VEETHREE
TECHNOLOGIES

PRODUCT PREVIEW

T7RT

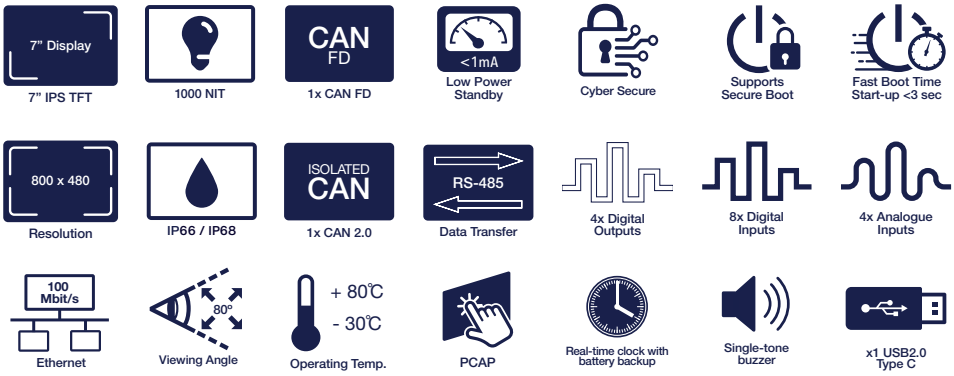
7” IPS TFT CAN Bus Display with capacitive touchscreen



Key Features:

- 7” IPS TFT
- 800 x 480px resolution
- 1000 NIT backlight
- IP66 / IP68 all round
- Projected Capacitive (PCAP) touchscreen
- Up to 4 Analogue Input (0-10V, 0-5000 Ohm, 0-28mA)
- Up to 8 Digital Inputs (5V - 32V 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 in <3 seconds*
- Single-tone buzzer
- **Mounting options include:**
  - Surface Mount
  - RAM Mount
  - Flush Mount (optional bracket)

***Backup battery** is removable and replaceable the T7RT complies with the EU Battery Regulation (EU) 2023/1542.*



T7RT – 7" IPS TFT CAN BUS DISPLAY WITH CAPACITIVE TOUCHSCREEN.

The T7RT continues the line of new rugged display solutions from Veethree. The 7" high bright colour display is a compact unit with capacitive touch. 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 (clock speed 492MHz) the T7RT 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 T7RT 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.

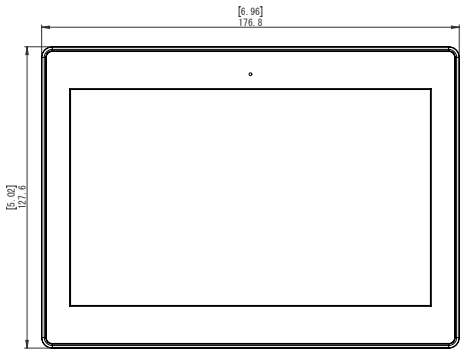
Graphics support is provided through the LVGL version included with Zephyr RTOS. Future enhancements to the development environment will include the legacy SDKC migration path and the integration of Codesys.

The fully bonded LCD provides outstanding viewability in all conditions including direct sunlight. The ruggedised unit is sealed to meet IP66/IP68 standards – suited to the harshest of environments.

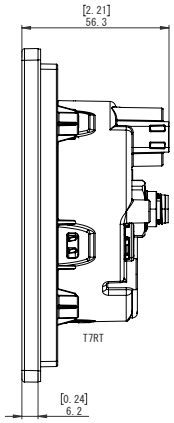
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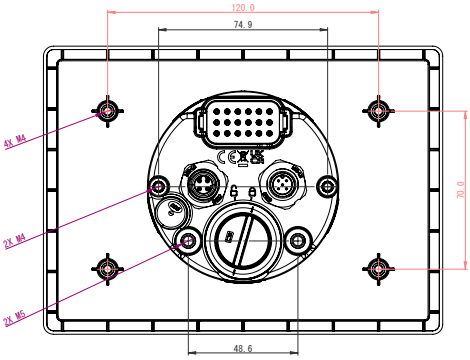
Specifications

FRONT VIEW



SIDE VIEW





Electrical	
Display	7" IPS TFT
Resolution	800 x 480px
Active Area	152mm x 91mm
Viewing Angle	-80 ~ 80° (H) -80 ~ 80° (V)
Contrast Ratio	800:1
Brightness	1000 NIT (cd/m²) - full sunlight readable
Power Requirements	9-32V DC nominal supply voltage
Sounder	Internal buzzer
Connection	x1 18 pin Deutsch - TE connectivity DT16 18SA-K004 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

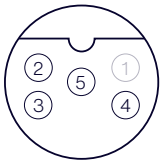
Environmental	
Operating Temperature	-30°C to +80°C
Storage Temperature	-40°C to +80°C
Glass Impact Rating	IK06
Degree of Protection	IP66 / IP68

Mechanical	
Case Material	PC / ABS
Case Colour	Black / Anthracite Grey
Dimensions	176.8mm x 127.6mm x 56.3mm (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
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

CAN2 (NMEA2000®)

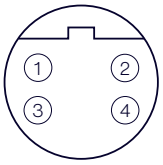


M12-5 Pin (Male)

Pin Number:

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

Ethernet



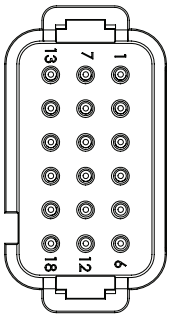
M12 D-Code

Pin Number:

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

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

Please note: *The product description and technical specifications are subject to change prior to the official launch of the T7RT.*