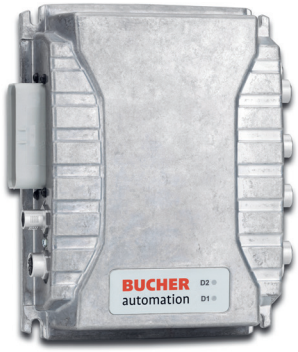
BUCHER
automation

JetControlMobile 631B-O04

Multiple-display controller



- Powerful PLC with advanced connectivity
- Excellent HMI features on two displays
- Free positioning, size adjustment and scaling of 8 camera images
- Integrated JetSym and JetViewSoft programming environment compliant with IEC-61131-3
- Plug-in for programming in C or 3rd party software
- Can be updated via USB flash drive

Description

The JCM-631B multi-monitor controller combines outstanding video features, and high-performance HMI and PLC disciplines into a single system. A powerful dual core 32-bit CPU with 1 GHz clock rate is at the heart of the automation functions. Four CAN interfaces, Gbit Ethernet connectivity, USB and RS232 offer state-of-the-art connectivity to suit complex architectures. Visualization takes place on 2 high-resolution displays each controlled via LVDS interfaces with one connector per display being sufficient. A host of supported display formats and configurations allow for versatile screen arrangement.

A single low-latency FPGA is able to process 6 camera images from 8 camera channels simultaneously. The images can be freely scaled, cut, positioned, or superimposed with graphic and text elements. With reasonable cost and effort, it is possible to implement operating concepts in special-purpose vehicles that offer a level of integration even outdoing modern middle-class cars. The IEC-61131-3-compliant STX programming language and scalable vector graphics support by JetViewSoft offer a highly efficient workflow for control and visualization. A current YOKTO is available for the JCM-631B that enables the entire range of Linux tools as a programming environment.

Technical specifications

CPU	i.MX6 Dual Cortex A9 (Chip-Rev. 1.6), 32-bit, 1000 MHz
Memory: RAM – application – non-volatile	1 GB RAM, 8 GB eMMC Flash, of which 4 GB are shared, 32 KB remanent
Co-CPU (CAN 3, 4/Watchdog)	120 MHz, 128 KB RAM ... 512 KB flash
Graphics programming	Linux YOKTO/JetViewSoft logic: IEC61131-3 STX
Controller programming	Linux YOKTO/JetSym logic: IEC61131-3 STX
Operating system	LINUX (5.xx LTS Kernel)
Power management	Boot-up duration < 10 s (until application screen appears)
Operating/storage temperature	-30 ... +75 °C/-40 ... +85 °C
Ports and interfaces	
FPD-LINKII	2; display, display power supply, CAN
CAN	4; CANopen, SAE J1939, ISOBUS 11783, 125 kB/s ... 1 MB/s
USB	1
Ethernet	1; (option)
CVBS cameras	8; of which 6 can be displayed simultaneously (incl. camera supply)
RS-232	2; (option 1 x RS-232 und 1 x RS-485)
Inputs	1; camera supply
Digital inputs	1; ignition
	3; digital input active-high, input impedance 43 kΩ
Digital outputs	2; peak current 3 A
RTC	Yes, various backup modes, battery included
Degree of protection	IP65
Vibration	DIN EN 60068-2-64, Cat. 2
Shock	DIN EN 60068-2-64, 30 g
Protection against polarity reversal	Yes

Pinout

35-pin male connector

Ignition, U_{ign} (terminal 15)	1
GND, battery - (terminal 31)	2
UB, battery + (terminal 30)	3
n.c. (not connected)/option: CAN3 L	4
CAN2 L	5
CAN1 L	6
n.c./option: CAN4 L	7
n.c./option: CAN4 H	8
GND for RS-232 (COM2)	9
GND (supply) for CAM8	10
DO1	11
DO2	12
Power supply DC 12 V/24 V for CAM8	13
Video input for CAM7	14
Video input + for CAM8	15
n.c./option: CAN3 H	16
CAN2 H	17
CAN1 H	18
GND	19
GND	20
GND (supply) for CAM7	21
GND	22
Shield	23
Power supply DC 12 V/24 V for CAM7	24
Video input + for CAM7	25
Video input for CAM8	26
RS-232/RS-485 TX (COM2)	27
RS-232/RS-485 RX (COM2)	28
DI1	29
Camera output power (OUT)/DO3 up to 3 A	30
Camera power consumption (IN: DC 12 V/24 V)	31
DI2	32
n.c./option: DI3	33
Shield	34
Shield	35

Pinout

M12 male connector on service port 1

USB signal VCC5 + I/O	1
USB signal DATA -	2
USB signal DATA+	3
- (do not connect)	4
Screen for USB	5
RS-232 RX (COM1)	6
RS-232 TX (COM1)	7
GND	8

Pinout

M12 female connector on service port 2 (Gbit Ethernet)

D1 +	1
D1 -	2
D2 +	3
D2 -	4
D4 +	5
D4 -	6
D3 -	7
D3 +	8

Pinout

M12 female connector - WLVDS 1 ... 2 - OUT

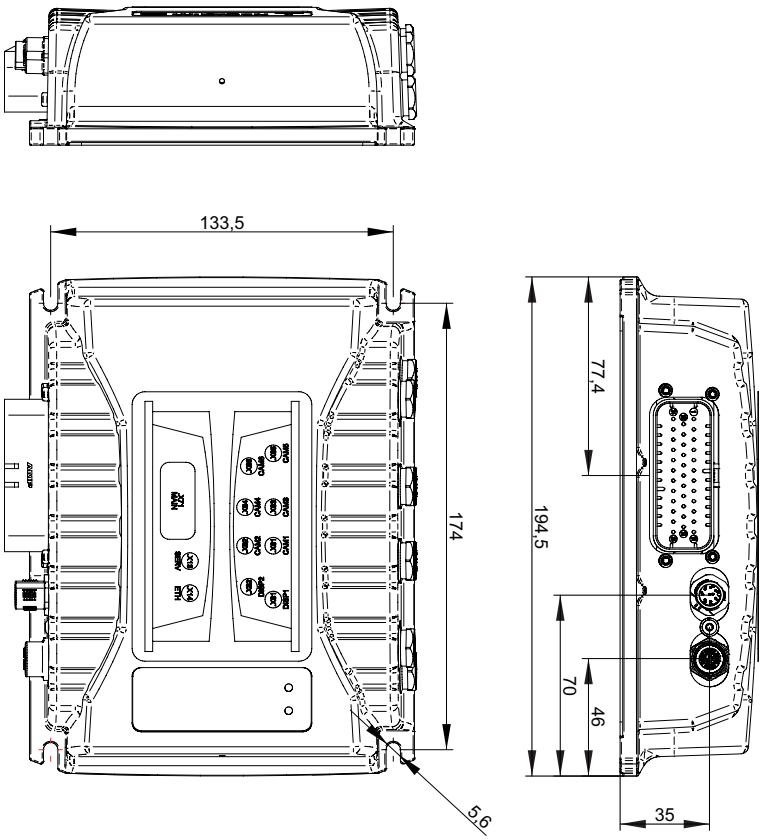
24 V supply	1
GND (supply)	2
GND (supply)	3
LVDS 1 ... 2+	4
CAN1 Low	5
LVDS1...2 -	6
24 V supply	7
CAN1 High	8

Pinout

M12 socket - CAM1 ... CAM6

Video input - for CAM1 ... 6	1
GND (supply)	2
Video input + for CAM 1 ... 6	3
Supply DC 12 V/12 V for CAM1 ... 6	4
GND (supply)	5

Dimensional drawing



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Further details and order information are available on request. Specifications are subject to change without notice. Errors and omissions excepted.

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