Hello, and welcome to this introduction to the STM32G4 Series training session.
It describes the feature sets of the various lines available in the STM32G4 microcontroller series.
The block diagram for STM32G47x devices is provided here for reference.

The STM32G47x line offers a variety of communication assets, a rich set of analog peripherals, a practical crystal-less USB2.0 FS interface, USB-C power delivery functionality, up to 107 GPIOs, and multiple low-power modes to maximize the battery life. The mathematical Accelerators offer trigonometric functions and digital filtering computation in hardware, leaving the CPU unloaded for other tasks. HR timer with 184ps resolution is designed to control time sensitive applications as digital switched power sources and lighting applications. To speed up the CPU performance in time critical routines, the CCM memory supports code execution with zero wait states. On top of those features, a particular focus is done on embedding security hardware functions such as a 256-bit AES, PCROP and TRNG.
The block diagram for STM32G43x devices is provided here for reference. The STM32G43x line offers similar functionality as the STM32G47x line with a reduced number of peripherals instances (like analog and communication), excluding the HR timer and FSMC and reduced memories spaces. There is still a rich set of analog and communication peripherals, hardware accelerators, crystal-less USB2.0 FS interface, USB-C power delivery functionality, up to 86 GPIOs, and multiple low-power modes to maximize the battery life. The timer set is oriented for motor control applications. To speed up the CPU performance in time critical routines, the CCM memory supports code execution with zero wait states.

![Block Diagram](image-url)
This slide lists some specific features of the STMG4 microcontroller.
- Rich set of analog peripherals
- CCM RAM memory for boosting fast routines
- Mathematical accelerators: Cordic and FMAC
- High resolution timer with 184ps resolution
- Rich set of timers to support a wide range of industrial applications
Specific STM32G4 features 2/2

- Memories features:
  • ECC on Flash
  • Dual bank Flash
  • HW parity check on part of SRAM
  • OTP area
  • FSMC, Quad-SPI (support for external memories)
- Integrated bootloader
  • Supporting USAT, SPI, I2C, USB
- Low power features
  • RTC, SRAM2 backup, VBAT mode, Stop/Standby/Shutdown mode

There are additional specific features:
- Memories features with focus on safety, firmware update and external memories support
- Embedded bootloader supporting most popular communication interfaces
- Low power features to save power in battery powered applications
The STM32G73x line can be encapsulated in a wide range of packages. AES encryption is available in selected configurations.
The STM32G43x line can be encapsulated in a wide range of packages. AES encryption is available in selected configurations.