# Digi ConnectCore MP133 Development Kit

Complete development platform for intelligent, connected and secure embedded industrial products with a broad suite of tools and turnkey Linux software support

The **Digi ConnectCore® MP133 Development Kit** is a complete platform. It features an integrated, secure, industrial system-on-module (SOM) with wireless connectivity, based on the STM32MP13 microprocessor, and a complete, embedded Linux software platform based on the Yocto® Project.

The kit seamlessly integrates pre-certified dual-band Wi-Fi 5 (802.11a/b/g/n/ac), Bluetooth® 5.2 and Gigabit Ethernet connectivity. Digi ConnectCore MP133 is designed for industrial and medical use with high levels of security, reliability, performance and 10+ year longevity. The Digi SMTplus® surface mount form factor provides simplified design integration, flexibility and reliability.

Embedded device security is a critical design aspect for the growing number of connected IoT applications. **Digi ConnectCore SOM solutions** provide built-in security with **Digi TrustFence®**, a fully integrated device-security framework simplifying the process of securing connected devices.

**Digi ConnectCore Cloud Services**, **Digi ConnectCore Security Services** and **Expert Support** provide additional capabilities for development, deployment and maintenance.

The ConnectCore SOM solution provides ready-to-use building blocks, a complete, embedded Linux software platform based on the Yocto® Project, and development tools. This helps OEMs lower research and development costs, realize a lower total cost of ownership and streamline time-to-market.

With over twenty years of embedded SOM experience enabling millions of globally connected products, Digi is a trusted embedded and IoT solutions provider, simplifying the way customers design, build and deploy connected applications. **Digi Wireless Design Services** (WDS) offer additional cellular integration support, certification assistance, and custom design and build services to get your products to market smarter and faster.

**Connect this device with Digi ConnectCore Cloud Services.** Create. Configure. Deploy. Manage.
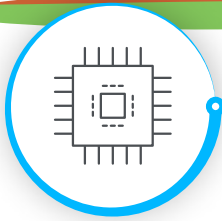
## The kit includes:

✓ Digi ConnectCore MP133 development board with SOM

✓ Console port cable

✓ Dual-band wireless antenna

✓ Power supply and accessories

✓ Reference designs and online documentation

| PART NUMBER | DESCRIPTION |
|---|---|
| CC-WMP133-KIT | Digi ConnectCore MP133 Development Kit |

## Key features, benefits and applications

- Industrial-grade, scalable, embedded SOM platform
- Pre-certified dual-band Wi-Fi 5 (802.11ac) and Bluetooth 5.2
- Power management with hardware and software support
- Digi SMTplus form factor (29 x 29 mm) for ultimate reliability
- High level of pin-compatibility with **ConnectCore 6UL SOMs**
- Built-in **Digi TrustFence** device security, identity and privacy
- Seamless cellular modem and **Digi XBee®** integration
- Remote monitoring, device management and IoT application enablement with **Digi ConnectCore Cloud Services**
- **Digi Embedded Yocto** Linux support
- Turnkey development services available from **Digi WDS**

| SPECIFICATIONS | DIGI CONNECTCORE MP133 SOM |
|---|---|
| **FEATURES** | |
| **APPLICATION PROCESSOR** | STMicroelectronics STM32MP133C, Arm® Cortex®-A7 at 650 MHz, secure boot, crypto engine |
| **MEMORY** | 256 MB SLC NAND flash, 256 MB DDR3L |
| **SECURITY** | Secure boot, TrustZone® 12x tamper pins incl. 5x active tamper, 1x TRNG (6 triple oscillators), 1x CRC calc. unit, 1x cryptographic processor, hardware acceleration with DMA support; <br><br>Encryption/decryption: DES/TDES: ECB (electronic codebook) and CBC (cipher block chaining) 64-, 128- or 192-bit key; AES: ECB, CBC, GCM, CCM, and CTR (counter mode) chaining algorithms, 128-, 192- or 256-bit key; <br><br>Universal HASH: SHA-1, SHA-224 and SHA-256, SHA-384, SHA-512, SHA-3, HMAC; **Digi TrustFence** embedded security framework |
| **PERIPHERALS / INTERFACES** | 5x I2C, 4x UART + 4x USART, 5x SPI (4 with full duplex I2S) <br>2x SAI (stereo audio: I2S, PDM, SPDIF Tx), SPDIF Rx (4 inputs) <br>2x SDMMC up to 8-bit (SD / eMMC™ / SDIO) <br>2x CAN FD (including 1x TTCAN) <br>2x USB 2.0 high-speed host or 1x USB 2.0 high-speed host + 1x USB 2.0 full-speed OTG, up to 135 I/O ports with interrupt capability <br>2x ADCs (up to 12-bit), 1x temperature sensor, 1x DFSDM (4 channels/2 filters), internal or external ADC reference VREF+ <br>2x 32-bit timers with up to 4 IC/OC/PWM or pulse counter and quadrature (incremental) encoder input <br>2x 16-bit advanced timers, 10x 16-bit general-purpose timers (including 2 basic timers without PWM) <br>5x 16-bit low-power timers, Secure RTC, 4 Cortex-A7 system timers (secure, nonsecure, virtual, hypervisor) <br>2x independent watchdogs |
| **ETHERNET** | 2x 10/100 M or Gigabit Ethernet <br>GMAC IEEE 1588v2, MII/RMII/RGMII |
| **WIRELESS** | Wi-Fi 5 dual-band 802.11a/b/g/n/ac 1x1 radio (up to 433.3 Mbps) with strong WPA3-Enterprise authentication/encryption <br>−40 °C to 85 °C (−40 °F to 185 °F) full temperature range; Bluetooth 5.2 (Basic Rate, Enhanced Data Rate and Bluetooth Low Energy) |
| **OPERATING TEMPERATURE** | Industrial: −40 °C to 85 °C (−40 °F to 185 °F); depending on use case and enclosure/system design |
| **STORAGE TEMPERATURE** | −50 °C to 125 °C (−58 °F to 257 °F) |
| **RELATIVE HUMIDITY** | 5% to 90% (non-condensing) |
| **RADIO APPROVALS** | US, Canada, EU, Japan, Australia/New Zealand, Brazil, Mexico |
| **EMISSIONS / IMMUNITY / SAFETY** | FCC Part 15 Class B, EN 55022 Class B, EN 61000-3-2, EN 61000-3-3, ICES- 003 Class B, VCCI Class II, AS 3548 <br>FCC Part 15 Subpart C Section 15.247, IC (Industry Canada), RSS-210 Issue 5 Section 6.2.2(o), EN 300 328, EN 301 489-17, EN 55024 <br>EN 301 489-3, Safety (IEC 62368-1); visit **www.digi.com/resources/certifications** for latest updates |
| **DESIGN VERIFICATION** | Temperature: IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-78; vibration/shock: IEC 60068-2-6, IEC 60068-2-64, IEC 60068-2-27, HALT |
| **MOUNTING / PIN COUNT** | Common Digi SMTplus surface mount footprint using 76-pad edge castellated pads (1.27 mm pitch) or 245-pad LGA (1.27 mm pitch) option |
| **MECHANICAL DIMENSIONS** | 29 mm x 29 mm x 3 mm (1.14 in x 1.14 in x 0.12 in) |
| **PRODUCT WARRANTY** | 3-year |

# Part Numbers

| PART NUMBERS | DIGI CONNECTCORE MP133 DEVELOPMENT KIT |
|---|---|
| CC-WMP133-KIT | Digi ConnectCore MP133 development kit with development board and Digi ConnectCore MP133 256 MB/256 MB wireless SOM |

| PART NUMBERS | DIGI CONNECTCORE CLOUD SERVICES |
|---|---|
| CC-CS-ESS-1-1YR | Digi ConnectCore Cloud Services — Essential 1-year (1 device) |
| CC-CS-ESS-100-1YR | Digi ConnectCore Cloud Services — Essential 1-year (100 devices) |
| CC-CS-ESS-100-3YR | Digi ConnectCore Cloud Services — Essential 3-year (100 devices) |
| CC-CS-ESS-100-5YR | Digi ConnectCore Cloud Services — Essential 5-year (100 devices) |
| CC-CS-PRM-1-1YR | Digi ConnectCore Cloud Services — Premium 1-year (1 device) |
| CC-CS-PRM-100-1YR | Digi ConnectCore Cloud Services — Premium 1-year (100 devices) |
| CC-CS-PRM-100-3YR | Digi ConnectCore Cloud Services — Premium 3-year (100 devices) |
| CC-CS-PRM-100-5YR | Digi ConnectCore Cloud Services — Premium 5-year (100 devices) |

| PART NUMBERS | DIGI CONNECTCORE SECURITY SERVICES |
|---|---|
| CC-SEC-ESS | Digi ConnectCore Security Services — Essential 1-year |
| CC-SEC-PRM | Digi ConnectCore Security Services — Premium 1-year |
| CC-SEC-ENT | Digi ConnectCore Security Services — Enterprise 1-year |
| CC-SEC-ENT-ADD | Digi ConnectCore Security Services — Additional product  (same duration as main contract) |

| PART NUMBERS | EXPERT SUPPORT |
|---|---|
| DG-EXPE-12 | Expert 12x5 support for end users |
| DG-EXPE-24 | Expert 24x7 support for end users |

## For more information, please visit digi.com

For more information about Digi ConnectCore,
visit **www.digi.com/connectcore**

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