Real world solutions...

"Boss 32" Provides Real World Solutions In One Complete Package

Explore The Many Capabilities Of The DIVELBISS BOSS 32

...the total control system.

Divelbiss CORPORATION

Boss 32 — On-Board Specifications

Processor	32-BIT @ 14.745 Mhz
Memory	User Program Area-200K, expandable to 968K User Data Area-64K Battery-Backed RAM, expandable to 256K/1Meg.
Display	Character Display: 2x40 or 8x42 (64x256) Graphic Display in Vacuum Fluorescent.
Serial Ports	4 Serial Ports: 2-RS232; 1-RS232/RS422/RS485; 1-RS232/422/485 hardware handshaking also available.
Network Communications	Divelbiss Bear Direct and Modbus®
Digital I/O	Up to 128 in and 128 out using standard Divelbiss HDIO cards
Analog In	8-channel buffered 12 bit A/D 0-5 VDC or 0-20 mA
Analog Out	4-channel buffered 12 bit D/A 0-10 VDC or 0-20 mA
Keyboard	Membrane or Mechanical: 24 keys (0-9, Enter, Clear, Programmable Function Keys: F1-F8 Menu, Next, Up and Down).
Real Time Clock	Time of Day, Day, Month, Year, and Day of Week.
Control Algorithm	Fuzzy Logic and PID
High Speed Counter	24-bit binary up/down counter. Inputs A,B Reset (optically isolated) Direct Output: open collector operation. Sensor Power Supply: +5 VDC reg. or 12 VDC unreg.
Power Requirements	115 VAC with supplied transformer or 12 VDC
Operating Temperature	0° - 50° C (8x42 graphic display) 0° - 60° C (2x40 display)
Programming Language	Compiled Basic
Touch Memory	Via 2 PIN Connector
Interrupts	3 external Modules

## Optional Features

Programming Language	Off-board compiled "C" Language IEC 1131-3 languages: Ladder Diagram, Sequential Function Chart, Function Block Diagram, Structured Text, Instruction List, FlowChart.
High Speed Counter	Plug-in modules available with up to 4 channels of counting per module (optional)
Analog	Plug-in modules with 16 single ended analog input channels or 8 differential input channels or 8 - 4-20 mA channels. Plug-in module with up to 4 channels independently selectable OUT-PUTS (optional), stepping motor and interrupt.

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8 X 42 CHARACTER
64 x 256 graphic display
Panel Mounted Unit:
8" x 12" x 2 ½" (H x W x D)
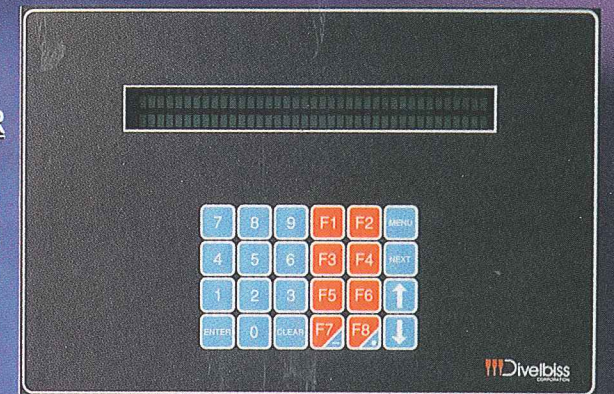
2 X 40 CHARACTER
Panel Mounted Unit:
8" x 12" x 2" (H x W x D)
Subplate Mounted Unit:
8" x 11" x 2" (H x W x D)
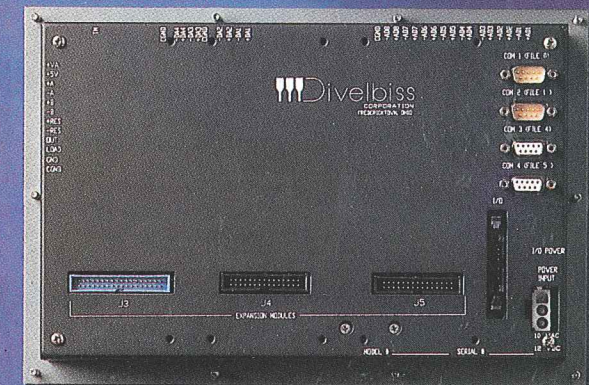
Complete application development support is provided by Divelbiss.

If you should be in need of assistance, simply call our help line at **1-800-245-2327**.

We will relieve you of the worries that you may be confronted with, by stepping you through to just the right solution. Divelbiss also has the capabilities of customizing the Divelbiss controllers to fit your particular needs. This gives you the opportunity to have proven technology in a custom product for your application.

Divelbiss CORPORATION

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BOSS 32
the one complete package.

Divelbiss has taken its powerful Boss Bear microcomputer into the next generation with the development of the new full-featured industrial control system: BOSS 32.

Offering enhanced capabilities over BOSS BEAR for counting, controlling, computation, graphics monitoring, and alphanumeric communication, **BOSS 32** offers many control functions all in one convenient package, in keeping with the Divelbiss standard of high-quality, cost-effective electronic products.
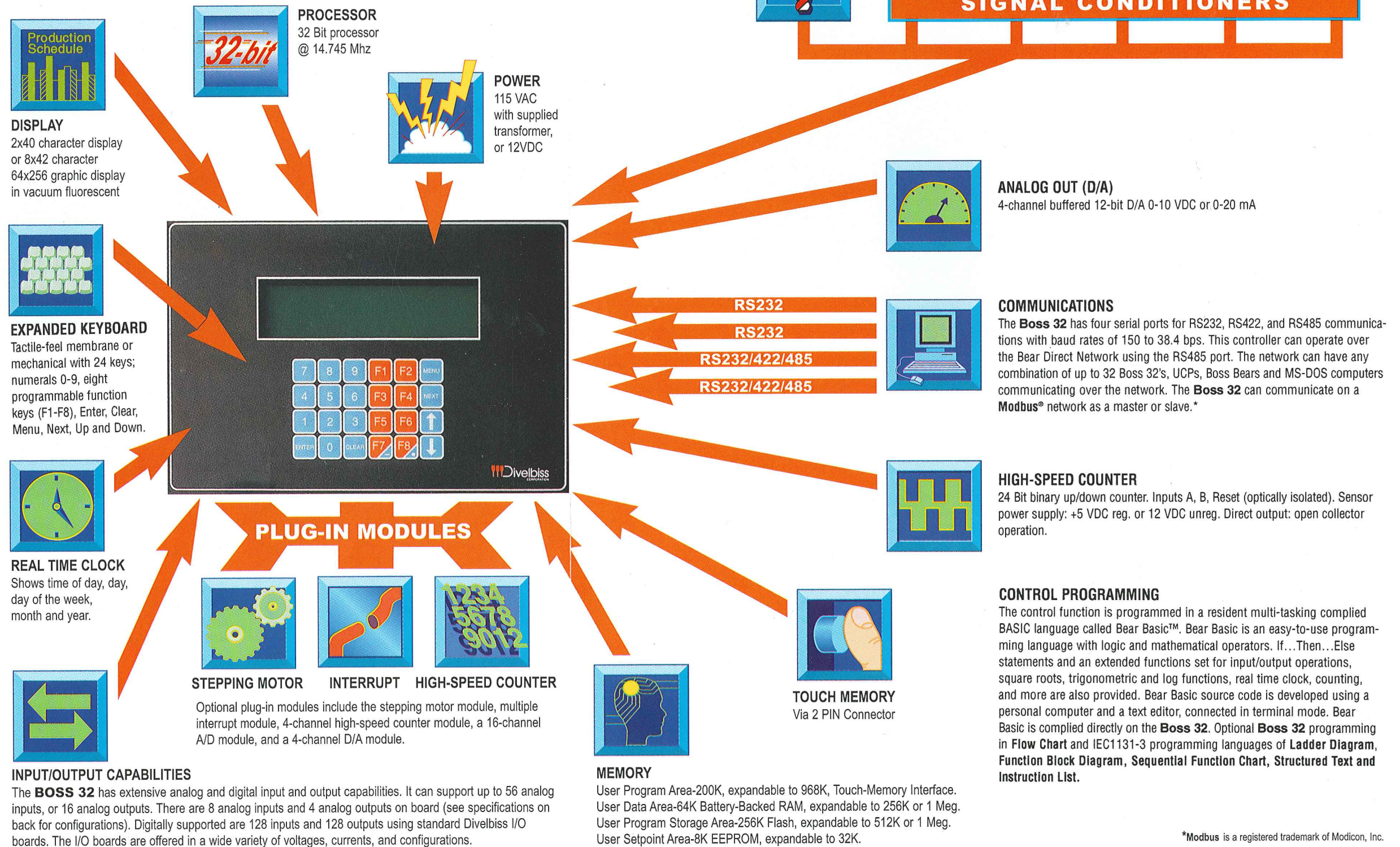
Applications

The **BOSS 32** is powerful and versatile. Its design is a perfect fit for a wide variety of applications and can be completely integrated with other information systems.

- Machine and Process Control
- Machine Monitoring
- Data Acquisition
- Production Counting
- Network Communications
  - Interface with printers or other computers
  - Provide plant production data for management analysis
  - Change part set-ups and batch sizes without costly additional components
- Production Reportings (reports daily, hourly, or shift totals)
- Length Measurement
- Batching
- Packaging
- Roll Forming
- Blending
- Dispensing
- Telemetry
- Remote & Mobile Field Applications
- Engine Control (powered by 12 VDC)

Divelbiss can customize **BOSS 32** to your exact needs, giving you proven technology in a custom product for your specific application.

DISPLAY
2x40 character display or 8x42 character 64x256 graphic display in vacuum fluorescent

PROCESSOR
32 Bit processor @ 14.745 Mhz

POWER
115 VAC with supplied transformer, or 12VDC

EXPANDED KEYBOARD
Tactile-feel membrane or mechanical with 24 keys; numerals 0-9, eight programmable function keys (F1-F8), Enter, Clear, Menu, Next, Up and Down.

REAL TIME CLOCK
Shows time of day, day, day of the week, month and year.

PLUG-IN MODULES

STEPPING MOTOR **INTERRUPT** **HIGH-SPEED COUNTER**

Optional plug-in modules include the stepping motor module, multiple interrupt module, 4-channel high-speed counter module, a 16-channel A/D module, and a 4-channel D/A module.

INPUT/OUTPUT CAPABILITIES
The **BOSS 32** has extensive analog and digital input and output capabilities. It can support up to 56 analog inputs, or 16 analog outputs. There are 8 analog inputs and 4 analog outputs on board (see specifications on back for configurations). Digitally supported are 128 inputs and 128 outputs using standard Divelbiss I/O boards. The I/O boards are offered in a wide variety of voltages, currents, and configurations.

ANALOG IN (A/D)
8-channel buffered 12-bit A/D 0-5 VDC or 0-20 mA

0-5 VDC   THERMOCOUPLE   STRAIN GAUGE   PRESSURE TRANSDUCER   4-20 MA   RTD

SIGNAL CONDITIONERS

RS232
RS232
RS232/422/485
RS232/422/485

ANALOG OUT (D/A)
4-channel buffered 12-bit D/A 0-10 VDC or 0-20 mA

COMMUNICATIONS
The **Boss 32** has four serial ports for RS232, RS422, and RS485 communications with baud rates of 150 to 38.4 bps. This controller can operate over the Bear Direct Network using the RS485 port. The network can have any combination of up to 32 Boss 32's, UCPs, Boss Bears and MS-DOS computers communicating over the network. The **Boss 32** can communicate on a Modbus® network as a master or slave.*

HIGH-SPEED COUNTER
24 Bit binary up/down counter. Inputs A, B, Reset (optically isolated). Sensor power supply: +5 VDC reg. or 12 VDC unreg. Direct output: open collector operation.

TOUCH MEMORY
Via 2 PIN Connector

MEMORY
User Program Area-200K, expandable to 968K, Touch-Memory Interface.
User Data Area-64K Battery-Backed RAM, expandable to 256K or 1 Meg.
User Program Storage Area-256K Flash, expandable to 512K or 1 Meg.
User Setpoint Area-8K EEPROM, expandable to 32K.

CONTROL PROGRAMMING
The control function is programmed in a resident multi-tasking complied BASIC language called Bear Basic™. Bear Basic is an easy-to-use programming language with logic and mathematical operators. If...Then...Else statements and an extended functions set for input/output operations, square roots, trigonometric and log functions, real time clock, counting, and more are also provided. Bear Basic source code is developed using a personal computer and a text editor, connected in terminal mode. Bear Basic is complied directly on the **Boss 32**. Optional **Boss 32** programming in **Flow Chart** and IEC1131-3 programming languages of **Ladder Diagram, Function Block Diagram, Sequential Function Chart, Structured Text and Instruction List.**

*Modbus is a registered trademark of Modicon, Inc.