VEETHREE TECHNOLOGIES

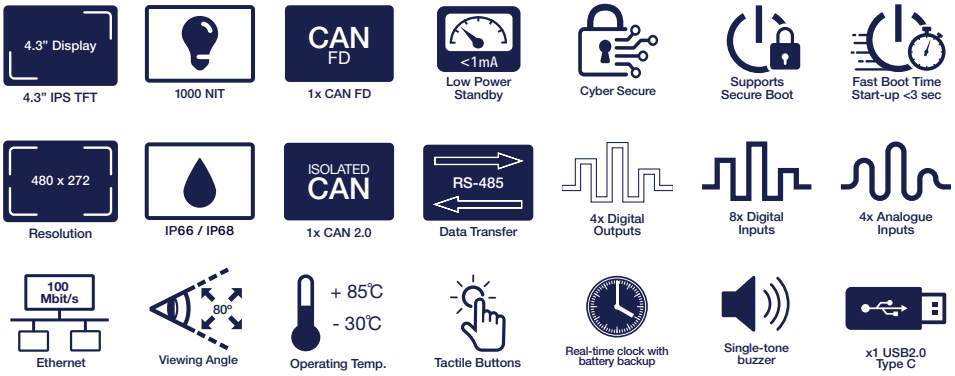
C4.3RT

4.3” IPS TFT CAN bus Display with backlit buttons

Key Features:

- 4.3” IPS TFT
- 480 x 272px resolution
- 1000 NIT backlight
- IP66 / IP68 all round
- 5 backlight buttons
- Up to 4 Analogue Inputs (0-10V, 0-5000 Ohm, 0-28mA)
- Up to 8 Digital Inputs (5V - 28V DC)
- 4 Digital Outputs, capable of sourcing or sinking up to 500 mA, and up to 10 KHz PWM
- Frequency (tachometer) input +/- 3V to +/- 60V, capable of measuring 4 Hz to 50 KHz
- Ignition input can be used for system wake up from low power mode
- 1 Isolated CAN 2.0
- 1 CAN FD
- 100 Mbit/s Ethernet
- Real Time Clock with battery backup*
- Low Power Standby
- Supports Secure Boot
- Fast Boot Time - *starts up <3 seconds*
- Single-tone buzzer
- **Mounting options include:**
  - Surface Mount
  - RAM Mount
  - Flush Mount (optional bracket)

***Backup battery** is removable and replaceable the C4.3 complies with the EU Battery Regulation (EU) 2023/1542.*



C4.3RT – 4.3” IPS TFT CAN BUS DISPLAY WITH BACKLIT BUTTONS

The C4.3RT continues the line of new rugged display solutions from Veethree. The 4.3” high bright IPS TFT colour display is a compact unit with 5 x tactile feedback buttons. On-board light sensor automatically adjusts brightness according to surroundings.

Suitable for a wide range of applications with communication options of 2 x CAN (1 x CAN FD capable and 1 x CAN isolated), RS485 and Ethernet. On-board I/O includes analogue / digital inputs and digital outputs.

With ARMcortex-M Microcontroller the C4.3RT can achieve fast boot times (starts up in less than 3 seconds) and can be used in low power applications, and also supports Secure Boot to meet CRA regulations. The target OS running the C4.3RT is provided by Zepher, a real-time operating system (RTOS) and the development environment includes a custom docker container (Linux) which is integrated into VSCode for Windows 11 or Linux Host.

The graphics library for the C4.3RT comprises LGVL and we support NXP's GUI Guider that utilises the LGVL platform. Future enhancements to the development environment, will include the SDKC migration path and the integration of Codesys.

The fully bonded LCD provides outstanding viewability in all conditions including direct sunlight. The ruggedised unit is sealed to meet IP66 / IP68 standards – making it ideally suited for use in harsh environments.

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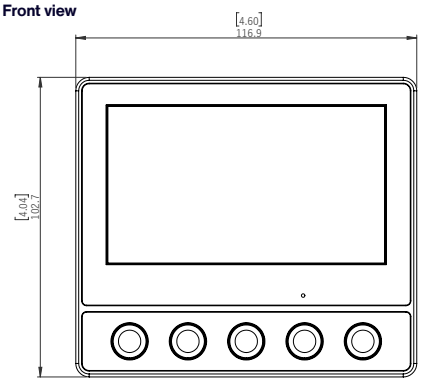
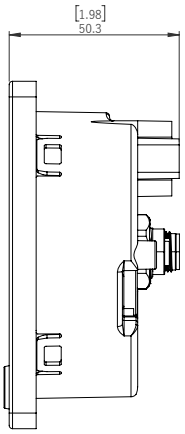
Specifications

Front view

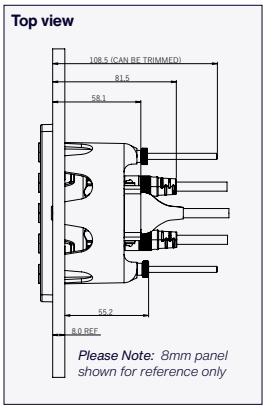


Side view



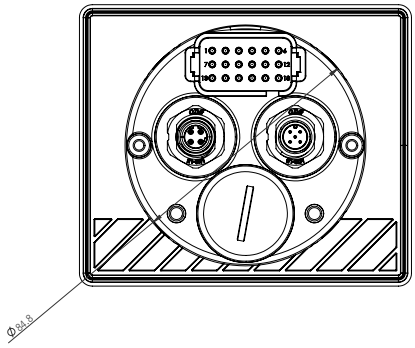
Cable allowance dimensions: *please allow appropriate room for cables to bend*

Top view

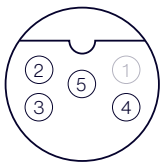


Please Note: 8mm panel shown for reference only

Back view



CAN2 (NMEA2000™)

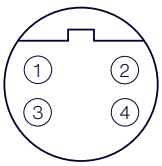


M12-5 Pin (Male)

Pin Number:

1: No connection
2: Isolated power +
3: Isolated power -
4: Isolated CAN High
5: Isolated CAN Low

Ethernet



M12 D-Code

Pin Number:

1: TX+ (White /Orange)
2: RX+ (White/Green)
3: TX- (Orange)
4: RX- (Green)

Electrical	
Display	4.3" IPS TFT
Resolution	480 x 272px
Active Area	95mm x 54mm
Viewing Angle	-80 ~ 80° (H) -80 ~ 80° (V)
Contrast Ratio	800:1
Brightness	1000 NIT (cd/m²) Full sunlight readable
Power Requirements	9-28Vdc nominal supply voltage
Sounder	Internal buzzer
Connection	x1 18 pin Deutsch connector in moulded receptacle *Mates with Deutsch DT16-18SA-K004, Amphenol AT16-18SA-K004 or equivalent plugs* x1 M12 isolated CAN / x1 M12 Ethernet
Communications	x1 CAN Bus / x1 CAN FD / x1 RS485 / x1 USB Type C (USB2.0) / x1 100 Mbit/s Ethernet

Environmental	
Operating Temperature	-30°C to +85°C
Storage Temperature	-40°C to +85°C
Glass Impact Rating	IK06
Degree of Protection	IP66 / IP68 all round

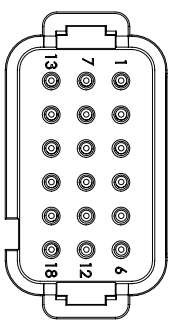
Mechanical	
Case Material	PC / ABS
Case Colour	Black / Anthracite Grey
Dimensions	116.9mm x 99.1mm x 38mm deep (51.9mm overall depth)
Fitting Kit	x2 Nylon 6-6 Nut (white) / x2 Nylon 6-6 Stud (white)

OS and Software	
Development Environment	Custom Docker (Linux) Container integrated into VSCode for Windows 11 or Linux Host.
Target OS	Zephyr
Graphics Library	LVGL and NXP's GUI Guider that uses LVGL
COMING SOON!	SDKC Migration path and integration of Codesys

Inputs / Outputs	
Analogue Input	Up to 4 x 0-10V, 0-5000 Ohms, 0-28 mA
Digital Inputs	Up to x8 digital inputs
Digital Output	Up to x4 digital outputs sourcing or sinking up to 500mA
Frequency Input	x1 frequency input +/- 3V to +/- 60V, capable of measuring 4 Hz to 50 KHz

Pin In / Out descriptions

Deutsch Connector



Pin Descriptions

1. GROUND	10. ANALOGUE IN 3 / DIGITAL IN 7
2. +POWER	11. ANALOGUE IN 4 / DIGITAL IN 8
3. DIGITAL OUT 1 / DIGITAL IN 1	12. WAKE UP INPUT
4. DIGITAL OUT 2 / DIGITAL IN 2	13. GROUND
5. DIGITAL OUT 3 / DIGITAL IN 3	14. TACH IN
6. DIGITAL OUT 4 / DIGITAL IN 4	15. RS485A
7. GROUND	16. RS485B
8. ANALOGUE IN 1 / DIGITAL IN 5	17. CAN1 LOW
9. ANALOGUE IN 2 / DIGITAL IN 6	18. CAN1 HIGH