Ethernet-based Embedded PC with Built-in UDP/IP Stack
Netsock/100

Features

✓ Ready-to-run embedded PC

✓ 10BASE-T Ethernet port with onboard Embedded Netsock™ UDP/IP stack

✓ Small PC/104 format and expansion

✓ Two RS232/RS485 COM ports

✓ 24 TTL-compatible I/O lines

✓ 8 analog in, 4 analog out (optional)

✓ Onboard flash downloader and operating system

✓ 5V-only operation

Netsock/100 provides a turnkey, network-oriented platform on which to build embedded systems. Based on the Micro/sys SBC1190 embedded PC and it's built-in 10BASE-T Ethernet port, Netsock/100 is a small PC/104 format computer that offers mid-range performances, and that can significantly reduce development time.

In addition to the SBC1190's 80C188 CPU, 512k RAM, 512k flash, 24TTL I/O lines, and pre-loaded operating system, Netsock/100 also includes the innovative Embedded Netsock UDP/IP stack. Upon powerup, a subset of the popular Winsock functions are immediately available for powerful net-working operations.

With networking software pre-installed and pre-integrated, bringing up multi-station embedded systems is much easier than in the past. And there are no royalties for any of the included software when production volumes begin.

Netsock/100 is completely turnkey. It displays a sign on messsage when 5V is applied. Clip in a standard network cable, and it communicates with a network. Cables, documentation, and example programs are all supplied with the free develoment kit. If required by an application, Netsock/100 offers two options: 8 channels of analog input and 4 channels of analog output.
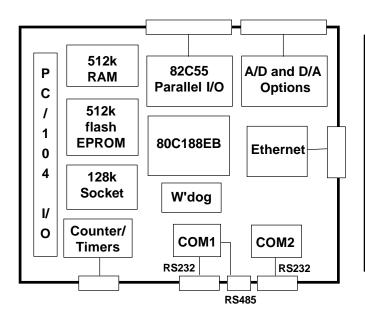

Software Support

DOS emulation, RUN.EXE™
Turbo Debugger™
Comm library, CommBLOK™
PID loop library, PidBLOK™,
C, compilers
   [Items above in Section 6]
UDP/IP

Compatible Hardware

PC/104 expansion cards
   [Items above in Section 4]
RS232/RS485 devices
Ethernet Networks
Analog sensors
Analog controls
Custom

Mounting/Packaging

Enclosure, ENC104-3
Standoffs, STDOFF01
   [Items above in Section 5]
Custom

Micro/sys 3730 Park Place, Montrose, CA 91020 (818)244-4600 Fax (818)244-4246
email: info@embeddedsys.com

Winsock API Subset

socket ( )
closesocket ( )
setsockopt ( )
getsockopt ( )
recvfrom ( )
sendto ( )
bind ( )
ioctlsocket ( )
inet_addr ( )
inet_ntoa ( )
WSAStartup ( )
WSACleanup ( )
WSAGetLastError ( )

Board diagram labels:

PC / 104 I/O

512k RAM

82C55 Parallel I/O

A/D and D/A Options

512k flash EPROM

80C188EB

Ethernet

128k Socket

W'dog

Counter/ Timers

COM1

COM2

RS232

RS232

RS485

Specifications:

Embedded PC Features:
- ❑ PC/104 standard
- ❑ 25MHz 80C188 CPU
- ❑ 512K RAM, 512K flash installed
- ❑ Two serial ports, 24 TTL I/O lines
- ❑ 10BASE-T Ethernet, RJ45
- ❑ Optional 8 analog in, 4 analog out
- ❑ See SBC1190 data sheet for complete details

Free On-board Network Software:
- ❑ Flash Setup™ configuration utility
- ❑ UDP/IP driver stack preloaded into flash
- ❑ Implements subset of Winsock functions (see chart above)
- ❑ SOCK_DGRAM (UDP datagram) and SOCK_RAW (low level) sockets supported
- ❑ IP, UDP, ARP, DHCP, ICMP protocols
- ❑ Dynamically linked with application program

Ordering Information:

Netsock/100	SBC1190-25, 512K RAM, 512K Flash, & Embedded Netsock™
DK100N	No charge development kit available with first order only.
1190OPT11	A/D Converter, 8-Channel
1190OPT12	D/A Converter, 4-Channel

RUN.EXE, Flash Setup, Embedded Netsock
    trademark Micro/sys, Inc.
CommBLOK, PidBLOK, OptoBLOK
    trademark Drumlin
Turbo Debugger
    trademark Borland International