which can monitor real-time equipment operating condition, alarming, GPS etc.

8、 接口和安装尺寸完全兼容吉尼体系, 36 芯安普插头和用户指定可选配的 6 芯西霸士插头, 即插即用。

Interface & installation dimension of AMP 36 pin plug and SIBAS 6 pin plug (designated by user, optional) fully compatible with Genie system, plug and play.

9、 可选配的遥控操作系统;

Optional remote PCU controller;

10、 可选配的操作授权系统 (IPAF 授权及定制化)

11、 可订制相关标识标志/OEM;

Customized product / OEM is available.



5 扩展订制
ODM Ext

12、 可扩展扩充及特殊系统订制;

System Extensible Customization;

如: 扩展平台自动伸缩及防撞控制——动车生产检测 航空制造与维保等;

扩展内燃机升降平台电控系统——越野式、大平台等

扩展支腿自动调平系统;

扩展履带行走系统;

其他特定扩展扩充系统等等。

电气规格(Electrical Specifications):

项目 NO	PCU	ECU
工作电压 Operating Voltage	12V 24V 36V DC	
其它电性性能 Other Electrical Characteristics	IEC61000, IEC60950, EN55022, EN55024	

机械规格(Mechanical Specifications):

项目 NO	PCU	ECU
工作温度 Operating Temperature	-30°C ~ +70°C	-40°C ~ +80°C
存储温度 Storage Temperature	-40°C ~ +80°C	-40°C ~ +80°C
安装后防护等级 Protection Level	IP65	
寿命 Life	手柄 3 百万次, 按钮 1 百万次 Joystick: 3 million Buttons: 1 million	N/A



剪叉一体化电控系统

上台控制器CAN-MPC8706



下台控制器CAN-MC8708



车辆远程管理手机快捷服务



CAN-MPC8706

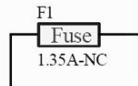
产品类型: 小型升降平台平台控制单元 PCU

Product: Scissor Lift Platform Control Unit

实现功能: 实现行走前进/后退及调速, 起升/下降、左右转向, 及其他辅助、调试设置、应急等各项操作。

Function: drive forward, backward, speed adjust, rise & fall, steering auxiliary , debugging and emergent operating.

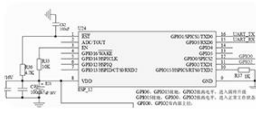
1. 自恢复设计
Self-recovering design



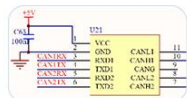
2. 高可靠性防水轻触按键
High Reliable Waterproof Button



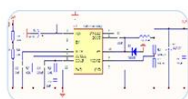
3. 内置WIFI模块
Integrate WIFI Module



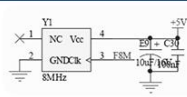
4. 高隔离CAN模块
Isolation Module



5. 高性能DC-DC电源
High Performance DC-DC Power



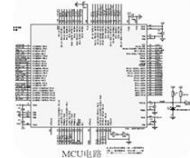
6. 高稳定性有源晶振
High Stable Oscillator



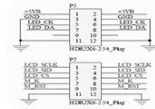
八重保护设计 Eight Protective Design Of PCU

100%设计自保护
100% Self-protection Design

7. 汽车级控制芯片
Auto-level control chip



8. 采用molex连接器
Adopt molex connector



内部组成及配置(Components & Configuration)

人机界面 HMI (主状态 status 参数 parameter 报警 alarm 代码 code 设置 setting 调试 debug)	128*64 	操作手柄 Joystick 单轴自复位(前后方向操作), 自带使能键, 2个功能按钮, 配备防尘保护套 single axis, enabled trigger, 2 buttons, dust-proof joystick protect case
端口防护 IO protection	短路错接自保护 short circuit fault self-protection	按键 Key 常规 4 个 Standard:4 可选的辅助 4 个 Auxiliary (optional):4
处理器 Processor	32 位汽车级 MCU 32 bit auto level MCU	急停开关 Emergency Stop 1 个
插头 Plug	西霸士 6 芯插头(用户指定可选) SIBAS 6 pin plug (customized available)	语言语言 Language 中英文/双语对照 Chinese-English
兼容系统 Compatible System	1) Genie 5 系统 Genie 5th generation system 2) 鼎立系统 DingLi system 3) 高立、星邦等国内其它系统 GaoLi, Sinoboom, other system	
可选配置 /功能 Hardware Configuration/Function(Optional)	1) 数码管可选 digital tube (optional) 2) DTM06 芯, 防水插头固定式, 独立式可选 DTM06 pin plug with fixed/separated cable (optional)	
可选配兼容系统 Compatible System(Optional)	1) 吉尼 Smart-Link & 吉尼 V5 系统 Genie Smart-Link Genie V5 2) Snoko 系统 Snoko System (Customized) 3) JLG 系统 JLG system (Customized)	

接口定义(Interface):

Pin 引脚	Input 输入/Output 输出	Function 功能	Character 特性
1	Power 电源	地 Ground	0VDC/2.5A
2	Communication 通信	PCU Communication PCU 通信+	CAN Level CAN 电平
3	Power 电源	急停出 E-Stop out	24VDC/2.5A
4	Power 电源	电源入+24V	24VDC/2.5A
5	Communication 通信	PCU Communication PCU 通信-	CAN Level CAN 电平
6	备用 Unused		

产品尺寸图(Dimension):

产品尺寸 MC-8706	安装尺寸
<p>注: 默认尺寸为MM 手柄下压到位的整体长度为310mm</p>	

CAN-MC8708

产品类型: 小型升降平台底盘控制单元 ECU

Product: Scissor Lift Electronic Control Unit

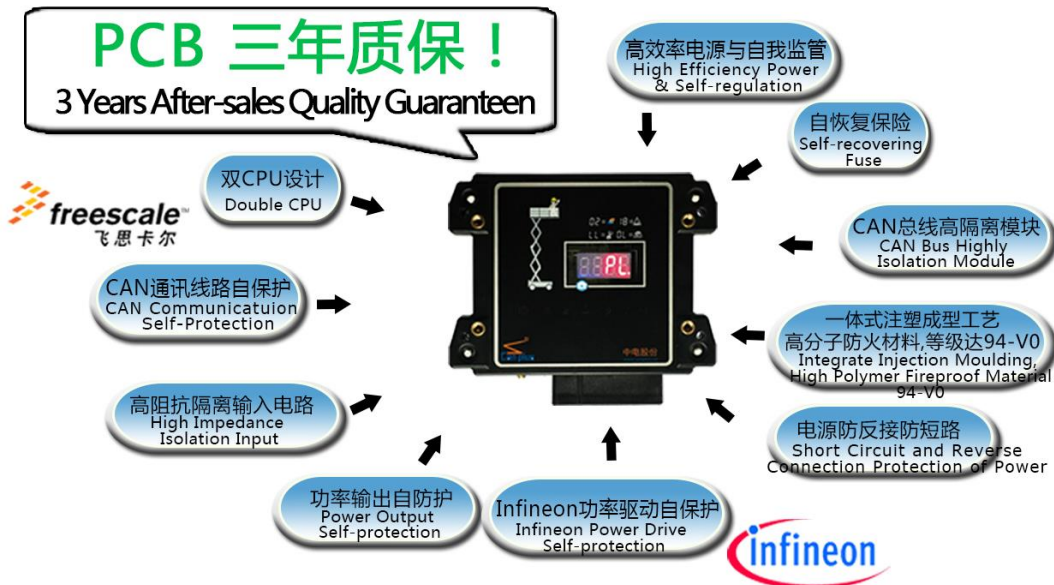
实现功能: 整机基本功能实现。如电机驱动, 阀组控制, 故障报警, 安全限制等。

Function: Realized basic control function of equipment: motor drive, valve control, fault alarming, security restriction, etc.

十重设计
Ten Protective Design of ECU

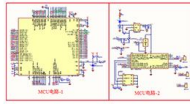
100%设计保护
100% Protection Design

PCB 三年质保!
3 Years After-sales Quality Guarantee

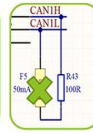
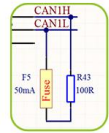


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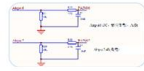
A. 双CPU设计 Double CPU



B. CAN通讯线路自保护 CAN Communicatuion Self-Protection



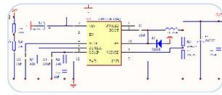
C. I/O 隔离保护 I/O Isolation Protection



D. 功率输出自防护 Power Output Self-Protection



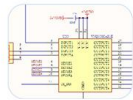
E. 高效电源 High Efficiency Power



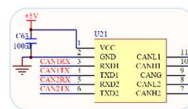
F. 自恢复设计 Self-Recovering Design



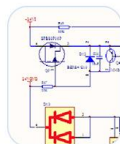
G. 高可靠功率驱动芯片 Highly Reliable Power Drive CHIP



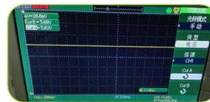
H. CAN总线高隔离防护 CAN Bus Highly Isolation Protection



I. 驱动电源防反保护 Power Reverse Connection Protection



J. 系统低功耗设计 强化系统稳定性 Low Consumption Design of System Helps to Improve the Stability of System

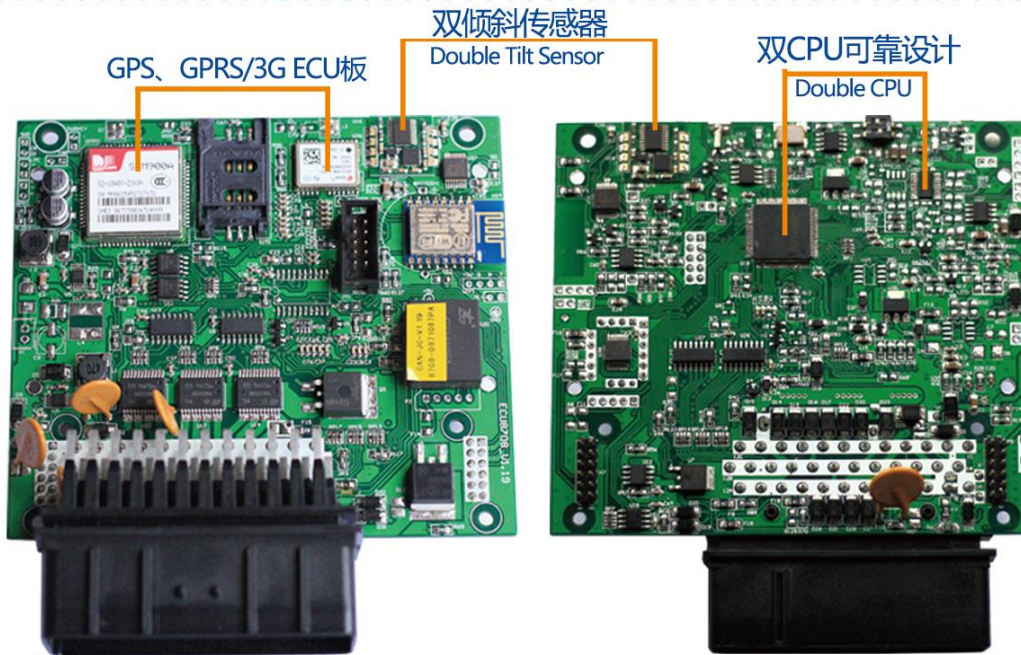


K. 高可靠性防水轻触按键 Highly Reliable Waterproof Button



L. 驱动电源防反保护 Power Reverse Connection Protection





特点 Features :

- 1、集成车辆控制、远程通讯功能，可采集车辆控制系统所有数据，可远程监测和控制车辆；
Integrate vehicle control, remote communication function, collecting all the data of vehicle control system, vehicle remote monitoring and control.
- 2、远程模块全内置嵌入控制器，可防拆卸和防车辆被盗及实现远程锁车功能；
Embedding remote management module in controller helps to prevent controller from being dismantled and vehicle being stolen, realize remote lock car function;
- 3、减少线束，更高可靠性；
The reducing of wiring harness helps to improve the reliability of vehicle;
- 4、数据采集量90%以上。
Collecting above 90% of total data.

VS

外挂式远程模块（辅助）
Plug-in Remote Management Module



特点 Features :

- 1、可远程监测车辆，采集外围及部分车辆数据；
Remote monitoring vehicle, collecting peripheral and some data,
- 2、外接远程通讯模块，安装、拆卸方便（不防拆）
It is convenient for installation & dismount for the external remote management module but not anti-tamper,
- 3、维护成本低；
Low maintenance cost;
- 4、数据采集量20%左右。
Collecting about 20% of total data.