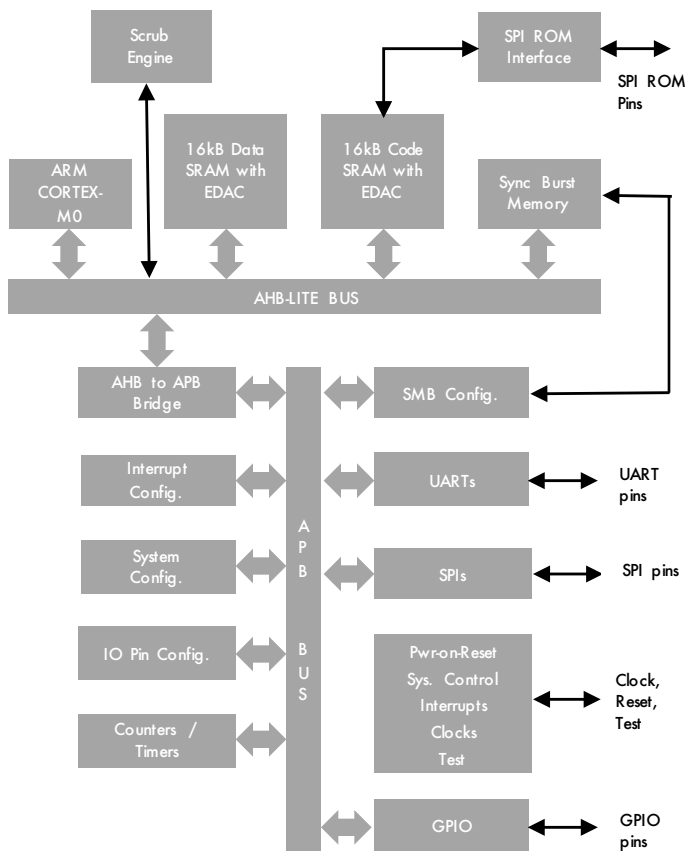


Radiation Hardened ARM® Cortex®-M0 Microcontroller PA32KAS



**32-Bit ARM® Cortex®-M0
Microcontroller manufactured with
HARDSIL® technology offering
superior radiation performance
>300K rad (Si) and latch-up immunity
for extreme environments.**



KEY FEATURES

- Manufactured with HARDSIL® technology
- 32-bit ARM® Cortex®-M0 processor
- Operating voltages
 - Core voltage 1.5 +/- 0.15V
 - I/O voltage 3.3 +/- 0.33V
- Clock rate 50MHz
- Memory
 - 16KB on-chip data and 16KB on-chip program memory
 - On-chip Error Detection & Correction (EDAC) and Scrub
- Peripherals
 - 32 configurable GPIO pins
 - 2 UART interfaces
 - 3 SPI interfaces
- Timer System
 - 32 configurable 32-bit counters / timers
 - Input capture, Output compares
 - PWMs, Pulse Counters, Watchdog timer
- System Redundancy
 - Triple Modular Redundancy (TMR) - all internal registers
- Temperature range -55 ° to 125 °C for Radiation-hardened version
- Temperature range -55 ° to 200 °C for High-temperature version
- Package
 - Ceramic 188 pin LQFP
 - Die option available

RADIATION HARDENED PERFORMANCE

- Total Ionizing Dose (TID) > 300K rad (Si)
- Soft Error Rate (SER) with EDAC disabled: 1.3e-7 errors / bit-day
- Soft Error Rate (SER) with EDAC enabled: < 1e-15 errors / bit-day
- Latchup immunity > LET = 110 MeV-cm² / mg (T = 125 °C)

SUPPORT

- SEB1 development board - includes 18MB SDRAM
- SEB2 development board - includes 36MB SDRAM
- Keil™ MDK-ARM® microcontroller software kit

APPLICATIONS

- Industrial
- Aerospace
- Space
- Medical
- Military

For more information, contact below or visit our web site at www.voragotech.com

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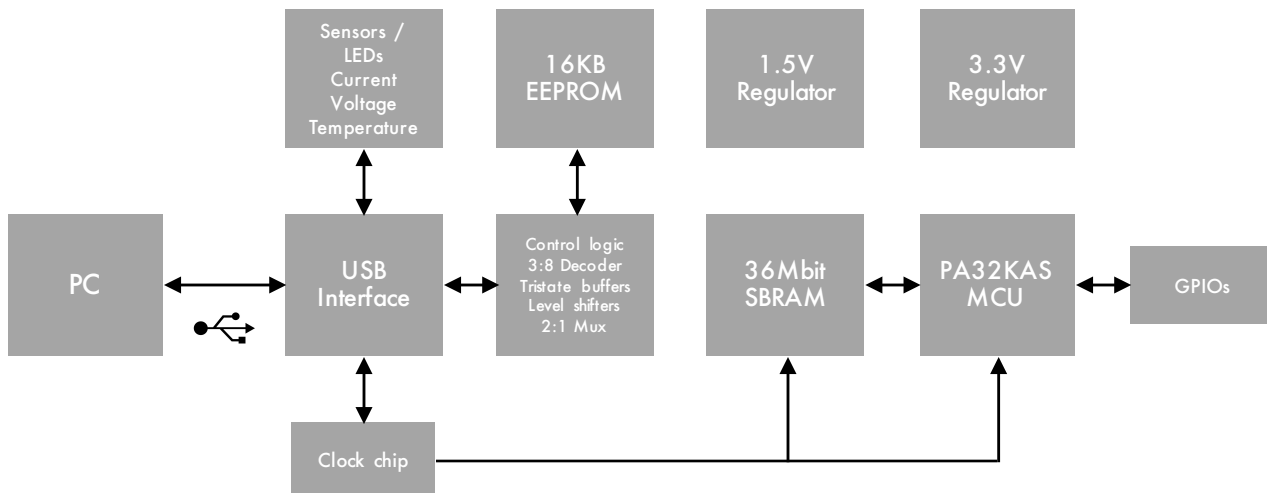
MCU ORDERING INFORMATION

Description	Part number	Environment	Temperature Range	Package
Radiation-hardened microcontroller	PA32KAS-D0000F0EAA	Rad-hard 300K rad (Si)	-55 to 125 °C	Die
Radiation-hardened microcontroller	PA32KASCQ188F0EAA	Rad-hard 300K rad (Si)	-55 to 125 °C	Ceramic 188 QFP
Extreme temperature microcontroller	PA32KAS-D000003EAA	Extreme temperature	-55 ° to 200 °C	Die
Extreme temperature microcontroller	PA32KASCQ18802EAA	Extreme temperature	-55 ° to 175 °C	Ceramic 188 CQFP (gold balls)
Extreme temperature microcontroller	PA32KASCQ18803EAA	Extreme temperature	-55 ° to 200 °C	Ceramic 188 QFP (aluminium balls)

DEVELOPMENT BOARD ORDERING INFORMATION

Description	Part number	Features
Development Board	SEB1	Includes 18MB SBRAM on-board Supported by Keil™ MDK-ARM Microcontroller Software Kit
Development Board	SEB2	Includes 36MB SBRAM on-board Supported by Keil™ MDK-ARM Microcontroller Software Kit

SEB2 DEVELOPMENT BOARD BLOCK DIAGRAM



For more information, contact below or visit our web site at www.voragotech.com
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