

Unlicensed Transmitters: Approved Antennas List

<i>Manufacturer</i>	<i>Antenna</i>	<i>Description</i>	<i>Type</i>	<i>Peak Gain (dBi)</i>	<i>Min Cable loss (dB)</i>	<i>Ω</i>	<i>Connector Type</i>	<i>Notes</i>
Espressif Systems	ESP32-C3-MINI-1	PCB	On-board PCB antenna	3.96 dBi	0	50	N/A	

Notes:

Please see sheets 2 & 3 with additional information for this on-board antenna

Datacolor Portable Spectrophotometer P100 Bluetooth/WiFi Radio Antenna:

The ESP32-C3-MINI-1-N4CT-ND module features an **on-board PCB trace antenna**. This type of antenna is integrated directly onto the printed circuit board (PCB) of the module, making it compact and suitable for various applications. The PCB trace antenna supports both Wi-Fi (802.11b/g/n) and Bluetooth 5.0, operating in the 2.4 GHz frequency rang

ESP32-C3-MINI-1
ESP32-C3-MINI-1U
Datasheet Version 1.8

Small-sized 2.4 GHz Wi-Fi (802.11b/g/n) and Bluetooth® 5 module
Built around ESP32-C3 series of SoCs, RISC-V single-core microprocessor
4 MB flash in chip package
15 GPIOs
On-board PCB antenna or external antenna connector



ESP32-C3-MINI-1



ESP32-C3-MINI-1U

BILL OF MATERIALS, Vilma Display-Switch Board 037-600001 Revision: B					
DATACOLOR 5 PRINCESS ROAD LAWRENCEVILLE, NJ 08648					
4/5/2024 Hammad Farooqui					
Bill Of Materials					
Quantity	Designator	Description	Manufacturer 1	Manufacturer Part Number 1	Supplier 1 Supplier Part Number 1
6	BTN_DOWN1, BTN_LEFT1, BTN_RIGHT1, BTN_SELECT1, BT	SWITCH TACTILE SPST-NO 0.05A 12V	C&K	PTS526 SMG15 SMTR2 LFS	Digikey CKN12222-2-ND
6	C1, C2, C3, C4, C6, C7	Cap Cer 0.1UF 16V X7R 0402	Kyocera AVX	KGM05AR71C104KH	Digi-Key 478-KGM05AR71C104KHCT-ND
2	C5, C8	Cap Ceramic 1uF 10V X7R 10% SMD 0603 125°C Cardboard T	Samsung	CL10B105KP8NFNC	Mouser 187-CL10B105KP8NFNC
1	J1	CONN FFC BOTTOM 50POS 0.5MM R/A	Cvilux USA	CF25501D0R0-05-NH	Digikey 2987-CF25501D0R0-NHDKR-ND
1	J2	CONN FFC BOTTOM 55POS 0.5MM R/A	KYOCERA AVX	046288055000846+	Digikey 478-046288055000846+-ND
1	J3	CONN HEADER SMD R/A 8POS 1.25MM	Hirose Electric Co Ltd	DF13-8P-1.25H(76)	Digikey H126421-ND
2	Q1, Q2	Transistor Mosfet N-ch 20V 4A 3-PIN SOT-23	Diodes	DMN2056U-7	Mouser 621-DMN2056U-7
25	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R14, R15, R	RES 10.0K OHM 1/10W 1% 0603 SMD	Yageo	RC0603FR-0710KL	Newark 68X3181
2	R13, R30	DO NOT POPULATE			
4	R24, R25, R26, R27	DO NOT POPULATE			
1	U1	Linear TECHNOLOGYLTC2955IDDB-1#TRMPBFIC, Push Button	Analog Devices / Linear	LTC2955IDDB-1#TRMPBF	Digikey 505-LTC2955IDDB-1#TRMPBFCT-ND
1	IC1	Accelerometers 3-axis MEMS accelerometer	NXP Semiconductors	FXLS8974CFR3	Mouser 771-FXLS8974CFR3
1	U3	SMD Module, ESP32-C3FN4, Pcb Ant	Espressif Systems	ESP32-C3-MINI-1-N4	Digi-Key 1965-ESP32-C3-MINI-1-N4CT-ND
Rev					
Date					
Comments					
Initial release.					
Change Tactile switch part number from J-lead part to gull wing part (remove J from part number) Keep J lead as alternate part. Add new testpoint between R22 and pin 23 of U3 and name the testpoint GPIO9. Move the net label "ESP32_UART1_TX" to pin 21 of U3. Add a 10k pull up to VDD_3.3 to pin 8 of U3. (Copy and paste from what is on pin 5.) Pin 8 must keep the name "EN_WIFI_BLUETOOTH". Flip pinout of 55 pin connector					
4/5/2024 HF					

Datacolor Portable Spectrophotometer P100 Bluetooth/WiFi Radio Antenna:

10 Physical Dimensions

10.1 Module Dimensions

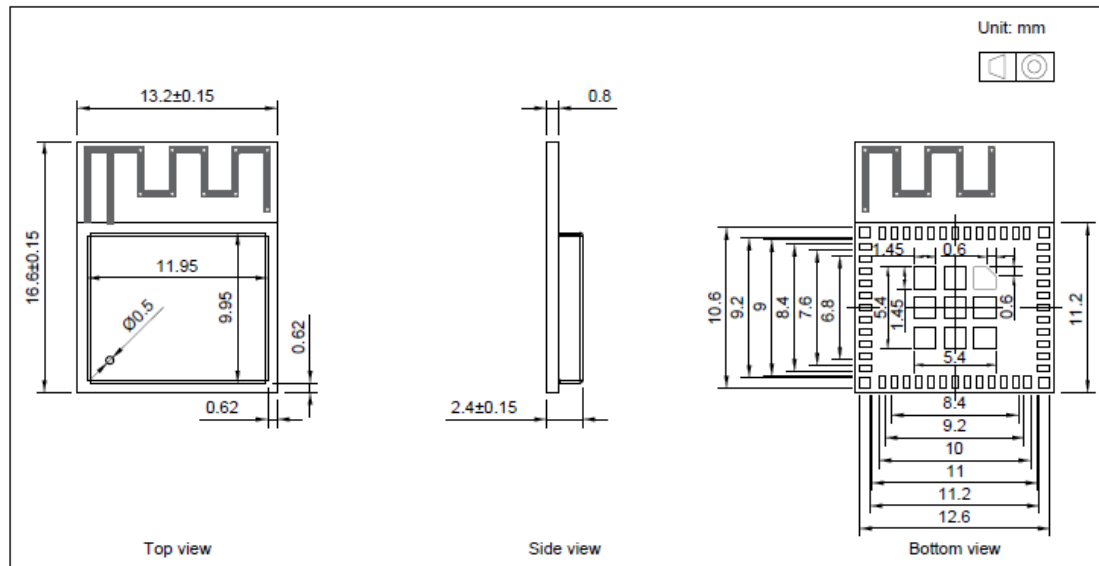


Figure 8: ESP32-C3-MINI-1 Physical Dimensions