

## Universal Off-Highway Control – Vision

### General Description

The Vision is a powerful electronic solution for visualization (from 6.5" up to 10.4" color displays) in off-highway industries that rely on their equipment to function under the most difficult conditions.

It is part of a complete and compatible product family and is protected by a robust housing suited to the off-highway industry.

### Specifications

Parameter		Unit
Dimensions	234 x 181 x 48	mm
Weight	790*	g
Operating Temperature	-40 to +70*	°C
Operating Altitude	0 to 4000	M
Supply Voltage	9 to 36	V
Peak Voltage	52	V <sub>max</sub>
Current Consumption	1* at 9V	A <sub>max</sub>
Environmental Specifications		
Protection Degree	DIN40050 IP65	
Vibration, Shock, Bump	IEC 68-2-64, -27, -29	
EMC	ISO/DIS 13766	
ESD	IEC 61 000	
Temperature Environment	IEC 68-2-1, -2, -3, -14, -30	
Load Dump	ISO 7637	
Conducted Emissions	CISPR 25	

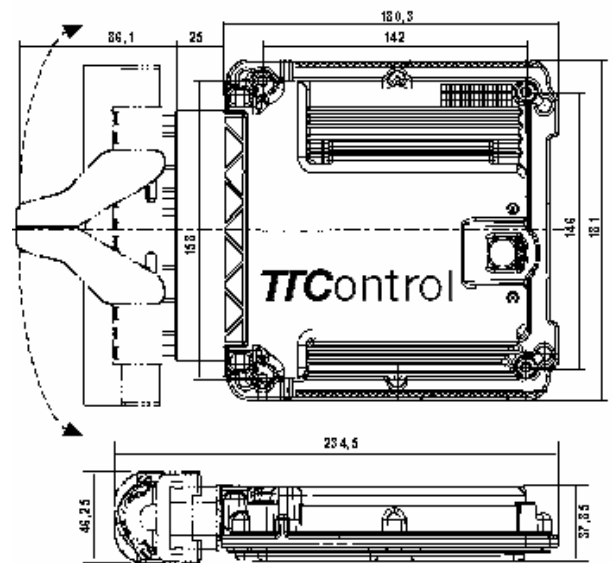
\*All parameters without display unit.

### Features

- MPC823E, 66 MHz, 8 MB Flash, 16 MB RAM, RTC
- 2 x serial EEPROM 32 kB over I<sup>2</sup>C (+ 1 x 32 kB EEPROM or 8 kB FRAM opt.)
- 1 x TTP bus with redundant channels, RS-485 physical layer (up to 5 Mbit/s)
- TTP communication controller AS8202NF
- 1 x RS-232 Modem (incl. handshake signal lines)
- 2 x RS-485 or 1 x RS-485 + 1 x RS-232
- 1 x LIN (up to 19200 bit/s)
- 1 x CANHS + 1 x CANHS or opt. LS (fault-tolerant)
- 1 x Ethernet following IEEE 802.3 (10 Mbit/s)
- 1 x 1-Wire (i-Button) Interface
- LVDS and PAL/NTSC interface with many LCDs:
  - 6.5" TFT 400x240 (-40 °C to +80 °C)
  - 7" TFT 16:9 480x240 (-30 °C to +85 °C)
  - 10.4" TFT 640x480 (-20 °C to +70 °C)
- Touch panel for all displays available over RS-232
- External and on-board temperature sensor
- Software: embedded Linux, C/C++, Microwindows, Engenuity VAPS, CoDeSys<sup>®</sup> 2.3

### Outline Dimensions

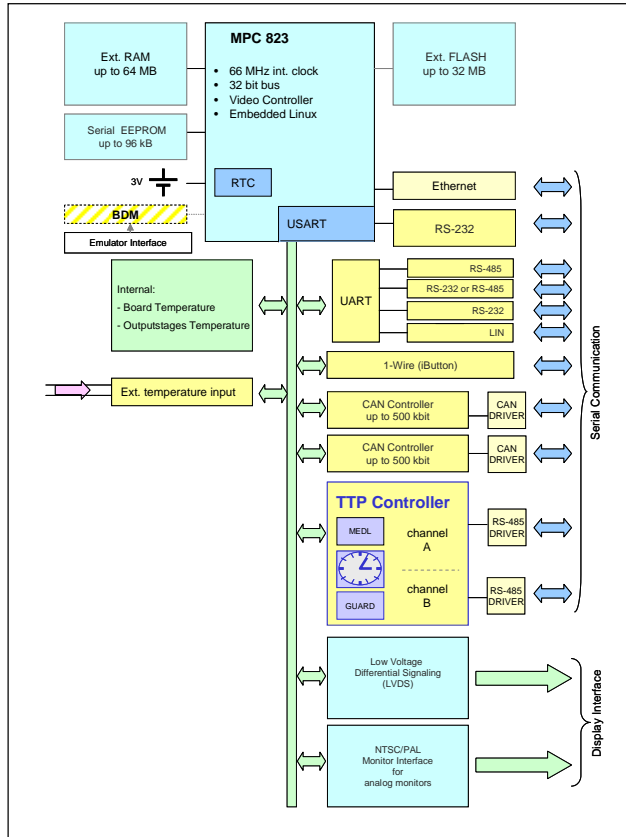
- Aluminum injection-molded housing
- Splash-proof 154 pin connector
- Pressure adjusting with water barrier
- Housing fins for optimal temperature deduction



### Cervis Incorporated, North American Partner of TTControl

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### Block Diagram



### Ordering Information

Available Options								Device Numbering System									
TTC Vis	B	B	M	F	A	CD	NA	S	TTC Vis	n	B	n	n	n	n	n	S
TTC Vis	C	B	M	F	A	CD	NA	S	<b>Display Type</b>								
TTC Vis	D	B	M	F	A	CD	NA	S	<b>B:</b> 6.5" TFT 400 x 240								
TTC Vis	B	B	X	Y	B	CD	NA	S	<b>C:</b> 7" TFT 480 x 240								
TTC Vis	C	B	X	Y	B	CD	NA	S	<b>D:</b> 10.4" TFT 640 x 480								
TTC Vis	B	B	M	F	B	CD	NA	S	<b>I/O configuration</b>								
TTC Vis	C	B	M	F	B	CD	NA	S	<b>B:</b> without I/Os								
TTC Vis	D	B	M	F	B	CD	NA	S	<b>RAM</b>								
TTC Vis	B	B	M	F	A	VA	NA	S	<b>M:</b> 16 MB								
TTC Vis	C	B	M	F	A	VA	NA	S	<b>X:</b> 32 MB								
TTC Vis	D	B	M	F	A	VA	TT	S	<b>Flash</b>								
									<b>F:</b> 8 MB								
									<b>Y:</b> 64 MB								
									<b>Serial interfaces</b>								
									<b>A:</b> 1 x RS-232 Modem (with handshake signals), 2 x RS-485, 1 x LIN								
									<b>B:</b> 1 x RS-232 Modem (with handshake signals) 1 x RS-232, 1 x RS-485, 1 x LIN								
									<b>Firmware</b>								
									<b>CD:</b> CoDeSys Run-Time-System – for CoDeSys development environment								
									<b>VA:</b> VAPS – software tool suite for rapid deployment of dynamic graphical HMIs for complex applications								
									<b>TTP Communication</b>								
									<b>NA:</b> No TTP communication available								
									<b>TT:</b> Enables TTP communication, requires TTP toolsuite								
									<b>Housing</b>								
									<b>S:</b> Sealed								

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