Espressif's ESP32 is one of the most unique microcontrollers on the market. Its laundry list of features include:

- Dual-core Tensilica LX6 microprocessor
- Up to 240MHz clock frequency
- 520kB internal SRAM
- Integrated 802.11 BGN WiFi transceiver
- Integrated dual-mode Bluetooth (classic and BLE)
- 2.2 to 3.6V operating range
- 2.5 µA deep sleep current
- 32 GPIO
- 10-electrode capacitive touch support
- Hardware accelerated encryption (AES, SHA2, ECC, RSA-4096)

ESP32 Technical Specifications

Microprocessor	Tensilica Xtensa LX6
Maximum Operating Frequency	240MHz
Operating Voltage	3.3V
Analog Input Pins	12-bit, 18 Channel
DAC Pins	8-bit, 2 Channel
Digital I/O Pins	39 (of which 34 is normal GPIO pin)
DC Current on I/O Pins	40 mA
DC Current on 3.3V Pin	50 mA
SRAM	520 KB
Communication	SPI(4), I2C(2), I2S(2), CAN, UART(3)
Wi-Fi	802.11 b/g/n
Bluetooth	V4.2 – Supports BLE and Classic Bluetooth

VSPI		GPIO23 (MOSI), GPIO19(MISO), GPIO18(CLK) and GPIO5 (CS)		Used for SPI-1 communication.	
HSPI		GPIO13 (MOSI), GPIO12(MISO), GPIO14(CLK) and GPIO15 (CS)		Used for SPI-2 communication.	
IIC		GPIO21(SDA), GPIO22(SCL)		Used for I2C communication.	

CONNECTEURS

IO27	ADC2.7	GPIO27	Touch7		27
SCK					
RST		Reset			
S_VP	SenseVP	GPPIO36	ADC1_0		36
IO12	ADC2_5	GPIO12	HSPI_O	Touch4	12
IO32	XTAL32	GPOI32	ADC1_4	Touch9	32
IO02	CS	GPIO2	ADC2_2	HSPI_WP	2
IO33	XTAL32	GPIO33	ADC1_5	Touch8	33
IO35		GPIO35	ADC1_7		35
VBAT					
5V					
Speaker-					
IO26	DAC2	GPIO26	ADC2_8		26
IO13	ADC2_4	GPIO13	HSPI_ID		13
TXD	CLK3	GPIO1	U0_TX		TX
RXD	CLK2	GPIO3	U0_RX		RX
IO19	MISO	GPIO19	V_SPI_O		19
IO15	ADC2_2	GPIO15	HSPI_CS0		15
S_VN	SensVN	GPIO39	ADC1_3		39
IO34	ADC1_6	GPIO34			34
3V3					
0	CLK1	GPIO0	ADC2_1	Touch0	0
GND					
Speaker+					

3-3V					
IO22	SCL	GPIO22	V_SPI_WP		22
IO21	SDA	GPIO21	V_SPI_HD		21
5V					
GND					

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SDA_PIN      GPIO21       I2C
SCL_PIN      GPIO22


MOSI         GPIO15       SPI (SCREEN / SDCARD)
MISO         GPIO2
SCK          GPIO14

CS           GPIO5        SCREEN
CS           GPIO13       SDCARD

DC           GPIO17       SCREEN
RST          GPIO16
BUSY         GPIO 4

BT1          GPIO38
BT2          GPIO37
BT3          GPIO39

LED          GPIO22
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GPIO00      CLK1
GPIO01      TX           UART
GPIO02      MISO         SPI          SCREEN / SDCARD
GPIO03      RX           UART
GPIO04                                BUSY SCREEN
GPIO05      CS           SPI          SCREEN
GPIO12      HSPI-O       HSPI
GPIO13      HSPI-ID      HSPI         MPU (INT)
GPIO14      SCK          SPI          SCREEN / SDCARD
GPIO15      MOSI         SPI          SCREEN / SDCARD
GPIO16                                RST SCREEN
GPIO17                                DC SCREEN
GPIO19      MISO         V-SPI-O      TX GPS
GPIO21      SDA          I2C          MPU
GPIO22      SCL          I2C          MPU / LED
GPIO25      DAC1                      SPEAKER
GPIO26      DAC2                      SPEAKER
GPIO27                                POWER CARD
GPIO32      XTAL32       RTC
GPIO33      XTAL32       RTC
GPIO34
GPIO35                                VBAT MESURE
GPIO36      S_VP         SenseVP
GPIO37                                BT1
GPIO38                                BT2
GPIO39      S_VN         SenseVN      BT3      HALL SENSOR
```