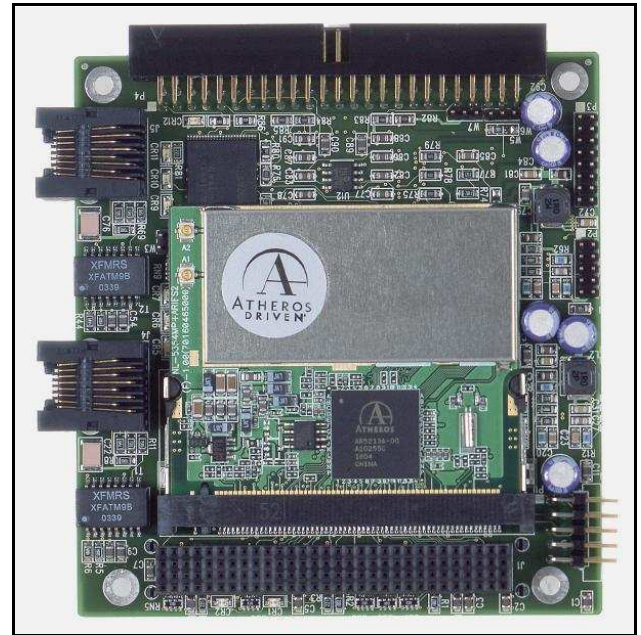# MESA

4C81 PC/104-PCI WIRELESS CPU

- Low Power ARM CPU ~2 Watts
- Low Cost
- Mini PCI-3 Expansion for Wireless
- PC/104-PCI compatible bus expansion
- 3 PCI bus masters
- 2 x 100BaseT Ethernet interfaces
- 32M or 64M RAM
- Up to 128M NAND flash
- RS-232 Serial port
- 5V only operation
- 0 to 70C standard -40 to +85C available
- NetBSD and Linux Supported
- JTAG debug connector
- Made in USA - local support
- 2 year warranty

The 4C81 is a low cost, low power ARM based PC104-PCI CPU. Designed for networked applications, the 4C81 has two 10/100 baseT Ethernet interfaces and a slot for a WI-FI card or other Mini-PCI device.

The 166 MHz CPU card consumes less than 2 watts total from a single 5V supply, making Solar powered applications practical.

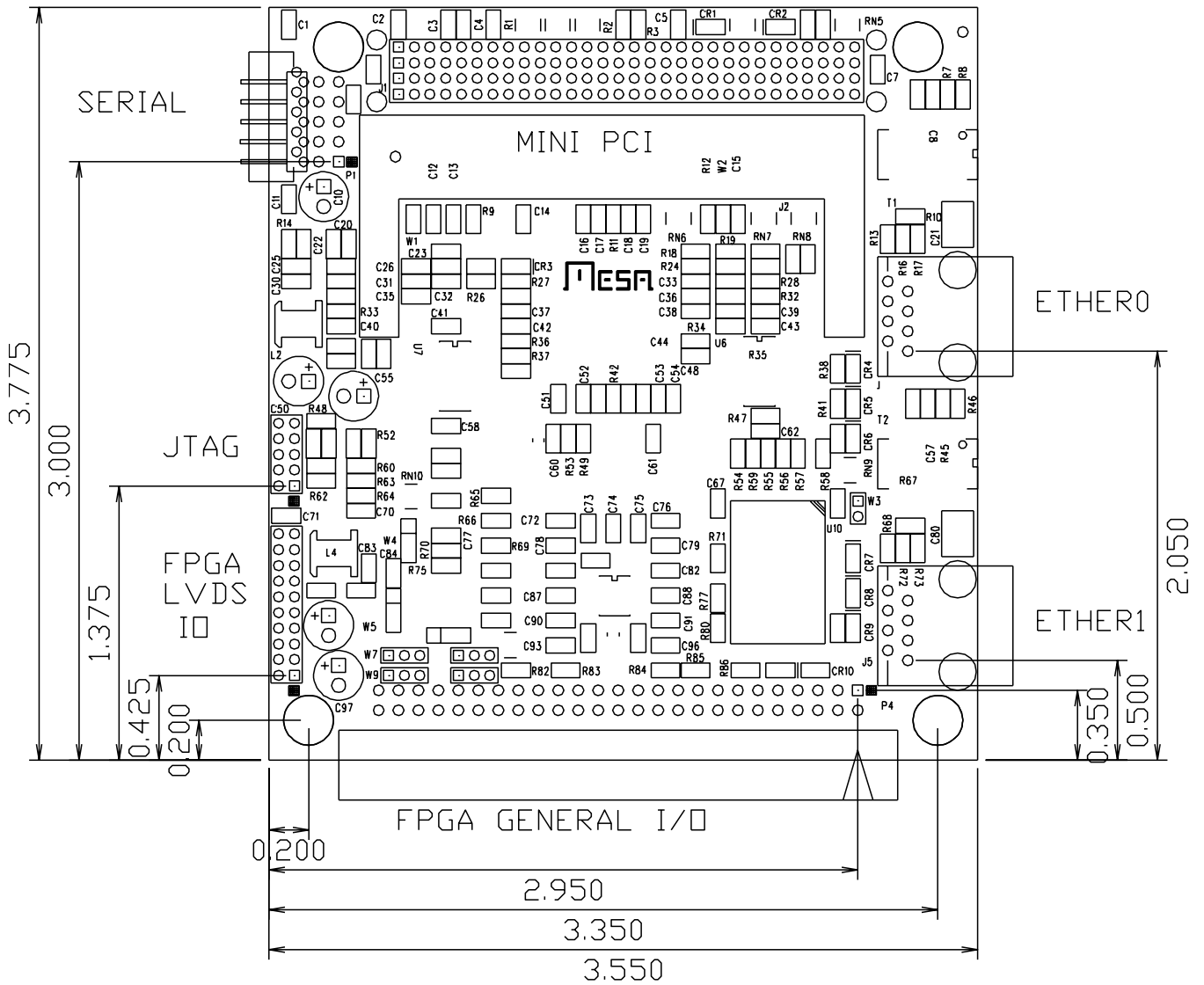System resources include 32M or 64M of RAM and 32M of NAND Flash memory and an RS-232 serial port..

The Ethernet interfaces generates hardware TCP checksums allowing close to wire speed routing through the 4C81.

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An optional on card 200K or 400K gate Spartan3 FPGA with 32 bit local bus connection provides flexible user I/O or a custom processing accelerator.

The FPGA has 36 User I/O pins available, 24 on a standard 50 pin header with interleaved grounds, and 12 on a 20 pin 2MM header organized as 6 LVDS pairs with grounds between pairs.

The 4C81 can run Linux or NetBSD and has a jumper selectable netboot option with NFS support to allow simple system debug and software development.

PC/104-PCI

SERIAL

MINI PCI

MESA

ETHER0

JTAG

ETHER1

FPGA
LVDS
IO

3.775

3.000

1.375

0.425

0.200

0.200

FPGA GENERAL I/O

2.950

3.350

3.550

2.050

0.350

0.500

EXAMPLE ORDERING INFORMATION:

4C81-R32F32   4C81 32M RAM 32M NAND Flash
4C81-R64F32   4C81 64M RAM 32M NAND Flash
4C81-R64F32-FPGA4   4C81 64M RAM 32M NAND Flash - 400K Spartan3 FPGA

Add -I for industrial temperature range.