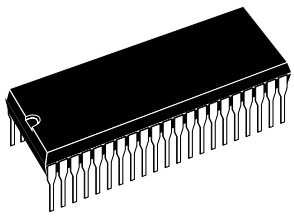
SGS-THOMSON MICROELECTRONICS

ST92161

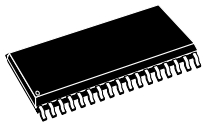
8/16-BIT MCU FOR USB HUB MONITORS WITH 6K ROM, 256 RAM, 2 USB FUNCTIONS, USB HUB, I^2C & WATCHDOG TIMER,

BRIEF DATA

- USB interface compliant with USB specifications version 1.0 having the following capabilities:
  - USB HUB with 4 downstream ports supporting power management (ganged or per-port power switching and overcurrent detection) including suspend and resume for bus-powered applications.
  - USB Embedded Monitor Function having two additional endpoints (one control and one interrupt), with programmable buffer sizes
  - On-chip USB Transceivers and 3.3 voltage regulator.
- Slave I^2C-bus serial interface up to 400 kHz
- Watchdog Timer
- 11 Fully programmable I/Os.
- 4 external interrupts used for overcurrent sensing on downstream ports
- Programmable PLL clock generator (RCCU) using a low frequency external quartz (8 MHz).
- Internal Memories: 6 Kbytes ROM, 256 bytes RAM.
- Register oriented 8/16 bit CORE with RUN, WFI, SLOW, HALT and STOP modes
- 224 general purpose registers available as RAM, accumulators or index pointers (register file)
- Rich Instruction Set with 14 Addressing Modes
- 0 - 24 MHz Cpu clock Operation, 4 - 5.5 Volt voltage range
- Minimum instruction cycle time: 167 ns (@24 MHz CPU frequency)
- Division-by-zero trap generation
- 0 ^oC to 70 ^oC temperature range
- 34-pin SO34 package, 42-pin SDIP42 package
- Low EMI design supporting single sided PCB
- Versatile Development Tools, including assembler, linker, C-compiler, archiver, source level debugger and hardware emulators, and Real Time Operating System

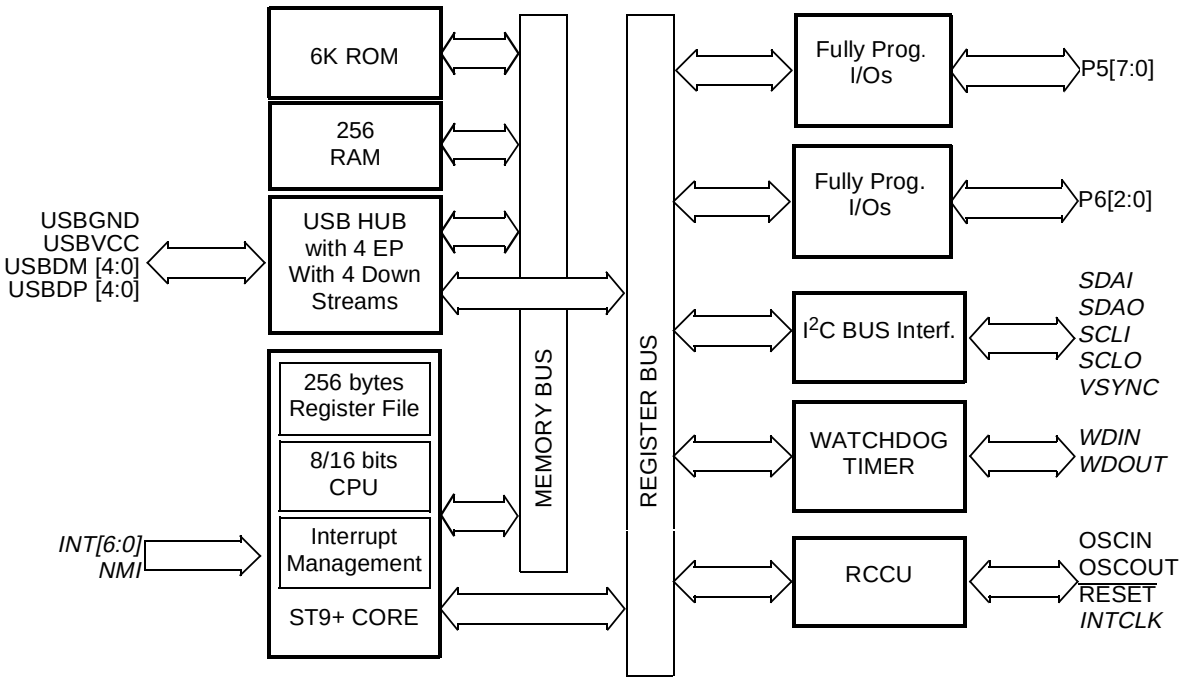


PSDIP42



PSO34

Figure 1. ST92161 Architectural Block Diagram



All alternate functions (*Italic characters*) are mapped on Port5 and Port6

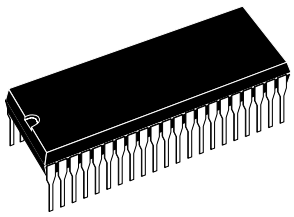
SGS-THOMSON MICROELECTRONICS

ST92E161
ST92T161

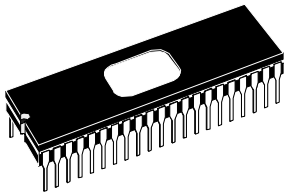
8/16-BIT MCU FOR USB HUB MONITORS WITH 6K EPROM/OTP, 256 RAM, 2 USB FUNCTIONS, USB HUB, I^2C & WATCHDOG TIMER,

PRODUCT PREVIEW

- USB interface compliant with USB specifications version 1.0 having the following capabilities:
  - USB HUB with 4 downstream ports supporting power management (ganged or per-port power switching and overcurrent detection) including suspend and resume for bus-powered applications.
  - USB Embedded Monitor Function having two additional endpoints (one control and one interrupt), with programmable buffer sizes
  - On-chip USB Transceivers and 3.3 voltage regulator.
- Slave I^2C-bus serial interface up to 400 kHz
- Watchdog Timer
- 11 Fully programmable I/Os.
- 4 external interrupts used for overcurrent sensing on downstream ports
- Programmable PLL clock generator (RCCU) using a low frequency external quartz (8 MHz).
- Internal Memories: 6 Kbytes EPROM/OTP, 256 bytes RAM.
- Register oriented 8/16 bit CORE with RUN, WFI, SLOW, HALT and STOP modes
- 224 general purpose registers available as RAM, accumulators or index pointers (register file)
- Rich Instruction Set with 14 Addressing Modes
- 0 - 24 MHz Cpu clock Operation, 4 - 5.5 Volt voltage range
- Minimum instruction cycle time: 167 ns (@24 MHz CPU frequency)
- Division-by-zero trap generation
- 0 ^oC to 70 ^oC temperature range
- 42-pin plastic/ceramic SDIP42 package
- Low EMI design supporting single sided PCB
- Versatile Development Tools, including assembler, linker, C-compiler, archiver, source level debugger and hardware emulators, programmers and Real Time Operating System

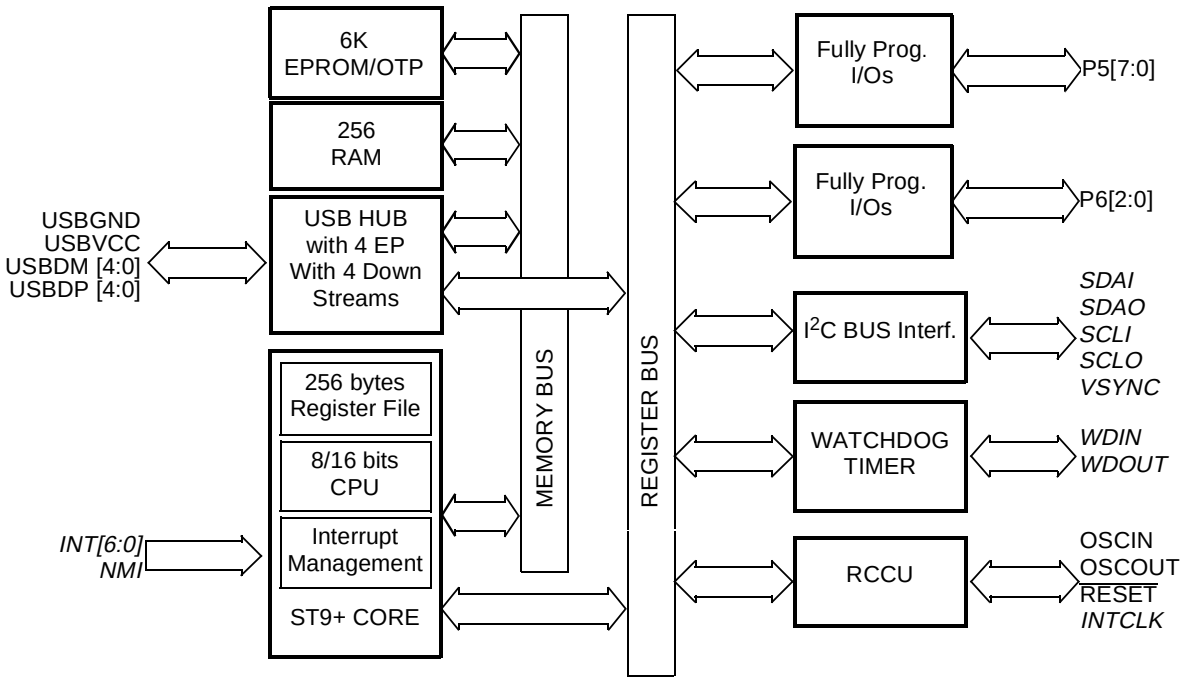


PSDIP42



CSDIP42

Figure 2. ST92E161/ST92T161 Architectural Block Diagram



All alternate functions (*Italic characters*) are mapped on Port5 and Port6