AIROC™ Bluetooth® LE: RF regulatory certifications for CYW20822-P4XXI040 modules - KBA238630

Question: Where can I find the RF regulatory certification-related details for the CYW20822-P4TAI040 and CYW20822-P4EPI040 AIROC™ Bluetooth® LE modules?

Answer:

The CYW20822-P4TAI040 and CYW20822-P4EPI040 AIROC™ Bluetooth® LE modules are certified for FCC, ISED, CE, and MIC/TELEC. The certificates and test reports are attached with this article.

Table 1 lists the module's compliance with regulations across various regions.

Table 1 Compliance

Region	Regulation
North America	USA, FCC Part 15.247 and Canada, ISED (RSS-247 Issue 2)
Europe	ETSI (EN 300 328), EN 62368-1, EN 301 489-1/17, EN 62479
Australia	AS/NZS 4268: 2017
Japan	MIC, Article 2 paragraph 1 item (19)

Table 2 lists the certification IDs for different regulations.

Table 2 Certification IDs

Regulation	Certification ID
USA(FCC)*	WAP822I04
Canada(ISED)*	7922A-822I04
Japan (MIC/TELEC)*	218-230142
*CYW20822-P4TAI040 and CYW20822-P4EPI040 have the same certification ID	

Attachments:

- For FCC, ISED, CE, and MIC certificates, see *CYW20822-P4TAI040, CYW20822-P4EPI040 Certificates* folder
- For FCC, ISED[1)], MIC, and CE test reports, see *CYW20822-P4TAI040, CYW20822-P4EPI040 Test Report* folder

1) The test reports of the FCC and ISED are the same.

Related categories:

Keywords: EZ-BLE™, Bluetooth® Smart, Bluetooth® Low Energy, Bluetooth® LE, AIROC™, FCC, ISED, CE, UKCA, KCC, MIC, TELEC, RF, EMI, EMC, Emission, Safety, Regulatory, Certification, Module, Compliance

DIVISION: CSS

Business Line: IOT, COMPUTE & WIRELESS

Product Line: IOT, COMPUTE & WIRELESS / BLUETOOTH

Application: Bluetooth® Module

Related tags:

RAM & Timing Solutions (Clocks)

☐ Autostore	☐ Battery Backup	☐ BHE / BLE	☐ Burst	☐ Echo Clocks	☐ Flowthrough
☐ HSB	☐ Impedance Matching	☐ Pipeline	☐ PLL / DLL	☐ QDR	☐ RECALL
☐ RTC	☐ Access Time	☐ Adapter	☐ Algorithm	☐ Asynchronous SRAM	☐ Automotive Grade 1
☐ Automotive Grade 2	☐ Automotive Grade 3	☐ Battery Backed	☐ Bit interleaving	☐ Bitmap	☐ Buffers
☐ Burst Architecture	☐ Bus contention	☐ Bus width	☐ Bypass	☐ Cascade	☐ Charge Pump
☐ Clock Programmer	☐ Clock Wizard	☐ Clocks	☐ Com Link	☐ Commercial	☐ Crystal Oscillators
☐ CY2037	☐ CY22050	☐ CY22150	☐ CY2239x	☐ CY2280x	☐ CY2304NZ
☐ CY2309NZ	☐ CY230x	☐ CY23EP0x	☐ CY274x	☐ CY29430	☐ CY294x
☐ CY2Xx	☐ CY3675	☐ CY51x7	☐ Cyber Clocks	☐ Data Retention	☐ DCXO
☐ DDR	☐ DDR-II CIO	☐ DDR-II SIO	☐ DDR-II+ CIO	☐ DDR-II+ SIO	☐ Deep Power Down
☐ Delay	☐ Deterministic Jitter	☐ DFN	☐ Die	☐ Differential	☐ Divider
☐ DRAM	☐ Drivers	☐ DSPI	☐ Dual Port	☐ Duty Cycle	☐ ECC
☐ EIAJ	☐ EMI Reduction	☐ Endurance	☐ ERR pin	☐ Excelon	☐ Factory
☐ Failsafe	☐ Fall Time	☐ fanout	☐ Fast	☐ FBGA	☐ Feedback
☐ Field	☐ Flexo	☐ Footprint	☐ F-RAM	☐ Frequency	☐ Functional Safety (IS0 26262)
☐ GQFN	☐ Ground Bounce	☐ Hibernation mode	☐ High Performance	☐ HSTL	☐ Hyperbus
☐ HyperRAM	☐ I2C Interface	☐ Impedance	☐ Industrial	☐ Input	☐ Inverted
☐ JEDEC	☐ Land Pattern	☐ LCC	☐ LLC	☐ Low Power	☐ LVCMOS
☐ LVDS	☐ LVTTL	☐ Micropower	☐ Migration	☐ Multiplier	☐ NoBL
☐ Non-EMI reduction	☐ Non-zero Delay	☐ nvSRAM	☐ ODT	☐ Operating Voltage range	☐ Offset
☐ ONFI	☐ Oscillators	☐ OTP	☐ Parallel Interface	☐ Parity	☐ Period

☐ Phase	☐ Phase Noise	☐ POD	☐ Power Supply Noise	☐ Processor Companion	☐ Program
☐ Programmable	☐ QDR	☐ QFN	☐ QSPI	☐ Rad Hard	☐ Random Jitter
☐ Reference	☐ Reliability	☐ Rise Time	☐ RMS	☐ Routing	☐ RTC (Real Time Clock)
☐ Schematic	☐ Schematic Symbol	☐ SDR	☐ Skew Management	☐ Socket	☐ SOIC
☐ SPCM	☐ SPI	☐ Spread Aware	☐ Spread Profile	☐ Spread Spectrum	☐ SRAM With ECC
☐ SSOP	☐ Standard Performance	☐ Standard Sync	☐ Standby mode	☐ Synchronous SRAM	☐ TCXO
☐ TDFN	☐ Timing Solutions	☐ TSOP II	☐ Unique ID	☐ VCO	☐ VCXO
☐ Wafer	☐ XO	☐ Xtal	☐ Zepto	☐ Zero Delay	

FLASH

☐ Address Bus	☐ Async	☐ Automotive	☐ Automotive Grade 1	☐ Automotive Grade 2	☐ Automotive Grade 3
☐ block erase	☐ Bus Contention	☐ BUSY	☐ Commercial	☐ Data bus	☐ Data Integrity
☐ Data Retention	☐ Datasheet	☐ DDR	☐ Erase	☐ FL-K	☐ FL-L
☐ Functional Safety	☐ FL-P	☐ FL-S	☐ FPGA	☐ FS-S	☐ GL-N
☐ GL-P	☐ GL-S	☐ GL-T	☐ HL-T	☐ HOLD	☐ HS-T
☐ HyperBus	☐ HyperFlash	☐ I2C	☐ INT	☐ Interface	☐ Junction Temperature
☐ KL-1	☐ KL-S	☐ KS-1	☐ KS-S	☐ LDD	☐ Migration Path
☐ ML-1	☐ ML-2	☐ ML-3	☐ Models	☐ MS-1	☐ MS-2
☐ MSL	☐ NOR flash	☐ Packaging	☐ Parallel	☐ Parity	Part difference
☐ Password Protection	☐ page program	☐ Pin Configuration	☐ PL-J	☐ Power Consumption	☐ Processor
☐ Power cycle	☐ Power -Up	☐ Power-down	☐ Program	☐ Qualification Reports	☐ Quality
☐ Read	☐ SER	☐ Serial	☐ Signal Integrity	☐ Schematics	☐ sector erase
☐ SL-2	☐ SPI	☐ SRAM	☐ Timing	☐ Vddq	☐ Voltage Levels
☐ Vref	☐ VS-R	☐ Width / Depth Expansion	☐ Write		

MCU: CAPSENSE

☐ **CAPSENSE**					
☐ Auto Calibration	☐ BREAKOUT COIL BOARD	☐ CSD	☐ CSX	☐ Descriptors	☐ EZ- Click
☐ IDAC	☐ Interrupts	☐ ISX	☐ MagSense	☐ Manual Tuning	☐ NVIC
☐ Overlay	☐ Parasitic capacitance	☐ Raw Count	☐ SCB	☐ Sense Tuner	☐ SmartSense

MCU: RTOS

☐ **Software**					
☐ Android	☐ AliOS	☐ Android	☐ Crypto Algos - RSA/SHA/AES	☐ C#/Python/Perl/C++	☐ Configurator
☐ Cypress Programmer	☐ CAN / LIN EBK	☐ CapSense Expansion EBK	☐ CY8CKIT-001 Kit	☐ CY8CKIT-030 / 050 Kit	☐ CY8CKIT-042 Kit
☐ CySmart	☐ DAPLink	☐ Dual Core	☐ Digital Audio EBK	☐ Debugger - Jlink/Ulink/Ulink2	☐ Eclipse
☐ emWin	☐ embOS	☐ emWin	☐ Firmware loader (fw-loader)	☐ FreeRTOS	☐ First Touch Kit
☐ FreeRTOS	☐ Github	☐ Import/Export	☐ iOS	☐ IAR	☐ IDE- Keil uVision
☐ IDE - IAR Embedded Workbench	☐ IDAC	☐ Jlink	☐ JTAG	☐ Kitprog3	☐ Keil uVision
☐ Kitprog/Kitprog2	☐ Lifecycle	☐ Linux	☐ LCD Segment Drive EBK	☐ ModusToolbox	☐ Mbed
☐ makefile	☐ Middleware	☐ MacOS	☐ Miniprog4	☐ MFI EBK	☐ Micrium OS
☐ OpenOCD	☐ OLED	☐ OpenSSL	☐ PyOCD	☐ Porting	☐ PPCOM
☐ PDL	☐ PSoC Programmer	☐ Power Supervisor EBK	☐ PSoC 3/4/5 Processor Module	☐ PSoC Programmer Command Line Interface (PPCLI)	☐ Python/C#/Perl/C++
☐ QSPI	☐ Root of Trust	☐ Secure System	☐ Segger	☐ Secure image	☐ SWD
☐ Segger	☐ Thermal Management EBK	☐ Visual Studio	☐ Windows	☐ Zerynth	

MCU: Powerline Communication

☐ Bidirectional Communication	☐ CENELEC	☐ Control Panel GUI	☐ CSMA	☐ Device Interface	☐ Device Memory Map
☐ FSK Modem	☐ High Voltage	☐ High Voltage Coupling	☐ Immunity	☐ Individual mode	☐ broadcast
☐ group mode addressing	☐ Logical addressing	☐ Extended Logical	☐ Physical Addressing	☐ Low Voltage	☐ Low Voltage Coupling
☐ Network Protocol	☐ Packet Structure	☐ PHY	☐ PLT User Module	☐ Protection Circuit	☐ Rx Filter
☐ Safety	☐ Signal Path Components	☐ Signalling	☐ Tx Amplifier	☐ Tx Filter	

MCU: BLE

☐ **BLE**					
☐ Attribute Protocol (ATT)	☐ Beacon	☐ BLE-Controller	☐ BLE-Host	☐ BLE-OTA	☐ BLESIG
☐ BLESS	☐ BLE-Stack	☐ Bonding	☐ Broadcaster	☐ Central	☐ Client
☐ Custom Profile	☐ CySmart	☐ Device Address	☐ EZ-BLE Module	☐ Generic Access Profile (GAP)	☐ Generic Attribute Profile (GATT)
☐ HCI-DTM	☐ LE Data Length Extension	☐ LE Secure connection	☐ Link Layer (LL)	☐ LL Privacy	☐ Logical Link Control and Adaption Protocol (L2CAP)
☐ Observer	☐ Peripheral	☐ RF Certification	☐ Security Manager (SM)	☐ Server	☐ Solar-Powered BLE Sensor
☐ UUID	☐ Whitelist				

MCU: Bootloader

☐ **Bootloader**					
☐ Bootloader	☐ Boot loadable	☐ Checksum Exclude	☐ Firmware Upgrade	☐ DFU	☐ Dual Application
☐ In-Application	☐ Launcher				

MCU: Security

☐ **Security**					
☐ AES	☐ Chain of Trust (CoT)	☐ Cipher	☐ CMAC	☐ Code Signing	☐ Crypto
☐ DEAD	☐ DES	☐ eFuse	☐ HMAC	☐ Life cycle	☐ PRNG
☐ RSASSA	☐ Secure boot	☐ secure_image	☐ Sflash	☐ SHA	☐ TDES
☐ TOC1	☐ TOC2	☐ TRNG			

MCU: MM MCU

☐ **MM MCU**					
☐ 16bit original core	☐ 32bit original core	☐ 8-bit original core	☐ ADC	☐ Base Timer	☐ CAN Interface
☐ Clock Super Visor (CSV)	☐ Core	☐ Descriptor System data Transfer Controller (DSTC)	☐ Dual Timer	☐ Ethernet MAC	☐ External Bus Interface
☐ FLASH Programmer	☐ FM0+ Family	☐ FM3 Family	☐ FM4 Family	☐ GDC Unit	☐ GPIO

☐ Interrupt controller	☐ Low-Voltage Detector (LVD)	☐ Motor Control	☐ Multi-Function Serial Interface (MFST)	☐ Multi-Function Timer (MFT)	☐ PDL 2.0.2
☐ PDL 2.1.0	☐ Quadrature Position/Revolution Counter (QPRC)	☐ Real-Time Clock (RTC)	☐ Softune	☐ USB Interface	☐ Control Transfer

MCU: Analog

☐ Analog Bus	☐ Analog Global Bus	☐ Analog Hardware Mux	☐ Analog Mux	☐ Analog Mux Bus	☐ Analog Reference
☐ Analog UM	☐ Comparator	☐ CTDAC	☐ DAC	☐ Delta Sigma ADC	☐ DFB
☐ DFB Assembler	☐ Die Temperature	☐ Mixer	☐ Opamp	☐ PGA	☐ Power Monitor
☐ Routing	☐ RTD Calculator	☐ Sample / Track and Hold	☐ SAR ADC	☐ SAR Sequencer	☐ SC Block
☐ Thermistor Calculator	☐ Thermocouple Calculator	☐ TIA	☐ TMP05 Interface	☐ Voltage Fault Detector	☐ Voltage Sequencer
☐ Vref	☐ WaveDAC				

MCU: General

☐ ADC	☐ ADCINC	☐ Analog	☐ Analog Bus	☐ API	☐ Assembly Language
☐ Amplifier UM	☐ Analog Reference	☐ Analog UM	☐ Boot.asm	☐ Bootloader	☐ BSDL Files
☐ Build Tools	☐ Communication UM	☐ CRC UM	☐ CYFI	☐ Calibration	☐ Capsense
☐ Clock	☐ Clock Synchronization	☐ Cloning	☐ Column Clock	☐ Communication	☐ Comparator
☐ Compiler	☐ Counter	☐ CPU Speed	☐ Crystal	☐ CT Block	☐ DAC
☐ Debugging	☐ Decimator	☐ Delta Sigma ADC	☐ Development Kit	☐ Digital	☐ Dynamic Reconfiguration
☐ Device Programming	☐ Digital UM	☐ DTMF	☐ ECO	☐ EEPROM	☐ Errata
☐ Fan Controller UM	☐ Firmware UM	☐ FMEA	☐ Filter	☐ Flash	☐ Flash Security
☐ Global Resources	☐ GPIO	☐ Hex File	☐ I2C	☐ I2C-USB Bridge	☐ ICE Cube
☐ Installation	☐ Internet Explorer	☐ Interrupt	☐ ISR	☐ ISSP	☐ Large Memory Model
☐ LCD	☐ License	☐ MAC	☐ MiniProg1	☐ MiniProg3	☐ Mux
☐ Mux Bus	☐ OCD	☐ Offset	☐ Pod	☐ Port and Pins	☐ Power Management
☐ Production Programmer	☐ PWM	☐ Port Expander	☐ PSoC Power System Architecture	☐ RAM	☐ RTC
☐ SAR	☐ SC Block	☐ SMP	☐ SPI	☐ System Level Design	☐ Timer
☐ UART	☐ USB	☐ USBUART	☐ Watchdog		

Automotive: TRAVEO™ T1G

☐ ADC	☐ A/D Converter				
☐ Bus Interface	☐ AHB	☐ AXI	☐ External Bus	☐ TCM	
☐ BootROM					
☐ CAN	☐ CAN FD	☐ MRAM			
☐ Clock					
☐ Calibration	☐ Clock gear	☐ CSV	☐ Clock supervisor	☐ Fast CR	☐ PLL
☐ Phase Locked Loop	☐ Slow CR	☐ SSCG PLL	☐ Spread Spectrum Clock Generator PLL	☐ Stabilization	
☐ CPU	☐ CRC	☐ Cache	☐ Cortex-R5	☐ Store Buffer	☐ DMA
☐ EAM	☐ Exclusive Access Memory				
☐ ECC	☐ Error Correction Code	☐ Error Injection	☐ SECDED	☐ Ethernet	
☐ Exception	☐ Abort	☐ NMI	☐ FlexRay		
☐ Graphics	☐ APIX	☐ FPD link	☐ LCDC	☐ LVDS	☐ IRIS
☐ GPU	☐ VRAM				
☐ Hyperbus	☐ HyperFlash	☐ HyperRam			
☐ ICU	☐ Input capture unit	☐ I2C			
☐ Interrupt	☐ VIC	☐ Vectored Interrupt Controller	☐ LIN	☐ LVD	
☐ MCAL	☐ AUTOSAR	☐ BASE	☐ CRY	☐ DEM	☐ DET
☐ FEE	☐ FLS	☐ GPT	☐ ICU	☐ MCU	☐ MAKE
☐ PORT	☐ PWM	☐ RESOURCE	☐ WDG	☐ Coretst	☐ Memtst
☐ Ramtst	☐ Flstst				
☐ Media LB					
☐ MFS	☐ Multi-Function Serial				
☐ Mode	☐ Mode pin				
☐ Motor Control	☐ SMC	☐ Stepper Motor Control	☐ MPU		
☐ OCU	☐ Output Capture unit	☐ Port			
☐ Power	☐ Power Domain	☐ PD1	☐ PD2	☐ PD4	☐ PD6
☐ PSC_1	☐ PSC1	☐ PSS Stop mode	☐ PSS timer mode	☐ PSS Shutdown mode	
☐ Programming	☐ Flash Programmer	☐ Parallel programming	☐ FPRG	☐ PPU	
☐ RAM	☐ Backup RAM	☐ Scratch Pad Ram	☐ System Ram	☐ TCRAM	
☐ Reset	☐ Power ON Reset	☐ Software reset			
☐ RTC	☐ Real Time Clock	☐ Safety			
☐ Security	☐ Secure Boot	☐ AES-128	☐ SHE	☐ CRYPTO	

☐ Sound	☐ Audio DAC	☐ I2S	☐ PCMPWM	☐ Stereo Audio DAC	☐ Waveform Generator
☐ Sound Mixer					
☐ SPI	☐ CSIO	☐ Startup			
☐ TCFLASH					
☐ Timer	☐ Base Timer	☐ Indicator PWM	☐ RLT	☐ Reload Timer	☐ UDC
☐ QPRC					
☐ TPU	☐ UART				
☐ Watchdog	☐ Hardware watchdog	☐ Software watchdog			
☐ WorkFlash	☐ EMC	☐ Electrical Specification			

Automotive: TRAVEO™ T2G

☐ ADC	☐ Calibration	☐ SAR ADC	☐ Bootloading		
☐ BootRom	☐ Boot	☐ Internal Bootloading	☐ Flash Boot	☐ Multicore Boot	☐ ROM
☐ ROM Boot	☐ Secure Boot				
☐ Bus Interface	☐ AXI	☐ AHB			
☐ CAN	☐ CANFD				
☐ Clock	☐ Clock Tree	☐ CSV	☐ External Clock	☐ FLL	☐ PLL
☐ systick					
☐ CPU	☐ Cortex M0+	☐ Cortex M4	☐ Cortex M7	☐ Cross Trigger	☐ CXPI
☐ Debugger	☐ DAP	☐ Program and Debug IF	☐ SWD	☐ JTAG	☐ Trace
☐ DMA	☐ Data Wire	☐ Descriptor	☐ MDMA	☐ PDMA	
☐ ECC	☐ Error Injection	☐ SECDED	☐ parity	☐ syndrome	☐ EFUSE
☐ EVTGEN					
☐ Exception	☐ Bus Fault	☐ Hard Fault	☐ Memory management	☐ Fault NMI	☐ PendSv
☐ Supervisor Cal	☐ Usage Fault	☐ Fault			
☐ Flash	☐ CodeFlash	☐ Dual Bank	☐ FOTA	☐ Memory Bank	☐ WorkFlash
☐ Flexray					
☐ Interrupt	☐ Interrupt Synchronizer	☐ WIC			
☐ IOSS	☐ Drive mode	☐ HSIO	☐ HSIOM	☐ IO Subsystem	☐ Slew rate
☐ Smart I/O					
☐ IPC	☐ Interrupt Structure	☐ Message Passing			
☐ Lifecycle state	☐ Chip operation mode	☐ VIRGIN	☐ SORT	☐ NORMAL	☐ NORMAL_PROVISIONED
☐ PROVISIONED	☐ SEC_W_DEBUG	☐ SECURE	☐ CORRUPTED	☐ Protection state	

☐ LIN	☐ PID	☐ LVD			
☐ Market Segment	☐ Body Control	☐ Chassis	☐ Cluster	☐ Gateway	
☐ MCAL	☐ AUTOSAR	☐ BASE	☐ CRY	☐ DEM	☐ DET
☐ DIO	☐ FEE	☐ FLS	☐ GPT	☐ ICU	☐ MCU
☐ MAKE	☐ OCU	☐ PORT	☐ PWM	☐ RESOURCE	☐ WDG
☐ Coretst	☐ Memtst	☐ Ramtst	☐ Flstst		
☐ MMIO	☐ Motor Control	☐ MPU			
☐ Power	☐ Brown out	☐ Deep Sleep	☐ Hibernate	☐ Power mode	☐ PPU
☐ Programming	☐ Cypress Programmer	☐ Miniprog4			
☐ Protection Context	☐ Protection State	☐ Protection Structure	☐ Reset		
☐ RTC	☐ Alarm	☐ Safety	☐ SCB	☐ SDIO	☐ SDHC
☐ Security	☐ Crypto	☐ SLLD	☐ AES	☐ CHACHA	☐ TDES
☐ SHA	☐ CRC	☐ STR	☐ PR	☐ TR	☐ PRNG
☐ TRNG	☐ VU	☐ SHA1	☐ SHA2	☐ SHA3	☐ DES
☐ SMIF	☐ Dual Quad	☐ Octal SPI	☐ XIP	☐ SMPU	
☐ Sound	☐ Audio DAC	☐ Mixer	☐ Sound Generator		
☐ Graphics	☐ VIDEOSS	☐ JPEG			
☐ TDM	☐ I2S	☐ LCD	☐ PCM-PWM		
☐ SRAM	☐ Write Buffer	☐ SWPU	☐ System Call		
☐ TCPWM	☐ Dead time	☐ PWM	☐ Timer mode	☐ Capture mode	☐ Quadrature Decoder mode
☐ Trigger Multiplexer	☐ WDT	☐ MCWDT	☐ Watchdog Reset	☐ EMC	☐ Electrical Specification
☐ MPN					
☐ SDL					

Automotive AURIX™ (TC2xx, TC3xx)

☐ CPU	☐ FPU	☐ Program Flash	☐ Data Flash	☐ Cache	☐ SRAM
☐ CPU Subsystem	☐ TC1.6P	☐ TC1.6E	☐ MPU		
☐ FCE	☐ MTU	☐ ECC	☐ DAM	☐ SCU	☐ DMA
☐ RCU	☐ CCU				
☐ PMI	☐ DMI	☐ FPI/SPB	☐ SRI	☐ BCU	
☐ Interrupt	☐ NMI	☐ PMU	☐ LMU	☐ DMU	☐ OVC
☐ CLOCK	☐ MHz Oscillator	☐ Back-up Clock	☐ PLL	☐ DPLL	
☐ TOM	☐ ATOM / MCS	☐ CMU / ICM	☐ PSM	☐ GPT12	☐ CCU6
☐ GTM	☐ TBU	☐ SPE	☐ CMP / MON	☐ BRC	☐ CONVCTRL
☐ ARU					
☐ STM	☐ Ports	☐ IOM	☐ LVDSH	☐ LVDSM	

☐ E-Ray	☐ CAN	☐ QSPI	☐ ASCLIN	☐ I2C	
☐ ETH	☐ GETH				
☐ MSC	☐ SENT	☐ PSI5	☐ PSI5-S	☐ HSCT	☐ HSSL
☐ EBU	☐ EMEM				
☐ VADC	☐ DSADC	☐ EVADC	☐ EDSADC		
☐ Reset	☐ Boot	☐ Power Supply	☐ DCDC	☐ LDO	☐ PMC/PMS
☐ Run Mode	☐ Idle Mode	☐ Sleep Mode	☐ Standby Mode	☐ Standby RAM	☐ SCR
☐ ASIL	☐ Safety	☐ SMU	☐ Lockstep	☐ LCL	
☐ Security	☐ HSM				
☐ ADAS	☐ Radar	☐ RIF	☐ HSPDM	☐ CIF	☐ SDMMC
☐ Motor Control	☐ PWM				
☐ Debug	☐ JTAG	☐ SWD	☐ DAP	☐ OCDS	
☐ Board (PCB)	☐ Development kit	☐ IDE	☐ AUTOSAR	☐ MCAL	
☐ Software	☐ OS/RTOS	☐ Driver	☐ iLLD	☐ BIFACES	
☐ Operating Conditions	☐ Temperature	☐ Temperature Sensor	☐ ESD	☐ EMC	
☐ Package	☐ Electrical Specification				

Automotive AURIX™ (TC4xx)

☐ CPU	☐ TC1.8	☐ TC1.8 LS	☐ PPU/PPUC		
☐ SRI	☐ LLI	☐ FPI			
☐ LMU	☐ NVM/NVMR				
☐ CSS	☐ CSRM				
☐ SDMA	☐ RDMA				
☐ RIF	☐ SPU	☐ RMEM			
☐ SCU	☐ SMU	☐ PMS	☐ SCR		
☐ SMM	☐ TRI	☐ CLOCK			
☐ CAN	☐ CANXL	☐ PCIe	☐ DRE	☐ xSPI	☐ SDMMC
☐ GETH	☐ LETH	☐ SENT	☐ PSI5	☐ PSI5-S	☐ MSC
☐ QSPI	☐ ASCLIN	☐ I2C	☐ HSPHY	☐ ERAY	☐ HSSL
☐ IR	☐ FCE	☐ GPT12	☐ GTM	☐ eGTM	☐ WTU
☐ VTMON	☐ GST	☐ ADC	☐ VMT	☐ Ports	
☐ ASIL	☐ Security	☐ Boot			
☐ ADAS	☐ Radar	☐ PWM	☐ Motor Control		
☐ Debug	☐ Trace	☐ JTAG	☐ SWD	☐ DAP	☐ OCMTS
☐ Board	☐ Development Kit	☐ IDE	☐ AUTOSAR	☐ MCAL	
☐ Firmware	☐ OS/RTOS	☐ Driver	☐ iLLD	☐ BIFACES	
☐ Quality	☐ Operating Conditions	☐ Temperature	☐ RoHS	☐ ESD	☐ EMC
☐ Package	☐ Electrical Specification	☐ Power Supply	☐ Reset		

☐ Purchase	☐ Order	☐ Export	☐	☐	☐

Automotive HMI

☐ EMC	☐ EMI	☐ BCI	☐ Functional Safety	☐ ASIL	☐ ESD
☐ CAN	☐ LIN	☐ CXPI	☐ ISO-26262	☐ grounded water rejection	☐ AEC-Q100
☐ IEC-61967	☐ IEC-62132	☐ CISPR-25	☐ ISO-11452	☐ EN61000	☐ glove
☐ wet finger	☐ fat finger	☐ large object	☐ multichip	☐ FPC	☐ finger threshold
☐ finger print	☐ ONS	☐ MDBP	☐ PSoC™ Automotive Multitouch	☐ Gen4	☐ Gen4L
☐ Gen4XL	☐ Gen6	☐ Gen6L	☐ Gen6XL	☐ Gen7	☐ Gen7L
☐ Gen7XL	☐ TSG	☐ TTHE	☐ CY8CTMA	☐ CYAT	☐ CY3295
☐ TT bridge	☐ MTK	☐ Heatmap mode	☐ Tuning	☐ TTDA	☐ haptic
☐ force touch	☐ ITO	☐ Incell	☐ Secondary Host Interface	☐ display	☐ hover
☐ crypto					

Wi-Fi

☐ Middleware					
☐ AMQP	☐ MQTT	☐ CoAP	☐ AVS	☐ AWS	☐ Azure
☐ Homekit	☐ ADK	☐ Bonjour	☐ u8g/ugui/emwin	☐ WICEDFS	
☐ WiFi Protocols					
☐ HTTP	☐ TFTP	☐ mDNS	☐ SSDP	☐ SNTP	☐ SMTP
☐ Gedday	☐ Websocket	☐ AGO	☐ P2P	☐ WiFi Direct	☐ DHCP
☐ RSDB					
☐ Security					
☐ TLS	☐ DTLS	☐ Enterprise Security	☐ WPS	☐ WPAx	
☐ OS / RTOS					
☐ FreeRTOS-LwIP	☐ ThreadX-NetX-Duo	☐ Amazon FreeRTOS	☐ mbed	☐ Linux	☐ Android
☐ Regulatory	☐ CLM				
☐ OTA	☐ OTA2				
☐ WiFi Applications					
☐ apsta	☐ BT-WiFi gateway	☐ WLAN Audio	☐ Soft AP	☐ WICED Application framework	
☐ Power Save	☐ WLAN Powersave	☐ Host powersave			
☐ WiFi Tools					

☐ i-perf	☐ Throughput	☐ WL Tool	☐ Toolchain compilation		
☐ WiFi Driver & Hardware					
☐ SDIO	☐ WWD/WHD	☐ FMAC/ DHD	☐	☐ BSP	☐ Peripherals
☐ CoEX					
☐ IDE					
☐ WICED Studio	☐ Modus Toolbox				

BTBLE

☐ BLE Profiles					
☐ BLE	☐ BLE OTA	☐ ibeacon	☐ Observer	☐ Remote control	☐ Mesh
☐ BT Profiles					
☐ BT Audio	☐ BR/EDR	☐ A2DP	☐ HFP	☐ Headset	☐ SPP
☐ Peripherals					
☐ I2S/PCM	☐ HCI UART	☐ PUART	☐ Aclk		
☐ Power Modes					
☐ Tx power	☐ Low power				
☐ RTOS & Middleware	☐ middleware	☐ RToS			
☐ Debug	☐ Rfcomm	☐ Buffer pool	☐ hcd/btp/cgs file	☐ platform file	☐ memory map
☐ Recovery	☐ Jtag debug				
☐ Test Tools					
☐ Client control	☐ BTspy	☐ Chipload	☐ RF test	☐ Android App	
☐ IDE					
☐ WICED SMART	☐ WICED Studio	☐ Modus tool box	☐ Linux Host		
☐ Stack	☐ BT	☒ BLE			
☐ Device Type	☐ Discrete BT	☐ Embedded Host Discrete BT	☐ WiFi BT Combo		

USB

☐ FX3 /FX3S					
☐ UVC	☐ Slave fifo	☐ I2C	☐ UART	☐ SPI	☐ I2C
☐ DMA	☐ Socket	☐ GPIF II	☐ I2S	☐ JTAG / debugging	☐ ARM926EJ -S
☐ SDK	☐ ADMUX	☐ bootloader	☐ mass storage	☐ SD	☐ Emmc
☐ Storage port	☐ RAID				
☐ GX3	☐ Ethernet	☐ Driver	☐ Config Utility		
☐ FX2LP	☐ GPIF	☐ 8051	☐ Keil uVision	☐ I2C	☐ UART

☐ Hardware					
☐ Schematic	☐ layout	☐ crystal	☐ power supply	☐ EMI/ESD	☐ DVK/RDK
☐ Host application					
☐ C/C++	☐ cyapi	☐ .net	☐ driver	☐ control center	☐ streamer
☐ cyusb	☐ dll	☐ library	☐		
☐ AT2LP	☐ ATA commands	☐ CF Card			
☐ HUB	☐ HX3	☐ HX2	☐ Shared link	☐ aca	☐ ghost charging
☐ power management					
☐ enCore	☐ encore	☐ EnCoreII	☐ EnCoreIII	☐ EnCoreV	☐ keyboard
☐ mouse	☐ hid				
☐ CX3					
☐ mipi protocol	☐ configuration utility	☐ I2C	☐ SPI	☐ UART	☐ bootloader

Type C & PD

☐ Active cable	☐ Alternate mode	☐ CC Bootloader	☐ CCGx Host SDK	☐ CCGx Power SDK	☐ Charge-Through Dongle
☐ CY4500 PD Analyzer	☐ CY4521	☐ CY4531	☐ CY4532	☐ CY4541	☐ Display port
☐ Dock	☐ Dock Management Controller	☐ Dongle	☐ DR swap	☐ DRP	☐ Dual firmware image
☐ EMCA	☐ Fast role swap	☐ Host Processor Interface	☐ I2C Bootloader	☐ OCP	☐ OVP
☐ Passive cable	☐ PD3.0	☐ Power Adapter	☐ Powerbank	☐ Power Delivery	☐ PPS
☐ PR Swap	☐ Provider	☐ RCP	☐ SBU	☐ Signed Firmware	☐ USB 3.1 Gen 1
☐ USB 3.2 Gen 2x2	☐ UVP	☐ VBUS FETs	☐ VCONN	☐ VCONN swap	☐ VDM
HX3PD	☐ Analog Feedback	☐ BCR	☐ Config cable	☐ Configuration Channel	☐ CY4533
☐ DP modes	☐ Gate driver	☐ HPD	☐ PAG1P	☐ PAG1S	☐ PCIe
☐ PD2.0	☐ PDO	☐ RDO	☐ SWD	☐ Thunderbolt 3	

XMC

☐ ADC	☐ Analog Comparator	☐ Analog to Digital Converter	☐ BMI	☐ Boot Mode Index	☐ Bootstrap Loaders
☐ Brightness and Color Control Unit	☐ Bus Fault	☐ Bus Interface	☐ CAN	☐ Capture and Compare Unit	☐ CCU4
☐ CCU8	☐ Clock	☐ CMSIS	☐ Cortex M0	☐ Cortex M4	☐ Counter

☐ DAC	☐ DALI	☐ Dave	☐ Debug	☐ Delta Sigma Demodulator	☐ Digital Addressible Lighting Interface
☐ Digital to Analog Converter	☐ DMA	☐ DSD	☐ EBU	☐ EEPROM	☐ Electrical Specifications
☐ Electromagnetic Compatiability	☐ EMC	☐ ERU	☐ EtherCAT	☐ Ethernet MAC	☐ Event Request Unit
☐ Exception	☐ External Bus Unit	☐ Firmware	☐ Flash	☐ Flexible CRC Engine	☐ Floating Point Unit
☐ GPIO	☐ Hard Fault	☐ Hibernate	☐ HRPWM	☐ I2C	☐ I2S
☐ Industrial Communication	☐ Interrupt	☐ JLINK	☐ LEDTS	☐ LIN	☐ MATH Coprocessor
☐ Memory management	☐ ModusToolbox	☐ Motor Control	☐ MultiCAN+	☐ NVIC	☐ Out of Range Comparator
☐ PendSV	☐ PLL	☐ POSIF	☐ Position Interface	☐ Power	☐ Power Conversion
☐ Pseudo Random Number Generator	☐ PWM	☐ QSPI	☐ Queud Serial Peripheral Interface	☐ Real Time Clock	☐ Reset
☐ RTC	☐ RTOS	☐ SCU	☐ SDMMC	☐ SPI	☐ Startup
☐ System Control Units	☐ Systick	☐ Temperature Sensor	☐ Timer	☐ Universal Serial Interface Channel	☐ Usage Fault
☐ USB	☐ USIC	☐ VADC	☐ Watchdog Timer	☐ xmclib	

Division, Business Line, Product Line

DIVISION	Business Line (BL)	Product Line (PL)
ATV	BODY POWER	BODY POWER
	HIGH POWER	MOSFET
		HV DISCRETES AND CHIPS
		HV MODULES
	MICROCONTROLLER	MICROCONTROLLER
		BODY, CLUSTER AND HMI
	MEMORY SOLUTIONS	FLASH SOLUTIONS
		RAM
		MEMORY INTELLECTUAL PROPERTY
	POWER INTEGRATION & SUPPLY	AUTOMOTIVE POWERSUPPLY SOLUTIONS
		INTEGRATED DRIVETRAIN SOLUTIONS
		HIGH VOLTAGE GATE DRIVER
	SENSE & CONTROL	SENSE & CONTROL
CSS	DIGITAL SECURITY & IDENTITY	PAYMENT SOLUTIONS
		IDENTITY SOLUTIONS
		IOT SECURITY SOLUTIONS
		DEVICE AUTHENTICATION SOLUTIONS
	IOT, COMPUTE & WIRELESS	INDUSTRIAL MICROCONTROLLER SOLUTIONS
		IOT, COMPUTE & WIRELESS / WIFI
		IOT, COMPUTE & WIRELESS / BLUETOOTH
		IOT, COMPUTE & WIRELESS / MCU
GIP	GREEN ENERGY CONTROL	CHIPS & DISCRETES
		INTELLIGENT POWER MODULES
		GATE DRIVER
	GREEN ENERGY MODULES & SYSTEMS	BIPOLAR
		HIGH POWER MODULES
		LOW & MEDIUM POWER
PSS	DIRECT CURRENT - DIRECT CURRENT	ENTERPRISE POWER
		ULTRA-LOW VOLTAGE SWITCHES
		LOW VOLTAGE SWITCHES
		MEDIUM VOLTAGE SWITCHES
		POWER MANAGEMENT CONTROLLER & DRIVER
	EFFICIENT POWER SUPPLIES, ISOLATION & C	POWER MANAGEMENT ICS
		ASIC & MULTIMARKET ICS
		HIGH VOLTAGE POWER CONVERSION
		WIRED CONNECTIVITY SOLUTIONS
	HIREL	HIREL
	RADIO FREQUENCY & SENSORS	3D-SENSING
		SENSORS
		RF COMMUNICATIONS

Knowledge base article type: [Select the category by clicking the checkbox associated]

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	☐ Imagecraft
	☐ Keil
	☐ HiTech
☐ Component Development	☐ Training/Things you should know
	☐ Component Architecture
	☐ Component/Project management
	☐ Datapath
	☐ Analog components
	☐ Digital components
	☐ Component software/tools
	☐ Component Testing
☐ Development Kits	☐ FirstTouch Kit
☐ Development Tools	
☐ Device Drivers	☐ Pullability
	☐ Mass Storage
☐ Device Programming	☐ PSoC Programmer
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☐ Firmware	
☐ General	
☐ Hardware	☐ Digital
	☐ Specifications
	☐ Analog
☐ Known Problems and Solutions	
☐ Microcontrollers	☐ 8051
	☐ M8
	☐ M8C
	☐ TRAVEO™ T1G
	☐ TRAVEO™ T2G
	☐ AURIX™ TC2xx
	☐ AURIX™ TC3xx
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☐ Reference Designs	
☐ Software	☐ PSoC Designer
	☐ PSoC Creator
☐ User Modules	☐ Analog
	☐ Digital

Revision history

Document revision	Date	Description of changes
**	2023-09-15	Initial release.

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