Product Data Sheet

CANect® CL-T05-100-10

Wi-Fi Module

CANect Product Portfolio

HED's CANect® Telematics portfolio lets you create a complete telematics strategy that suits your customer base, all customized to your application. The CANect® family is a full portfolio of hardware, software, and web portal tools that give you complete control of your assets in the field.

Processor and Memory

Processor:	Freescale i.MX6UL - 696MHz
Architecture:	ARM Microprocessor
Operating System:	Linux
Memory (RAM[1], Flash[2]):	128MB DDR3, 4GB eMMC

[1] This module can support up to 512MB of RAM. This requires additional validation.
[2] This module can support up to 32GB of eMMC. This requires additional validation.

Environmental

IP Rating:	IP67
Operating Temperature:	-40°C to 70°C [1]
Storage Temperature:	-40°C to 85°C
RoHS Compliant:	Yes

[1] Temperature range subject to use case. HED assumes heat dissipation based on general market software and solution use cases.

Electrical Characteristics[1]

Operating Voltage:	6.5VDC to 32VDC

[1] Please reference the product family specification for power consumption characteristics.

Controller Area Network (CAN) [1]

Number of Buses:	2
Standard:	ISO 11898
Data Rate:	20K, 50K, 100K, 125K, 250K, 500K, 1M bits/sec
Identifier Support:	11 and 29 bit
Data Length:	0 to 8 byte(s)

[1] Application Note: The device is capable of supporting universal CAN protocols.

Ethernet Port

Standard:	IEEE 802.3, 10/100BaseT
Data Rate:	10/100M bits per second

Universal Serial Bus (USB)[4]

Interface:	Single, 5 pin USB with OTG
USB Standard:	2.0 with OTG Support
Data Transfer Rate:	480M bits per second
Host	Yes[1,2]
Client	Yes[3]

[1] Application Note: USB Host is software configurable to respond to the OTG pin being asserted.
[2] Application Note: USB Host can support flash drives, user inputs, and various other devices.
[3] Application Note: USB Client is a common method to reprogram or serial terminal into the device.
[4] USB is intended for module configuration and device programming.

Wi-Fi Interface

Standard:	802.11 b/g/n (2.4GHz)
Channels:	1-13[1]
Operational Modes:	APN, Client, Concurrent (two simultaneous instances)
Data Transfer Rate:	b: 11, 5.5, 2, 1 Mbps g: 54, 48, 36, 24, 18, 12, 9, 6 Mbps n: 150, 72Mbps
Max Transmit Power:	18dBm
Security:	WEP64/128 WPA (TKIP, AES) WPA2 (CCMP, AES) WAPI hardware support 64/128 bit AES hardware support
Certifications[2]:	US (FCC CFR 47 part 15) Canada (IC RSS)
Supported Antenna:	Internal Antenna

[1] Certain governments do not permit operating with all available channels.
[2] Inquire about additional geographic and governmental certifications as this is updated frequently.

Accelerometer/Inclinometer

Function:	3-Axis
Sensitivity Range:	2/4/8G (Configurable)
Accuracy[1]:	Inclinometer ±3°

[1] The inclinometer is accurate to ±3° when the accelerometer is configured to 2G under the operating temperatures defined in this document.

Real Time Clock

The real time clock is powered during device shutdown with 10-year lithium battery.

LED Indicators

Multiple LEDs are located on the board to provide status indicators such as GPS, GSM, Wi-Fi, and various other module functions. Additionally, the LEDs can be programmed to support alternative module status or functions.

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Physical

Dimensions: 6.3” x 5.25” x 1.28” (H x W x D)

*STEP files are available upon request.

Antenna Installation

The antennas need to be installed with their respective SMA connector for proper compliance. The SMA connections need to be torqued from 7 to 10 in-lbf or the Metric equivalent range of 0.8 to 1.1 N-m

Mounting

The mounting holes in the mounting tabs are compatible with a #10 type bolt (either 10-32 or 10-24). Mounting bolts should be torqued between 25 and 35 in-lbf. The Metric equivalent to the #10 is a M5 bolt with an installation torque range of 2.8 to 4N-m.

Software Development

Developers can choose between the CANect Software Development Kit (SDK) or the CANect® Composer® solution development utility. Each piece of software is free to customers and requires an NDA.

CL-T05 Module Pinout

Main Connector - DT16-18SA-K004	
Pin	Function
1	Ethernet TXN
2	Ethernet TXP
3	Ethernet RXN
4	Ethernet RXP
5	Battery(-) Module
6	Unswitched Battery(+) Module
7	CAN1-H
8	CAN1-L
9	CAN2-H
10	CAN2-L
11	Keyswitch(+)
12	Input STB/STG/VTD (0-5.66V)
13	USB Power
14	USB DM (D-)
15	USB DP (D+)
16	USB ID (OTG)
17	USB Ground
18	150 mA Sinking Output

RF Connections	
SMA	Not Populated (Internal Antenna)
SMA	Not Populated
RP-SMA	Not Populated

For more information, please contact us at:

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