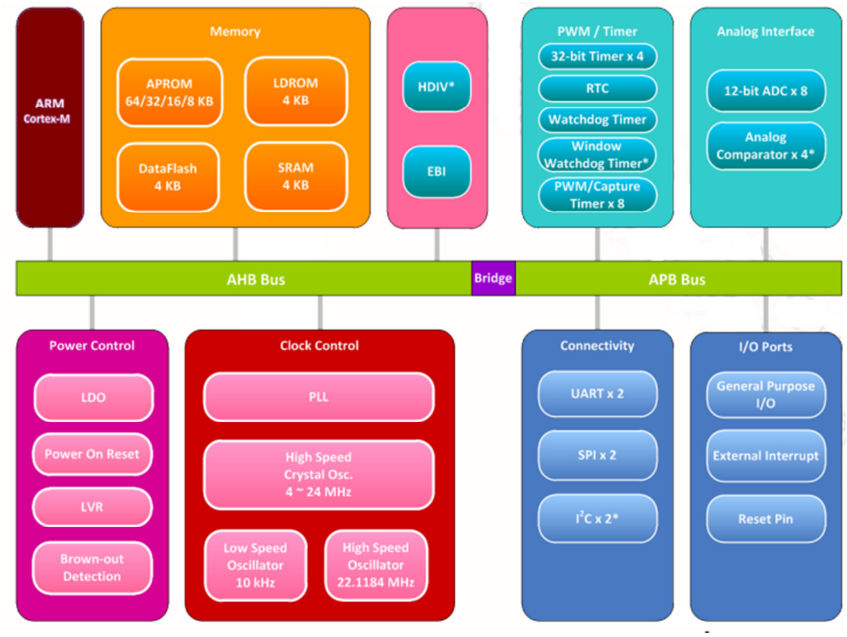
# HWAF33IC

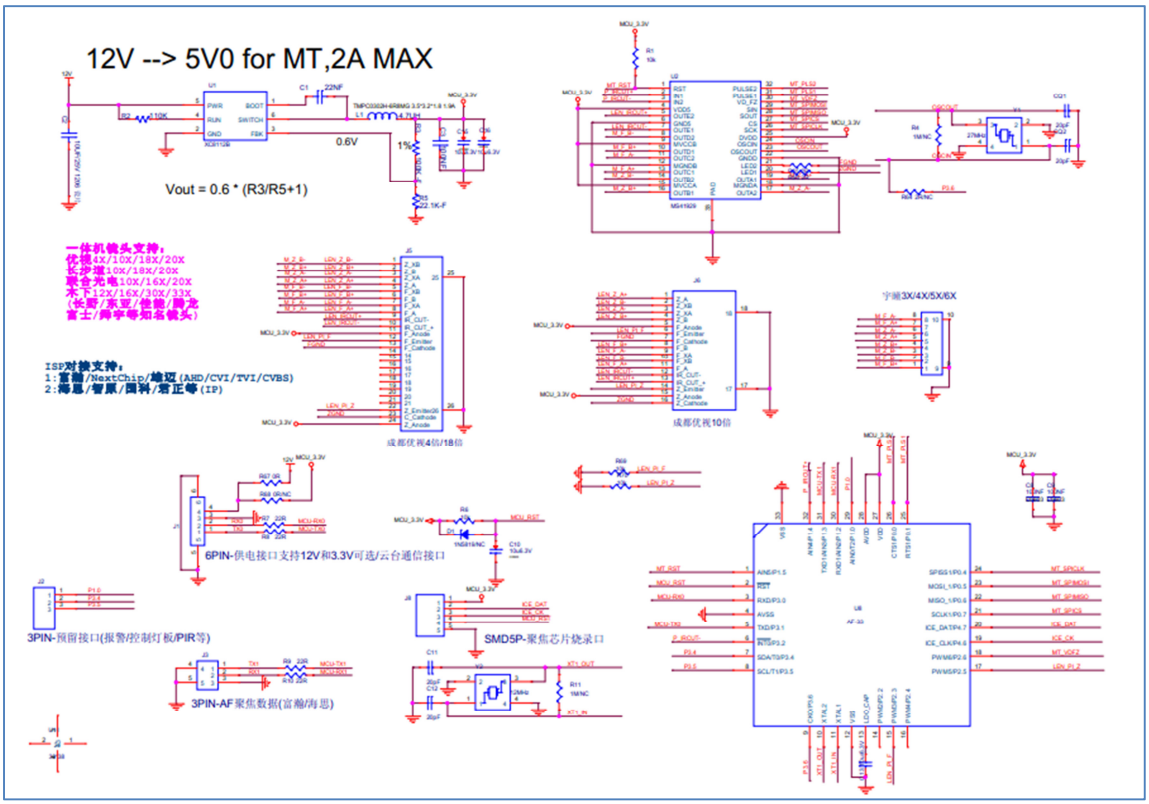
## Introduction

- We provide an ARM chip for driving the zoom lens for auto focus. We open the schematic and you can use it flexibly in your project. The chip has been successfully docked with many manufacturers' zoom lenses and docked well. The module has been mass produced.
- The chip incorporates the high-performance ARM® Cortex®-M3 32-bit RISC core operating at a 100MHz frequency.
- Operating from a 2.5 to 5.5 V power supply. It is available in both the –40 to +85 °C temperature range and the –40 to +105 °C extended temperature range
- High-speed embedded memories (Flash memory up to 64 Kbytes and SRAM up to 4Kbytes, Data-Flash up to 4Kbytes, programming (ISP) Flash memory up to 4Kbytes), and an extensive range of enhanced I/Os and peripherals connected to two APB buses.
- There are many system peripheral functions such as I/O ports, EBI (External Bus Interface), Timer, UART, SPI, I2C, PWM, ADC, Watchdog Timer, Window Watchdog, Analog Comparator, and low voltage level Detection. All had already Integrated into the chip to reduce system peripheral components ,that save board space and system cost.
- The chip has ISP (in-system programming) and ICP (in-circuit programming) functions, as well as IAP (programming in the application) Allows the user to upgrade the program memory directly on the board without removing the chip.

## Functional Block Diagram

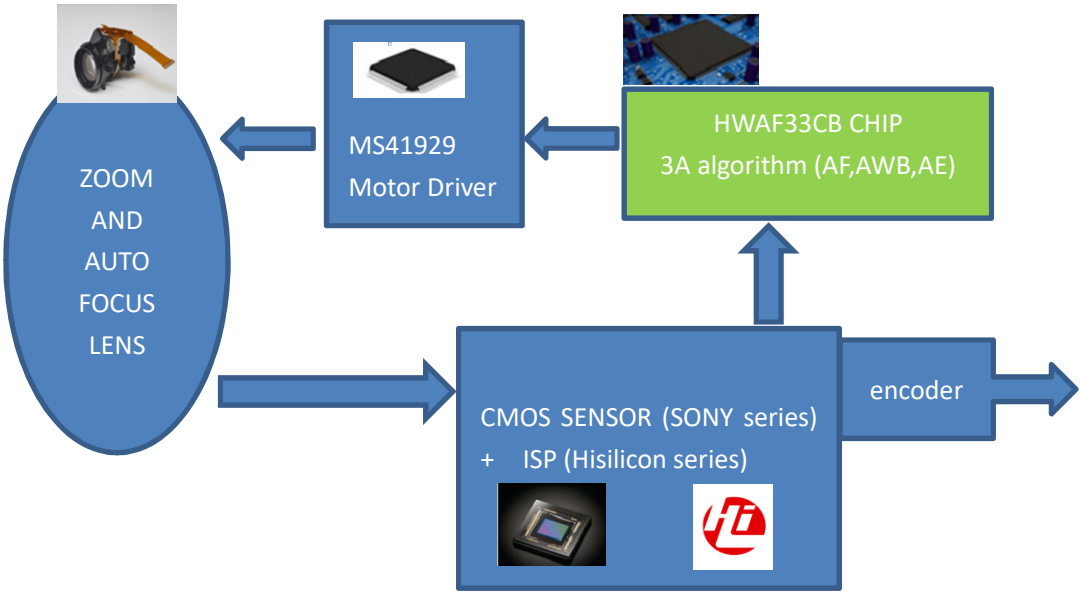


## Reference Schematic

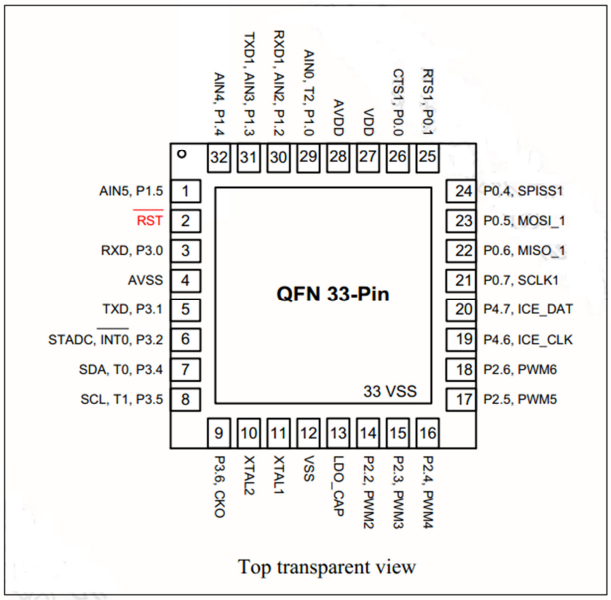



*NOTE: If you need SCH and PCB source files, please contact us.*

## Application example block diagram



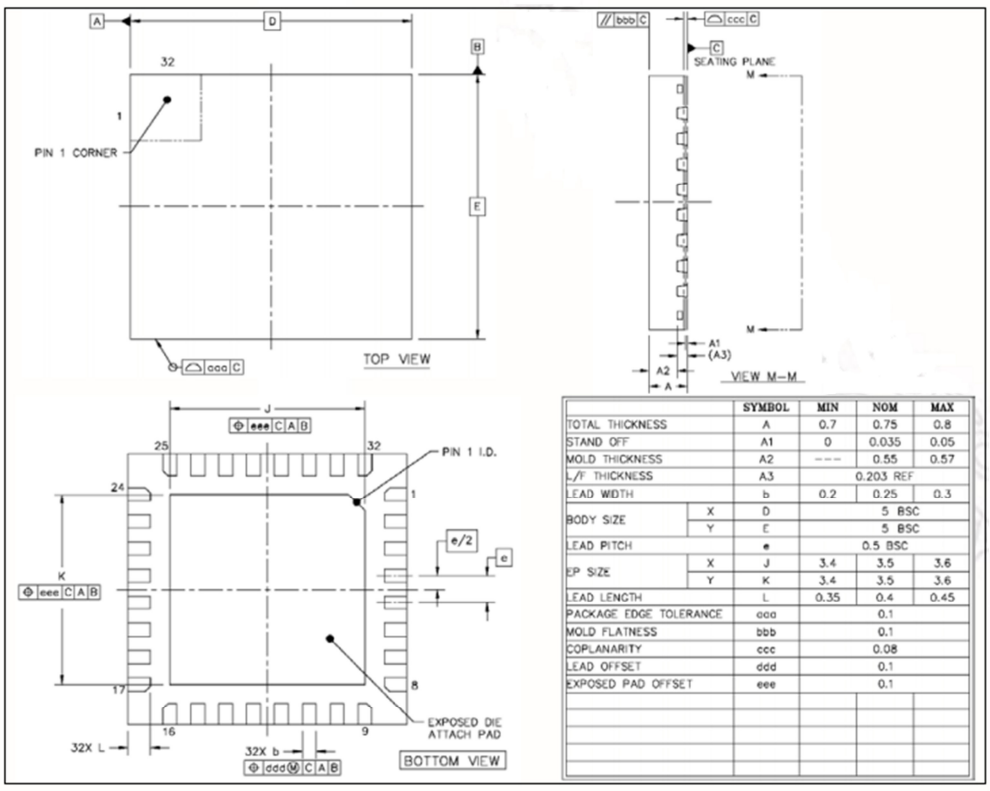
## Pinouts and pin Description



Top transparent view

## QFN package information

### 33-pin , 5 x 5mm




| | | SYMBOL | MIN | NOM | MAX |
|---|---|---|---|---|---|
| TOTAL THICKNESS | | A | 0.7 | 0.75 | 0.8 |
| STAND OFF | | A1 | 0 | 0.035 | 0.05 |
| MOLD THICKNESS | | A2 | --- | 0.55 | 0.57 |
| L/F THICKNESS | | A3 | | 0.203 REF | |
| LEAD WIDTH | | b | 0.2 | 0.25 | 0.3 |
| BODY SIZE | X | D | | 5 BSC | |
| | Y | E | | 5 BSC | |
| LEAD PITCH | | e | | 0.5 BSC | |
| EP SIZE | X | J | 3.4 | 3.5 | 3.6 |
| | Y | K | 3.4 | 3.5 | 3.6 |
| LEAD LENGTH | | L | 0.35 | 0.4 | 0.45 |
| PACKAGE EDGE TOLERANCE | | aaa | | 0.1 | |
| MOLD FLATNESS | | bbb | | 0.1 | |
| COPLANARITY | | ccc | | 0.08 | |
| LEAD OFFSET | | ddd | | 0.1 | |
| EXPOSED PAD OFFSET | | eee | | 0.1 | |