





SPREADER REVAMPING

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INNOVAL Revamping

"We have developed a latest generation electronic system that meets the needs of customers..''

The vast and heterogeneous fleet of Spreaders operating in the world can be revamped with the INNOVAL single electronic system.



NEW SYSTEM Benefits

Always up-to-date software

Configurable with different components

Small size

Remote monitoring of the vehicle

Remote assistance from anywhere

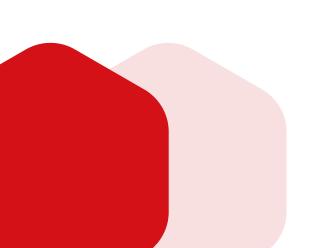
Customizations

24 months warranty

Spare parts at low prices

PI-D safety protocol

Heavyduty "automotive" system



iOM[®] SPREADER Panel

Crane connection by I/O or CAN-bus wiring



The DCU-C V2 is a fully programmable automotive grade controller designed to be used as high performance master controller and Man-Machine-Interface (combined with an external VGA/HDMI) in industrial vehicles.

On board GPS/LTE/WiFi for internet connection.





The SIOC (Secure IO Controller) control unit is a programmable controller designed to operate in the automotive environment on systems that require a high degree of reliability and safety PL-d (ISO EN 13849).





Easy configuration and programming via the 7" touchscreen display for assistance (optional).

DCU-C





FEATURES:

CPU master: NXP i.MX6DL ($2\,\mathrm{x}$ 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: 512 Mbyte, (1 / 2 / 4 GByte optional)

2 x Slot micro Sd-card (optional memory up to 2 x 32 Gbyte)

CPU slave (supervisor): NXP LPX5526 150 MHz (Cortex-M33), Memory: 256

kByte Flash, 144 kByte RAM

3 axis accelerometer and 3 axis gyroscope

3 axis magnetic-sensor (optional)

miniPCle slot for LTE/4G with micro SIM-Holder

M.2 slot (optional)

GPS module

SIOC





FEATURES:

CPU n.1: Microchip PIC24HJ128GP506 (40Mips, 16 bit Core, Internal memory: 8 kByte RAM, 128 kByte Flash)

CPU n.2: Microchip PIC18F4580 (10Mips, 8 bit Core, Internal memory: 1.5 kByte RAM, 32 kByte Flash, 256 byte EEPROM)

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

Serial interfaces: RS485, programmable baud rate from 1.2 to 115.2 kbit/s



INNOVAL System

In-cab awareness via lights and machine status displays (control and monitoring)

- Telescope control of the spreader for 20' 30' 40'
- 6. Monitoring of operating hours

 Control of the flaps and twistlock engagement Counting of transported containers

3. Gravity point tower control

8. I/O live

4. Safety control

9. Bump detection

5. Remote Assistance

10. Monitoring of alarms and events



CONTACT US

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