Caprica 5L
Play-Fi™ Wireless Module User Manual and Data Sheet

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Revision 1B

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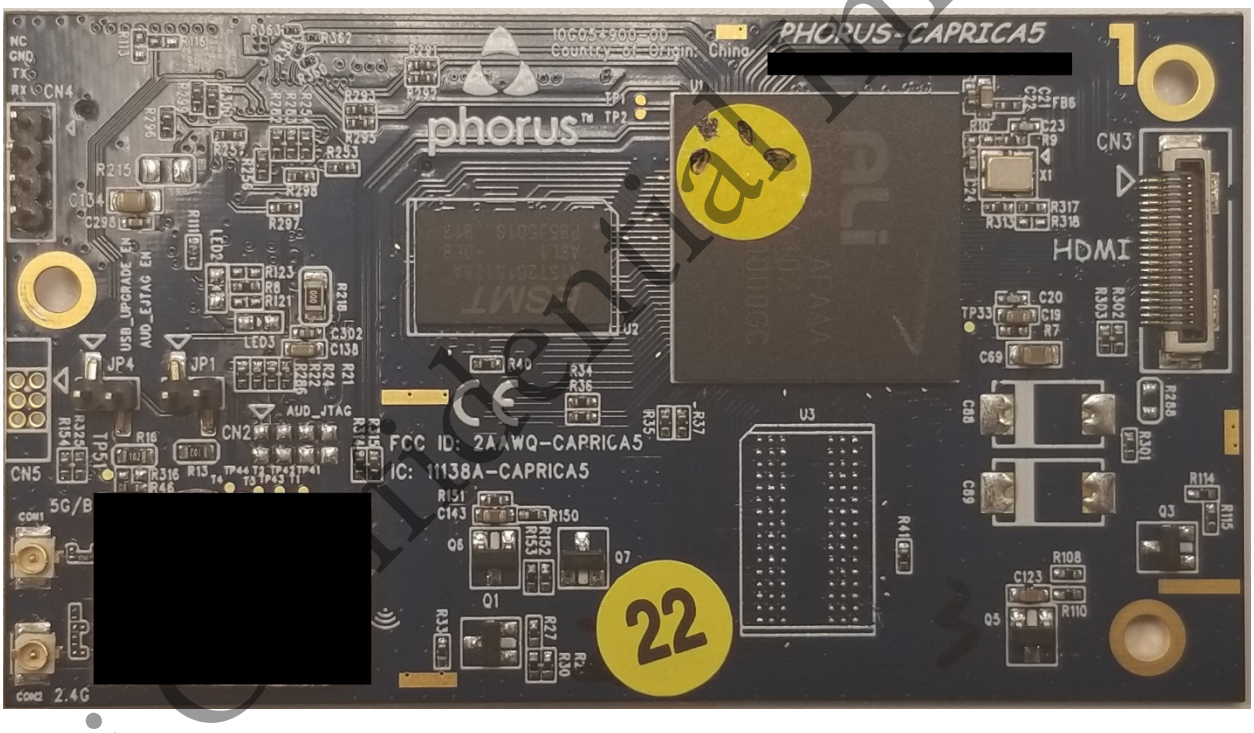
phorus

Document Change Summary				
Date:	Revision:	Changes:	Author:	Approver:
20190904	1	Caprica5 User Manual and Data Sheet	JG/MC	
20190918	1A	Updated Mechanical Drawings	JG	
20191118	1B	Updating P/N for BTB Connector	JG	

NOTE: Picture is representative only and actual product may differ



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1 Play-Fi Wireless Module

The fifth generation Play-Fi wireless module, also known as “Caprica5 module” or “Caprica5”. Caprica5 module is a hardware implementation of DTS Play-Fi technology. Play-Fi is the enabling technology for synchronous multi-room audio distribution via wireless or wired network connectivity. Caprica5 module also supports a variety of wired and wireless connectivity options which can be utilized in speakers, stand-alone receivers, AVR’s and Sound bars.

2 Features

The Play-Fi wireless module version 5 is a programmable, high-performance, encapsulated design that enables manufacturers to build audio devices that can wirelessly distribute audio to multiple devices symmetrically or distribute a subset of multi-channel audio to a small set of speakers with pre-designated roles such as Surround Sound (asymmetric audio distribution). The supported sources include Play-Fi mobile apps, Play-Fi drivers, Play-Fi PC applet, AirPlay, AirPlay2, Spotify Connect, Amazon Alexa, Bluetooth or other sources of a manufacturer’s choice, such as audio captured from a multi-channel I2S input.

2.1 ARM Cortex-based Processor

Ali M3733 with the following features:

- ARM Cortex A9 dual-core application processor with Neon/VFP and 512 KB L2 cache running at 1.0Ghz
- Security processor
- Media processor
- Advanced hardware security via on-chip Secure Boot ROM + on-chip OPT

2.2 DDR3 DRAM

2.3 NAND FLASH

2.4 Wi-Fi Standard compliance

- IEEE 802.11 a/b/g/n/ac
- IEEE 802.11e QoS Enhancement (WMM)
- IEEE 802.11h DFS, TPC, Spectrum Measurement
- 802.11ac 1x1, Wave-2 compliant with MU-MIMO STA mode
- 802.11i (WPA, WPA2) supporting open, shared key and pair-wise key authentication

2.5 Bluetooth

2.6 I2S Output

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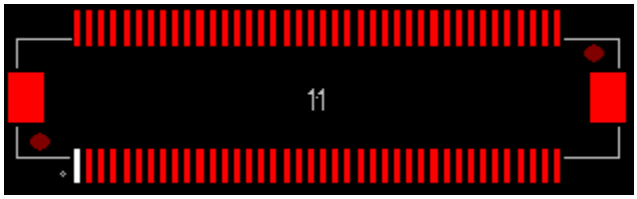
2.7 I2S Input

2.8 USB 2.0HS

3 Caprica Module Electrical Interface Definition

3.1 80-pin Board to Board Connector

Caprica5 module utilizes a 0.5mm BTB SMT Female type, P/N: 50019-08041 (Vendor: ACES). See datasheet.



4 Electrical Characteristics

This section describes the electrical characteristics of the module including power consumption.

4.1 Operating Voltages

Symbol	Min (V)	Typical (V)	Max (V)
P3V3_M (3.3V)	2.97	3.3	3.63
1V5_M (1.5V)	1.425	1.5	1.575
VDDCORE_CPU_M (1.31V)	1.27	1.31	1.34
VDDCORE_M (1.06V)	1.02	1.06	1.09

4.2 Power Consumption

Name	3V3_M	1V5_M	VDDCORE_CPU_M	VDDCORE_M
Voltage (V)	3.3	1.5	1.31	1.06
Current (mA)	360	510	670	940

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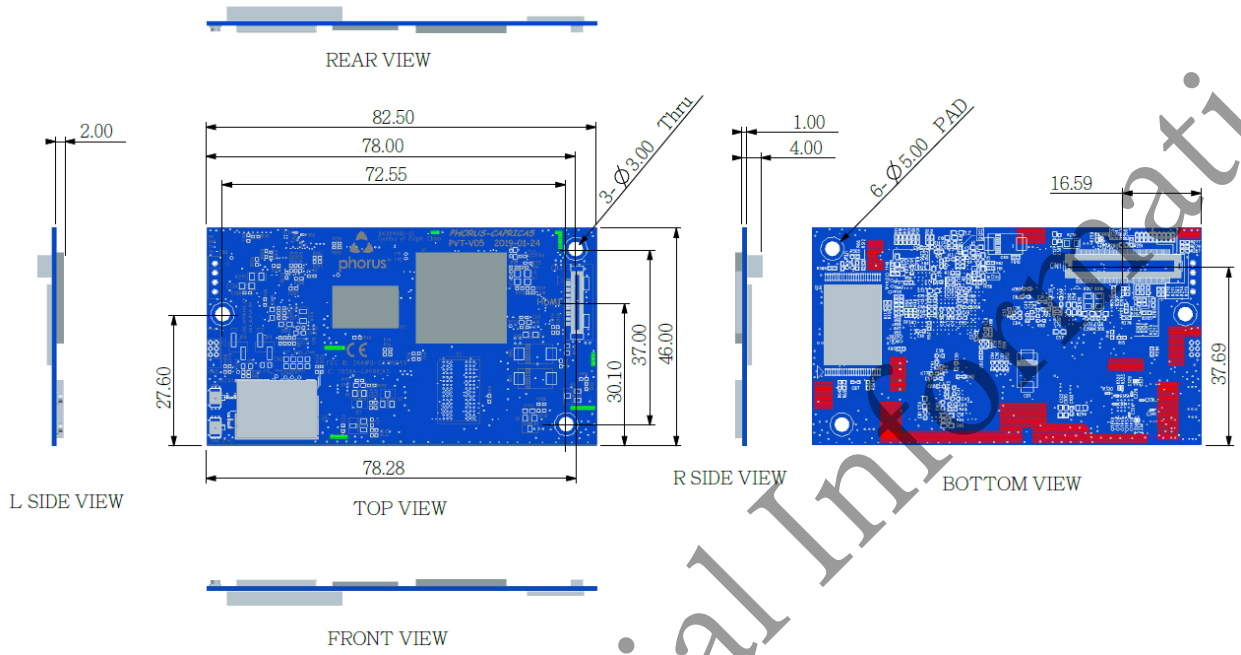
5 Mechanical Outline

All measurements in millimeters



5 Configuration Details

NOTE: These part numbers are filled out after a configuration and feature set have been developed in cooperation with the brand partner.

DTS Part Number	Brand	Software (Product ID) code version	Customer PN (if applicable)
TBD			

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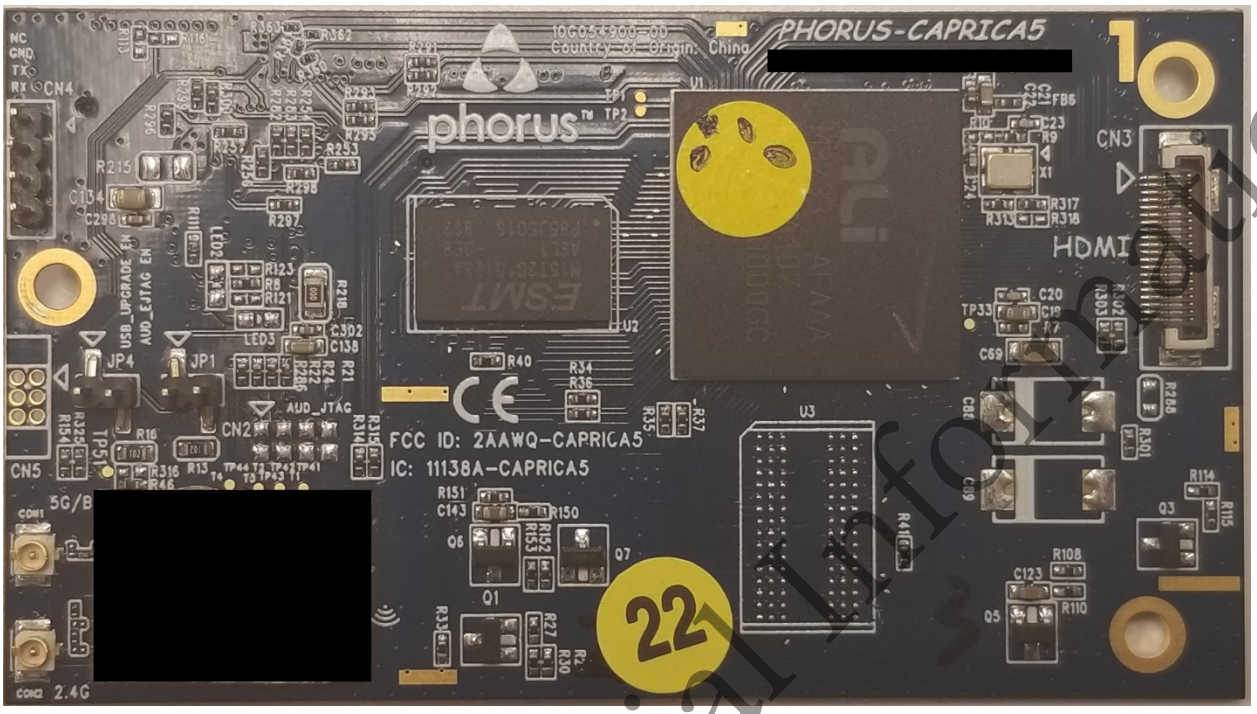

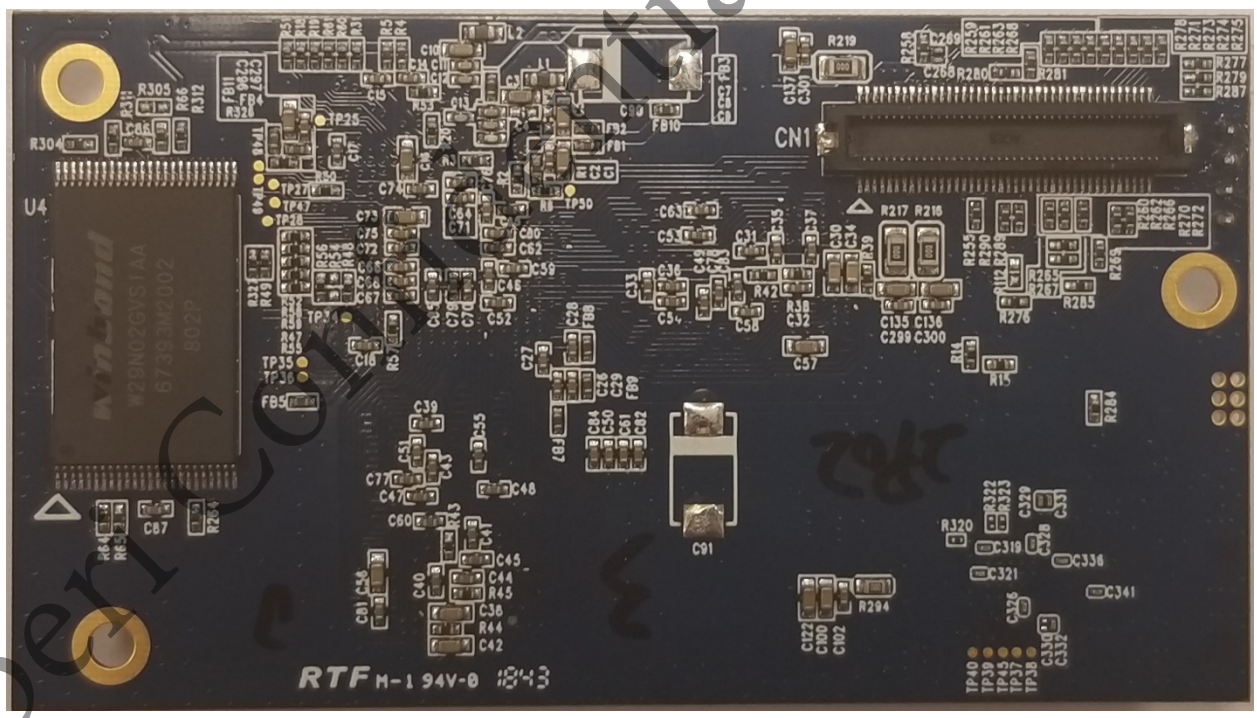

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Product Specification

The operating band is 2412-2462MHz for FCC / 2412-2472MHz for CE (2.4GHz); 5180-5240MHz, 5260-5320MHz, 5500-5700MHz, 5745-5825MHz for FCC / 5180-5240MHz, 5260-5320MHz, 5500-5700MHz for CE (5GHz), which 2.4GHz and 5GHz signals are separated by Diplexer.

Equipment Name	Wireless module
Trade Name	XPERI
Model Number	Caprica5
WLAN	**Supports** : 802.11a/b/g/n/ac **Frequency (MHz)** : 2412~2472, 5180~5240, 5260~5320, 5500~5700 MHz, 5745~5825 MHz **Ant. Type** : PIFA/Dipole Antenna supported
BT	**Supports** : Bluetooth V4.2; Bluetooth V4.0+EDR/LE **Frequency (MHz)** : 2402~2480 **Ant. Type** : PIFA/Dipole Antenna supported

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