



# Brasuíno BS1 - Manual do Usuário

05 de Janeiro de 2012

Parabéns! Você tem em mãos um produto com alta qualidade e tecnologia, que respeita a liberdade do usuário: você pode estudá-lo, alterá-lo e redistribuí-lo como quiser. Ele é um hardware livre, que funciona e é compatível com software livre. Aproveite!

– Equipe Holoscópio.

## 1 Características do BS1

Brasuíno BS1 é uma plataforma de prototipagem e desenvolvimento baseado em Arduino® que utiliza o microcontrolador AVR®. Este hardware foi redesenhada com software Livre, e licenciada como GPLv2+. Foi projetado para fácil prototipagem, é portanto ideal para estudantes, hobbystas e designers interessados em criar dispositivos mirabolantes. É uma plataforma versátil, flexível e robusta, permitindo até que seja utilizada como plataforma para outros produtos e aplicações de automação.

- Compatível com o shields do Arduino® Uno e o software Arduino®;
- Utiliza o microcontrolador ATMEGA328 em 16MHz, com 32kiB de memória Flash, 2kiB de memória RAM e 1KiB de memória EEPROM;
- Possui um microcontrolador secundário (ATMEGA8U2) que pode ser utilizado por usuários avançados para criar dispositivos USB diversos baseados na biblioteca LUFA;
- Cristais individuais para cada microcontrolador;
- 8 entradas analógicas disponíveis, sendo 6 disponíveis no conector padrão;
- Proteção contra inversão de fonte de alimentação;
- LEDs de estado e botão de reset na borda da placa, para fácil visualização e operação;
- Conexão compatível com USB 2.0 para programação e comunicação com outros computadores;
- Alimentação pela interface USB e por fonte externa;
- Hardware Livre: projetado com software livre e licenciado como tal, faça o que quiser com o seu Brasuíno!

## 2 Recomendações de Uso

Recomenda-se o uso de uma fonte de tensão contínua de 9V ou 12V com corrente de 500mA. O uso de fontes de características diferentes das especificadas poderão causar dano ao produto. Quando alimentado pela própria USB, a corrente máxima que o Brasuíno e a eletrônica adicional pode exigir é de 200mA. Exceder este limite provoca ativação do circuito de proteção, impedindo a sobrecarga do Host USB.

Observe também os limites máximos absolutos de tensão e corrente nas portas de entrada e saída, que são 5V +/- 0.5V e 20mA. É recomendado que a corrente por porta de saída não ultrapasse 10mA.

### 3 Software de Programação

O Brasuíno é compatível com o software Arduino®, e pode ser obtido em:

<http://arduino.cc/en/Main/Software>

Verifique se usa distribuição de software livre favorita já possui o software Arduino® em seus repositórios!

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[http://www.planalto.gov.br/ccivil\\_03/LEIS/L8078.htm](http://www.planalto.gov.br/ccivil_03/LEIS/L8078.htm)

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<http://brasuino.holoscopio.com/>

Qualquer dúvida, entrar em contato através do e-mail [contato@holoscopio.com](mailto:contato@holoscopio.com).

## 7 Contato

Para entrar em contato com a equipe da Holoscópio, envie um e-mail para [contato@holoscopio.com](mailto:contato@holoscopio.com).

## 8 Dados

Holoscópio Indústria e Comercio de Eletrônicos Ltda. ME.

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