Storage ICs

Features

ATT91C011 REACH 1

- Fully integrated single-chip read channel
- 5 V all-CMOS design
- Low-power operation: 230 mW max read mode/225 mW max write mode
- Standby mode power = 35 mW max
- Data rates from 6.67 Mbits/s to 30 Mbits/s
- Internal embedded servo demodulator
- On-chip pulse detector & AGC circuitry
- Fully integrated multiple-zone constant density recording support
- On-chip DAC for PLL center frequency control
- Fast-acquisition zero-phase start PLL
- On-chip write precompensation circuitry
- µP programmable via serial interface
- Available in both 44-pin PLCC and EIAJ QFP package

ATT91C012 Enhanced REACH 1

- REACH 1 performance and features

In addition:

- Separate AGC loops for data and servo
- Precision averaging peak detect servo demodulator

ATT91C020 REACH 2

- Fully integrated all-CMOS single-chip read channel
- 5 V only low-power operation with multiple powerdown modes:
  - — Under 500 mW in operating
  - — Under 195 mW in servo tracking
  - — Under 1 mW in sleep mode
- Supports power cycling via I/O pin:
  - — Wake-up from sleep in under 1 ms
  - — Fast wake-up from track following in under 30 µs
- Data rates from 6.67 Mbits/s to 30 Mbits/s
- Full multizone constant density recording support
- Integrates the following read/write and servo functions on one IC:
  - — Data AGC circuit
  - — Pulse detector with two programmable qualification thresholds
  - — 7th-order 0.05° equiripple data filter with programmable boost
  - — Data synchronizer with programmable window shift and zero phase start PLL
  - — Bypassable RLL (1, 7) ENDEC
  - — Two-level write data precompensation
  - — 3rd-order bessel servo filter
  - — Quad integrating servo demodulator with PES outputs
  - — Frequency synthesizer
- Typically requires 11 external passive components
- 64-pin EIAJ SQFP package

ATT93C010 *SEARCH* 1

- On-chip 30 MHz 80C31 microcontroller with 256 bytes of internal RAM
- On-chip digital signal processor:
  - — DSP is optimized for mass storage
  - — Accumulation self-limits to significantly reduce DSP overhead
  - — Selectable 2s complement and unsigned arithmetic
  - — Performs 16- by 16-bit multiply in one clock
  - — Accumulates to 32-bit precision
  - — Includes 32- by 16-bit division instruction
- On-chip programmable timing processor generates and detects servo timing signals
- On-chip burst-mode DMA controller
- On-chip programmable clock generator:
  - — Crystal oscillator accepts crystal or CMOS-level inputs
  - — Supplies five internal and two external clock references
  - — External clock reference provides four programmable divisors
- CMOS design requires single 5 V or 3 V supply
- Versatile power management: internal and external clock references can be individually enabled or disabled
- 100-pin EIAJ SQFP

ATT93C020 *SEARCH* 2

- Integrated *SEARCH* 1 and *SPIN* 1

ATT91C611 *SPIN* 1

- Six-channel A/D converter
- Performs 10-bit A/D conversion in 1.8 µs
- Performs 10-bit D/A conversion in 3.6 µs
- Interfaces to 8- or 16-bit multiplexed µP bus
- Sleep and power-saving modes
- Internal or external reference voltage
- 6 ADC output storage registers
- +5 V single power supply
- 48-pin EIAJ SQFP package

Product Matrix

Part Number	Description	Package Type	Literature
ATT91C011-30M44	REACH 1 Integrated Read Channel	44-pin PLCC	—
ATT91C011-30J44	REACH 1 Integrated Read Channel	44-pin EIAJ QFP	—
ATT91C012-30M44	Enhanced REACH 1 Integrated Read Channel	44-pin PLCC	—
ATT91C020-30Q64	REACH 2 Fully Integrated Read Channel	44-pin EIAJ SQFP	—
ATT93C010-30Q10	*SEARCH* 1 Servo DSP Multiprocessor	100-pin EIAJ SQFP	—
ATT93C020-30Q10	*SEARCH* 2 Integrated *SEARCH* 1 and *SPIN* 1	100-pin EIAJ SQFP	—
ATT91C611-06Q48	*SPIN* 1 Servo Data Converter	48-pin EIAJ SQFP	—

For additional information, call your AT&T Account Manager, or call 1-800-372-2447.