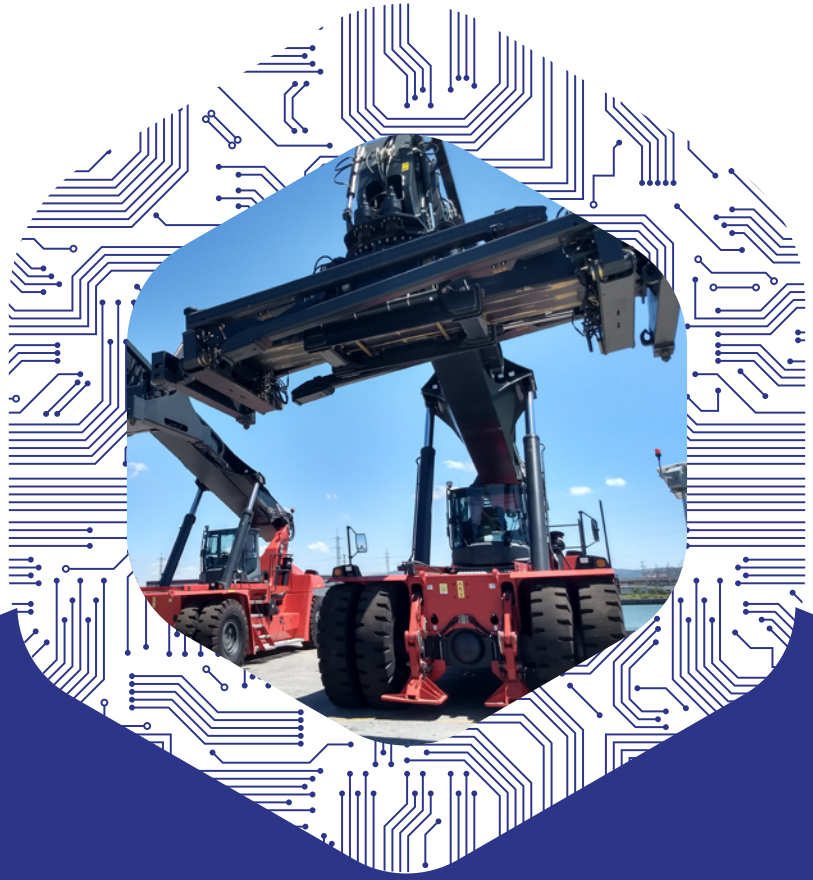
INNOVAL®
Value of Innovation



STACKER ELECTRONIC REVAMPING

www.innoval.biz

INNOVAL
Revamping

"We have developed an electronic system that completely replaces any native electronics on stackers of different brands"

The idea of giving a second life to the stacker stems from the increasingly difficult finding of electronic spare parts for controlling the stacker park and to allow the end customer to use a vehicle for longer with high performance without having to buy a new one .

Benefits of New System

- New generation electronics
- Better modularity of movements
- Configurable with different components
- Always up-to-date software
- Remote monitoring of the vehicle
- Remote assistance from anywhere
- Usage customizations
- 24 months warranty
- Spare parts at low prices

INNOVAL
Software

CSV SW

It allows you to configure all the different resources of the native system at will in order to minimally intervene on the existing wiring

CONTROL SW

Fully parameterizable to allow great versatility in customizing the vehicle and the use of different types of sensors

VNC SW

Allows remote control of the master unit display and allows quick and inexpensive assistance and software updates with minimum movement of technicians

iOM®

It allows the bidirectional transfer of all the data and files necessary for an optimal operational management of the vehicle

NEW Hardware

INCLINOMETER

C-BOX

CABLE REEL

JOYSTICK

CANBUS KEYBOARD

LOAD CELLS

or

PRESSURE SENSORS

Used to give continuity with the previous system

MMI V2

Master Display

The MMI V2 unit is a programmable controller designed to perform the function of master and man/machine interface on industrial mobile vehicles.

FEATURES

CPU master: NXP i.MX6DL (2 x Cortex-A9 @ 800Mhz), Internal memory: 144 kByte RAM (OCRAM), 32i+32d kByte L1 cache, 512 kByte L2 cache

External memory:

- RAM: 1 GByte DDR3, (2 / 4 GByte DDR3 optional)
- NAND Flash: 1 Gbyte, (2 / 4 GByte optional)
- 2 slot micro SD-card (optional additional memory up 2 x 32 GByte)

CPU slave (supervisor): STM ST32H7x 480 MHz (Cortex-M7), Internal memory : 128 kByte Flash, 564 kByte RAM external up to 32MByte Flash (optional)

3-axis accelerometer

3 axis gyroscope

MINI PCI-E slot for LTE modem with micro SIM-Holder

Slot M.2

GPS Module

DCU-S

Slave Control Unit

DCU-S V.2 is a programmable controller designed for use on industrial vehicles, able to operate independently even in extreme conditions (humidity, temperature, dust, vibrations, etc.), both for reading the signals coming from the sensors of the machine, and for the control of the management of the actuators.

FEATURES

CPU: ARM Cortex M3 (LPC1518)

Internal memory: 20 kByte RAM, 128 kByte Flash, 4 kByte EEPROM

CAN Bus: full CAN 2.0B (11-bit or 29-bit identifiers), with programmable baud rate from 125 kbit/s to 1 Mbit/s, CANOpen protocol (optional: J1939, ISOBUS)

Functions: Watch Dog, Brown Out, Undervoltage

DCU-M+

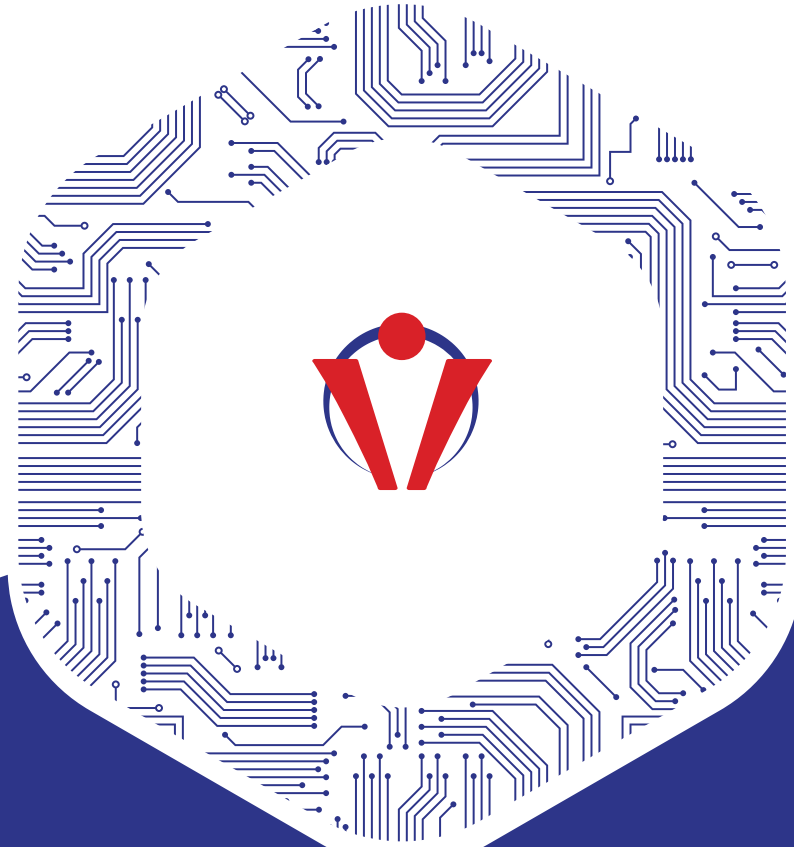
Slave Control Unit

The DCU-M+ control unit is a fully programmable general-purpose controller. It can be used independently as a reading unit for the signals coming from the machine's sensors and as a driving or control unit for managing the actuators (without the need for auxiliary amplification).
It is capable of executing several programs separately or in relation to each other in real time (supports an embedded real-time Operating System).

FEATURES

- Main CPU: ARM Cortex M7 Clock 400Mhz (STM32H7xx)
  - Internal memory: 564 KByte RAM, 128 KByte Flash (optional up to 1 MByte)
  - External memory: 32K EEPROM
  - Optional up to 64 KByte F-RAM
  - Optional up to 16 MByte Flash (Quad SPI, XIP)
  - Optional up to 64 MByte Flash (Octa SPI, XIP)
  - Optional RTC with SuperCap backup
  - Optional 3-axis accelerometer
  - CAN Bus: FD-CAN/CAN 2.0B (11 bit or 29 bit identifiers), with programmable baud rate from 125 kbit/s to 8 Mbit/s, CANopen protocol (optional J1939, ISOBUS)
  - Optional second and third FD-CAN/CAN2.0B
  - Optional RS485: Half-duplex up to 115200 Baud
  - Optional M12 connector for USB device (Virtual serial for Debugging / Firmware Update)

- Supervisor CPU: ARM Cortex M33, Clock 96MHz (LPC550x)
  - Internal Memory: 80 kByte RAM, 128 kByte Flash
  - Optional CAN Bus: FD_CAN/Can 2.0B, usable for CANOpen Safety protocol, compliant with EN50325-5 for systems with high safety requirements, SIL2 and/or PId.
  - Optional RS485: Half-duplex up to 115200 Baud



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