

VCU Pro IDM Onboard Unit Datasheet

Vehicle Connectivity Gateway



REV 2.02

0501.345.187



VCU Pro IDM Onboard Unit

VCU Pro IDM is the advanced on-board unit from the Vehicle Connectivity Unit series. With 4 CAN interfaces (2 standard CAN and 2 CAN FD), 4 analog inputs and 4 digital outputs VCU Pro IDM is a professional and robust gateway. Two independent processors ensure both a safe and secure connection to the vehicle network and also provide a universal communication capability.

Dimensions
200 × 122 × 40 mm

Temperature Range
-40 to +70 °C
acc. DIN EN 50155
Class TX



Cellular Antenna Connectors 2x
WLAN/Bluetooth Antenna
Connectors 2x
GNSS



Power supply and
signal interface

CPU	ARM® 1 GHz	Automotive Connector	MOLEX (48 pins)
RAM	512 MB	Antenna Connectors	SMA Female
Memory	8 GB Flash		
Sensors	3-axis Accelerometer 3-axis Gyro	Mounting Option	Screws
GNSS	GPS, Glonass, BeiDou, Galileo		

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<p>Communication and Interfaces</p> <ul style="list-style-type: none"> 2× CAN 2.0B 2× CAN FD 4× Analog IN 4× Digital OUT 1× Ethernet 100 BaseT 2× Ethernet BrdrR WiFi 802.11 a/b/g/n Bluetooth 4.2 1× RS232 1× RS232 / RS485 1× LIN 1× K-Line 1× embedded SIM + 1× plastic SIM (accessible) Cellular – LTE Cat4 (Global) 	<p>Processors and modules</p> <ul style="list-style-type: none"> ARM Cortex A8 (1GHz) Infineon Aurix Microcontroller (200MHz, 472 KB RAM) HSM (Hardware Security Module) for cloud communication secure key storage Second HSM for diagnostic key sessions GTM (Generic Timer Module) 	<p>Mechanical</p> <ul style="list-style-type: none"> Environmental conditions according to EN50155: Cold operating and non-operating; Dry, damp heat and cyclic Vibration and shock acc. EN61373 Material: Aluminum / Plastic Waterproof housing Operating temperature from -40°C to +70°C acc. DIN EN 50155 Class TX Protection level: IP55 (IP69K optional)
<p>GNSS</p> <ul style="list-style-type: none"> uBlox NEO-M9V with UDR and ADR (Dead Reckoning) 	<p>Sensor Network</p> <ul style="list-style-type: none"> 3-axis Accelerometer 3-axis Gyro 	<p>Memory</p> <ul style="list-style-type: none"> 512 MB RAM 8 GB eMMC Flash
	<p>Power Supply</p> <ul style="list-style-type: none"> Nominal Voltage: 9–36 V DC 	<p>Approvals</p> <ul style="list-style-type: none"> E-Mark ISO16750 Fire protection DIN EN 45545-2
	<p>System</p> <ul style="list-style-type: none"> Linux Operating System Fail-safe OTA update 	<p>Certification</p> <ul style="list-style-type: none"> CE FCC (components)

