Griswold FX

Spinner Edge V1.0

Manual V1.1

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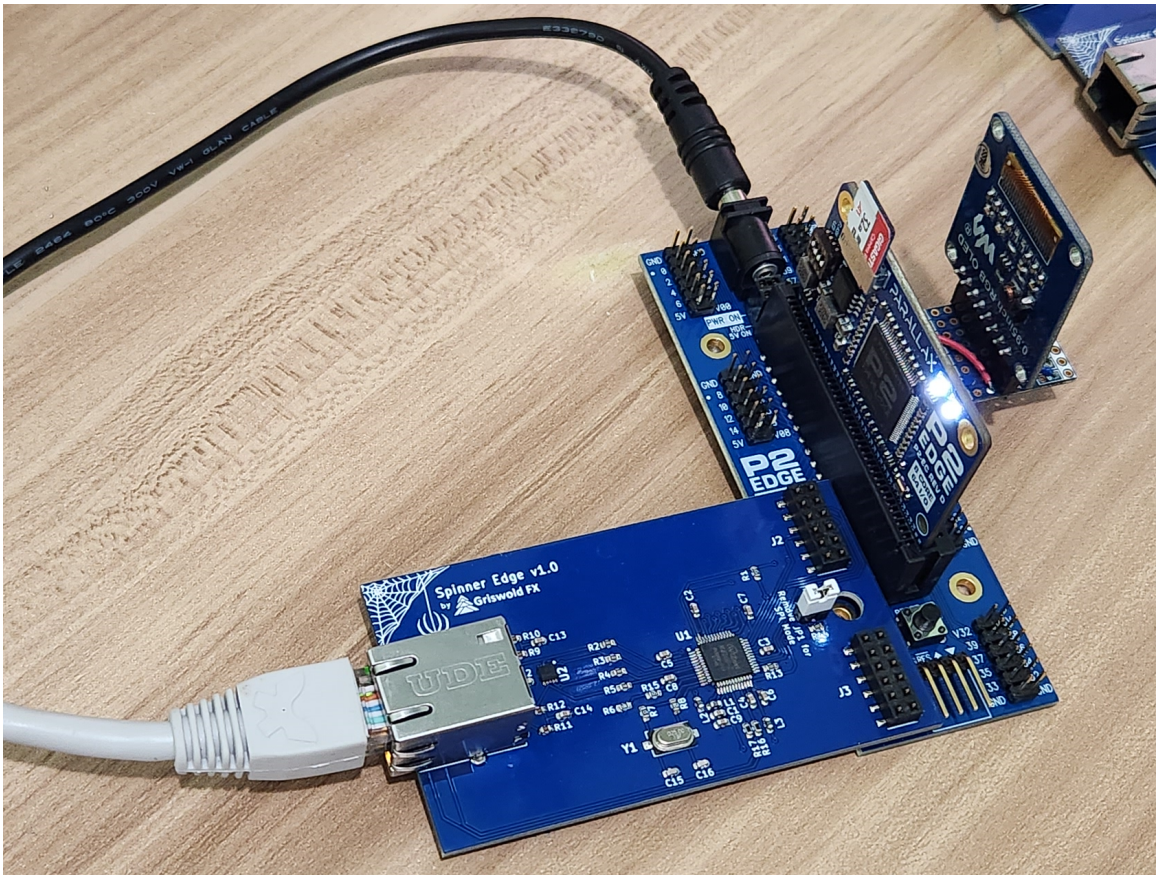


www.griswoldfx.com

Introduction

The Spinner Edge board is an Ethernet Development board for the Parallax P2 Edge and P2 Eval boards. The board is based on the Wiznet W6100.

Hardware

The W6100 is a hardwired Internet controller chip supporting IPv4/IPv6 dual stack by adding IPv6 functions on the basis of WIZnet's patented hardwired TCP/IP core technology. W6100 supports TCP/IP protocols such as TCP, UDP, IPv6, IPv4, ICMPv6, ICMPv4, IGMP, ARP and PPPoE. W6100 also includes 10Base-T / 10Base-Te / 100Base-TX Ethernet PHY and Ethernet MAC Controller which makes it suitable for embedded internet-enabled devices.

W6100 has 8 independent hardwired SOCKETs and supports various SOCKET-less commands, which are for IPv6 auto-configuration, monitoring, and managing the network via ARP, PINGv4, and PINGv6.

W6100 supports two kinds of HOST interfaces; SPI and parallel system BUS. It has 32KB internal memory for sending and receiving data. Designed for low power and low heat, W6100 provides WOL (Wake On LAN), Ethernet PHY power down mod, etc.

Supported Parallax P2 boards:

- P2 Edge Breakout Board
- P2 Edge Mini Breakout Board
- P2 Edge Module Breadboard, aka "The Jonny Mac Board"
- Propeller 2 Evaluation Board (Rev C)

Data Transfer Modes

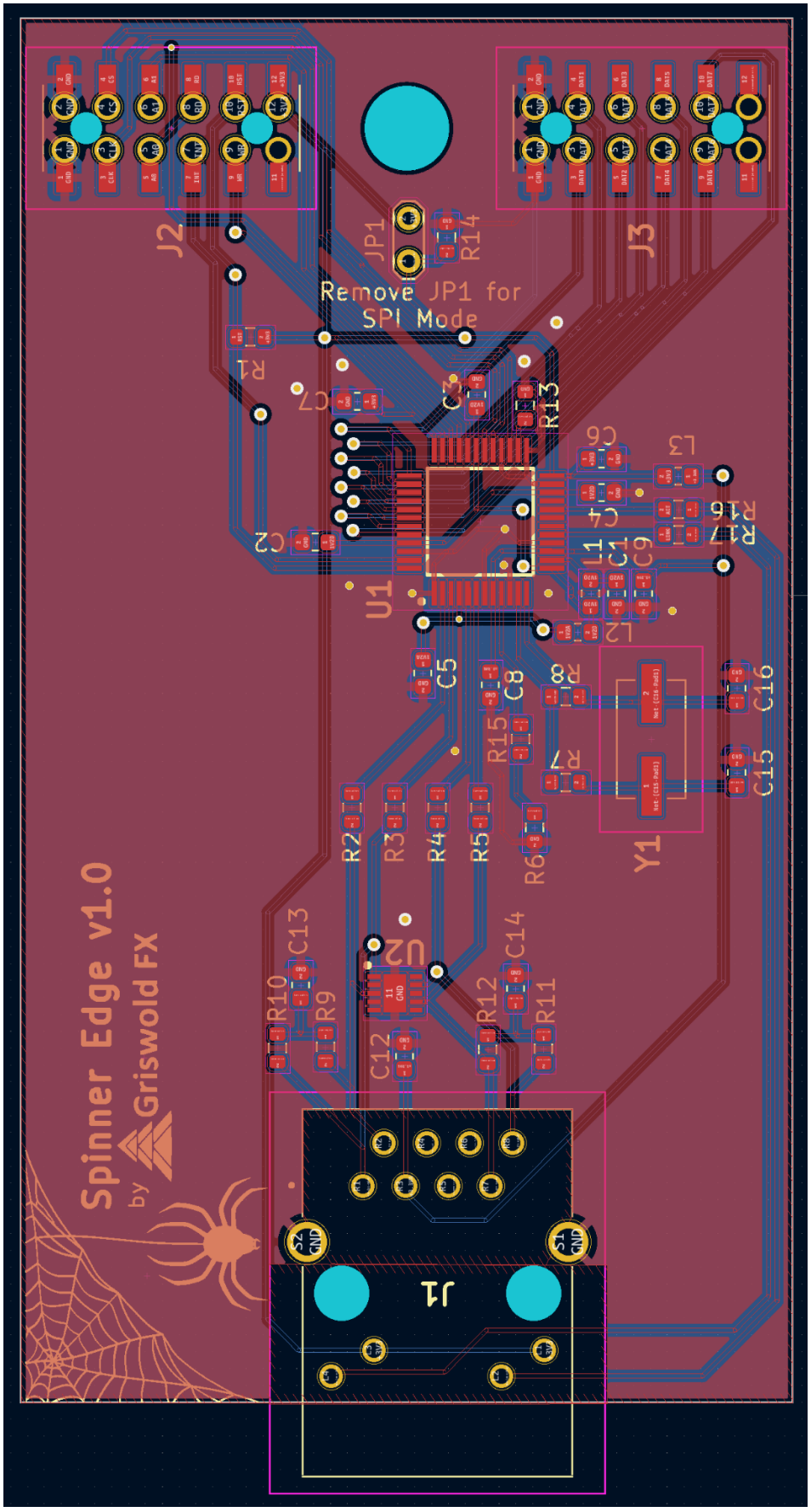
Parallel data transfer operations are with J1 installed. (Default with our driver)
SPI data transfer mode is with J1 removed.

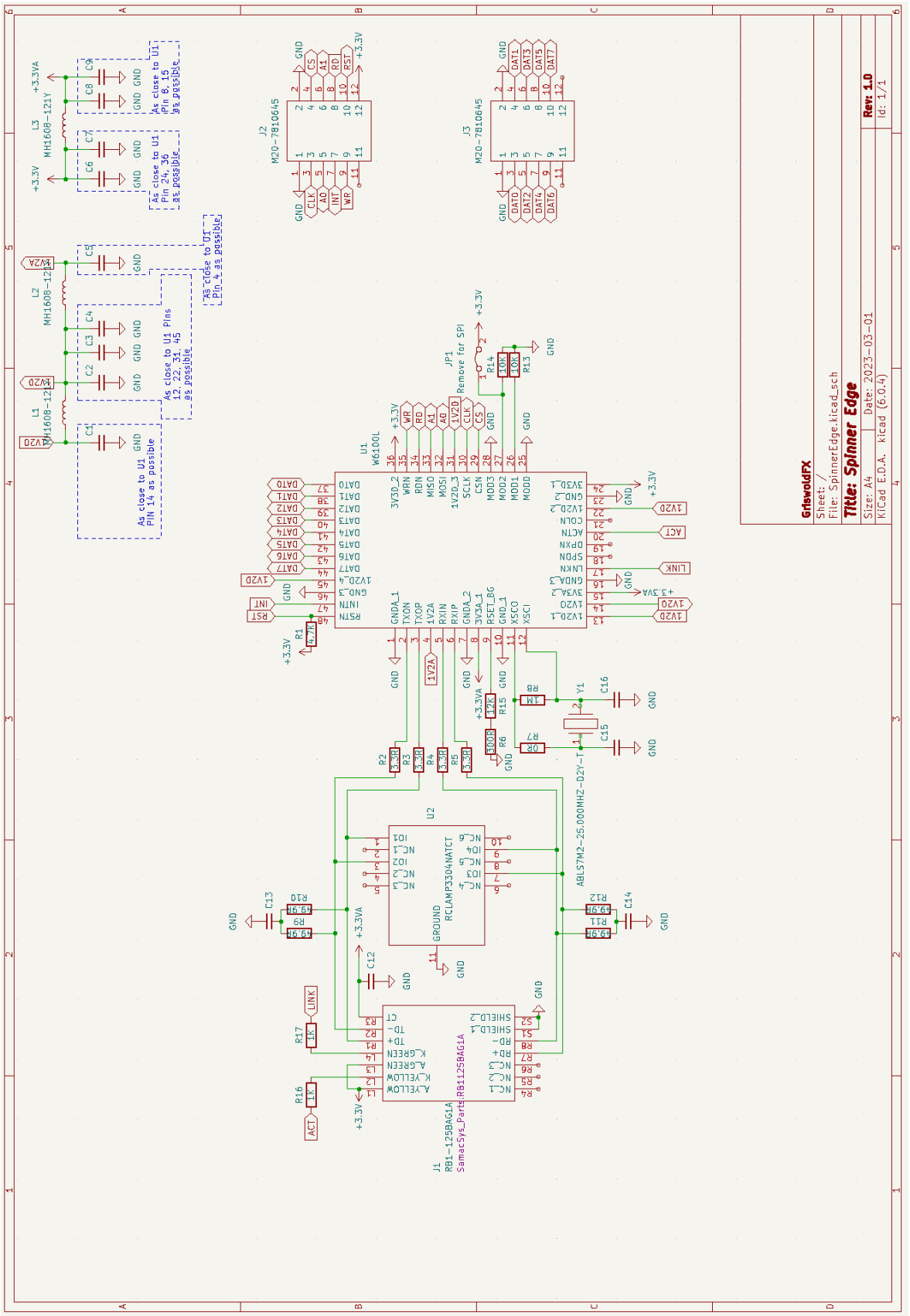
Pinout

The data pinout is as follows:

J2	
GND	GND
P0 CLK	P1 CS
P2 A0 (MOSI)	P3 A1 (MISO)
P4 INT	P5 RD
P6 WR	P7 RST
NC	3.3V

J3	
GND	GND
P8 D0	P9 D1
P10 D2	P11 D3
P12 D4	P13 D5
P14 D6	P15 D7
NC	3.3V


Spinner Edge v1.0
by Griswold FX
Remove JP1 for
SPI Mode
J1
J2
J3
JP1
U1
U2
Y1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Date: 2023-03-01
Rev: 1.0
KiCad E.D.A. kicad (6.0.4)
Id: 1/1
U1
W6100L
U2
RCLAMP3304NATCT
J1
RB1-125BAG1A
SamacSys_Parts.RB1125BAG1A
Y1
ABLS7M2-25.000MHZ-D2Y-T
J2
M20-7810645
J3
M20-7810645
JP1
Remove for SPI
L1
MH1608-121Y
L2
MH1608-121Y
L3
MH1608-121Y

Software

The driver for the Spinner Edge is available under the MIT License. It supports IPV4, inbound and outbound TCP and UDP sockets, DHCP Client, DNS, and HTTP. All of these protocols are available in SPIN2 and are supported under the Parallax Propeller Tool.

Currently IPV6, PPPoE, and IGMP is not supported by the Griswold FX driver for the Spinner Edge, however these features are supported by the Wiznet chip and may be added to the driver in the future.

The driver and example code can be found here:

Software - Repos (https://griswoldfx.visualstudio.com/Spinner%20Edge/_git/Software)

Rayman has provided a Propeller 2 port of the Official Wiznet Driver

The datasheet for the Wiznet 6100 can be found here:

Document | WIZnet Document System
(https://docs.wiznet.io/Product/iEthernet/W6100/document)