Powerful
Versatile
Rugged
Reliable
Easy-to-use...

MicroOIT Family

3100/4100 Series

Communicate with PLCs, Motion Controllers, and Embedded MicroControllers

PACIFIC SCIENTIFIC
Superior Electric
Compumotor
ANIMATICS Motion Control
Allen-Bradley
EMERSON Motion Control
GE FANUC
CONTROL MICROSYSTEMS

c UL us LISTED

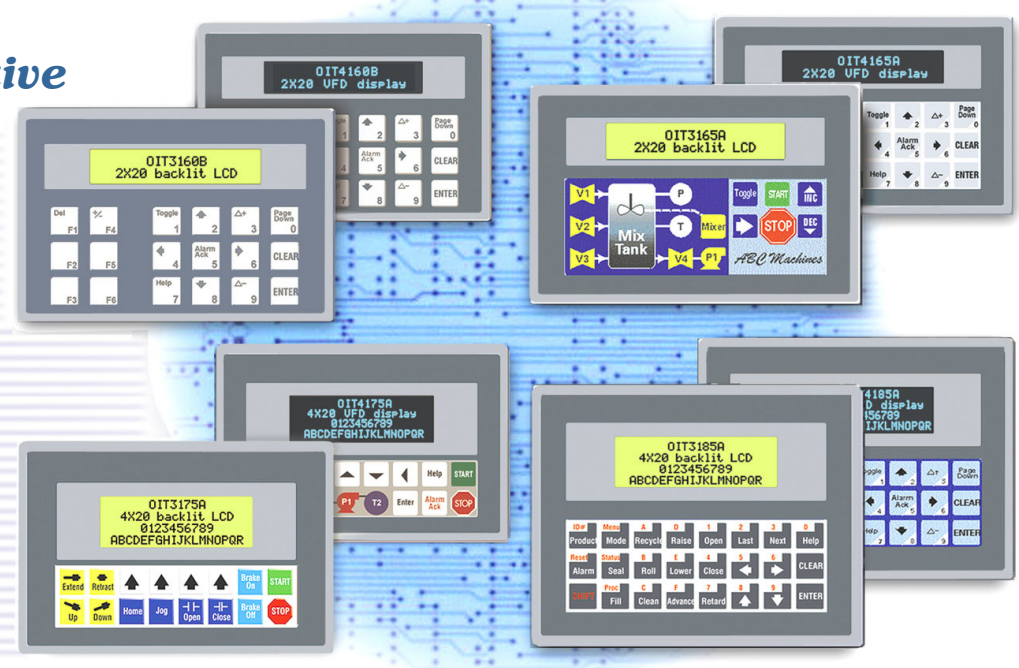
CE

SIXNET
SAF Drives
MODICON (Schneider Electric)
MITSUBISHI
YASKAWA
OMRON
SIEMENS
API Motion
QuickSilver Controls

Maple Systems INC.

Maple Systems 3100/4100 Series MicroOITs offer unmatched functionality, flexibility and value. Designed to meet your need for powerful yet affordable operator interface terminals, these MicroOITs offer more features than other products in their class. With their unique user-definable keypad and slide-in legend you can easily create the perfect operator interface terminal for your application. These MicroOITs communicate with over 75 families of PLCs, motion controllers, temperature controllers and embedded microcontrollers. Choose from 2 or 4-line LCD or VFD displays and a 16 or 24-key keypad.

Truly Cost Effective Replacements for Push Buttons, Switches, Displays, Dials & Lamps



Unequaled Flexibility

Whether you are designing for one application or many, the 3100/4100 Series MicroOITs fit the bill. With 500 user-definable screens, 16 or 24 user-definable keys, and a user-definable keypad legend, these MicroOITs fit perfectly in any application.

Choose Your Own Keys

The 3100/4100 Series MicroOITs offer an innovative new feature that allows you to choose the exact keys that your application requires. In the past, you had to search for an operator interface terminal with just the right combination of keys; and when you couldn't find the perfect keypad layout, you had to settle for something different. Now, with the user-definable keypad feature standard on the 3100/4100 Series, it is easy to have the exact keypad layout you want; whether that includes function keys, a number pad, no keys at all, or almost any combination you can think of. Choose from the following key types: Global Function Keys, Screen-Dependent Function Keys, Numeric Keys or Control Keys.

Global Function Keys

You can configure up to 16 global function keys. Each global function key can display one of 500 user-definable screens or simulate a momentary or push-on/push-off mchanical switch.

Screen-Dependent Function Keys

Screen-dependent function keys allow you to define how they operate in each of the 500 user-definable screens. With 8 available, you have the equivalent of 4000 function keys.

Numeric Keys

For applications that require data entry, the 0 to 9 and +/- keys are available.

Control Keys

Many different control keys are available, allowing you to tailor the operation of the OIT to the requirements of your application.

Arrange the Keys

Once you choose the keys you need, these MicroOITs allow you to arrange those keys in any order. Use any, all, or none of the key locations. It's completely up to you. Of course, you are always free to use the predefined templates included in the configuration software.

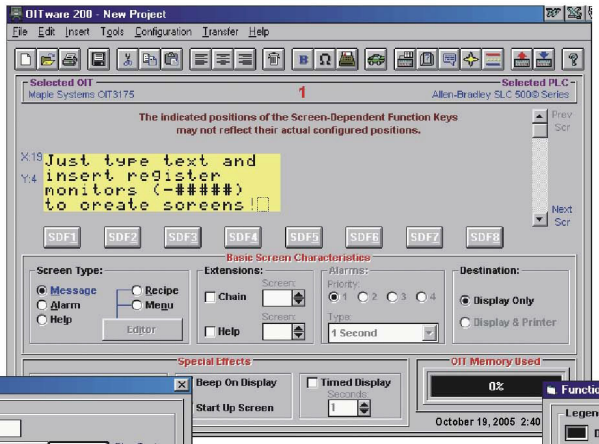
Install Your Own Keypad Legend

The 3100/4100 Series MicroOITs offer the flexibility you demand when it comes to keypad layout & design. All models have a clear area over the entire keypad that allows you to easily and inexpensively label the keys with any combination of text, graphics, and colors by simply inserting a custom legend. The legend can cover any unused keys to guard against operator confusion, and you can use the unused space for your company logo or other information. Just slide-out the default legend and slide-in your own legend for a "Built to Spec" look.

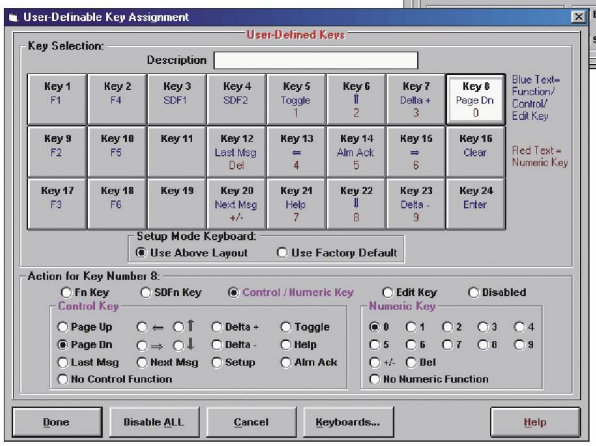
Once installed, the legend is completely sealed and protected.

Easy to Setup

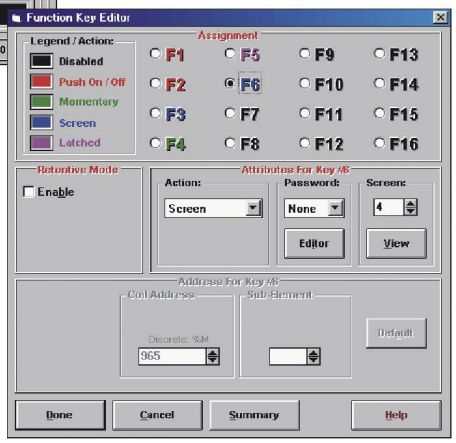
Putting the 3100/4100 Series MicroOITs to work is amazingly simple. Our configuration software packages let you develop your application on any Windows-based PC.



When your application is ready, just connect the MicroOIT to your PC's RS-232 port, power up and download, it's that simple. And it's just as easy to modify your application in the future.



The intuitive interface and easy to navigate controls make it a snap to design the screens, layout the keypad, and setup the function keys.



Communicate with Clarity

The 3100/4100 Series MicroOITs store up to 500 user-definable screens. Each screen can display as little or as much information as you choose. There is no wasted space -- you have control over the entire screen. The following screen types are available to help you clearly communicate to the OIT operator.

Message Screens

With the ability to embed up to 25 controller register monitors anywhere in each screen, message screens can convey information to the OIT operator in an easy to read format while allowing the OIT operator to change data in the controller. In addition, message screens can be chained together to form messages longer than the display size.

Recipe Screens

Recipe screens allow the OIT operator to setup and start a batch process. Each recipe screen can include up to 20 preset and 25 operator controlled ingredients.

Alarm Screens

Alarm screens keep the OIT operator informed of alarm conditions using a message and an audible alert. The message can include real-time information from up to 25 controller registers.

Menu Screens

Menu screens allow the OIT operator to quickly and easily branch to other message, recipe or menu screens. Chaining menu screens together, allows each menu option to have a longer description.

Screen Display Features

The 3100/4100 Series MicroOITs offer many screen display features to enhance communication:

- Linear Scaling to present analog or digital data in readily understandable terms (i.e., degrees, speed)
- Blinking Characters and an Extended Character Set
- Horizontal Scrolling
- Timed Display and Beep on Display

Help Screens

Help screens are linked to related message, recipe or menu screens and display when the HELP key is pressed.

Rugged & Reliable

Tough enough to function almost anywhere, the 3100/4100 Series MicroOITs are sealed to NEMA 4/4X(indoor)/12 standards and meet CE specifications for electric noise immunity in commercial, light, and heavy industrial environments. Reliability is not sacrificed to keep these products affordable. We use the best components available to ensure that our MicroOITs operate flawlessly.

With their full featured functionality, flexibility and easy setup, the 3100/4100 Series MicroOITs offer the economical operator interface option you've been looking for. These MicroOITs are simply the best value on the market today. If you have been searching for a truly affordable, yet flexible operator interface for your applications, contact your Maple Systems representative today.

Product Selection Chart

	OIT3160-B00/ OIT4160-B00	OIT3165-A00/ OIT4165-A00	OIT3175-A00/ OIT4175-A00	OIT3185-A00/ OIT4185-A00
	CE c UL US LISTED	CE c UL US LISTED	CE c UL US LISTED	CE c UL US LISTED
Display (lines x characters)	2 X 20 backlit LCD/VFD	2 X 20 backlit LCD/VFD	4 X 20 backlit LCD/VFD	4 X 20 backlit LCD/VFD
Dimensions (WxHxD)	6” x 4” x 1.77”	6” x 4” x 1.77”	6” x 4” x 1.77”	6” x 5” x 1.77”
Key Types Available	Numeric keypad; 6 screen-dependent function keys	Up to 24 user definable -- screen-dependent or global function keys, control keys, or numeric keys	Up to 16 user definable -- screen-dependent or global function keys, control keys, or numeric keys	Up to 24 user definable -- screen-dependent or global function keys, control keys, or numeric keys
Tactile Key Feedback	Yes	No	No	No
Slide-in Legend	No	Yes	Yes	Yes
Operating Temperature	14 to 149°F; -10 to 65°C	14 to 149°F; -10 to 65°C	14 to 149°F; -10 to 65°C	14 to 149°F; -10 to 65°C
CLASS I DIVISION 2	Yes	Yes	Yes	Yes

= User programmable keypad with custom slide-in legend

Specifications

Display

Character Height (2-line display) -- 0.19 in. [5 mm]
(4-line display) -- 0.16 in. [4 mm]
Viewing Angle -- approximately 90 degrees

Mechanical

Material -- aluminum enclosure, polyester keypad
Mounting -- panel
Weight -- less than 1 pound [0.45 kg]
Depth Behind Panel -- 1.57 in. [40 mm]

Environment

Operating Temp. (LCD) -- 32 to 122°F; 0 to 50°C
(VFD) -- 14 to 149°F; -10 to 65°C
Storage Temp. (LCD) -- -4 to 158°F; -20 to 70°C
(VFD) -- -40 to 185°F; -40 to 85°C
Relative Humidity -- 5% to 95% (non-condensing)
NEMA Rating -- 4, 4X (indoor), 12

CE Certifications

EN55011 Group 1, Class B (1991)
EN50081-1 (1992), EN50081-2 (1994)
EN50082-1 (1992), EN50082-2 (1995)

UL Certifications

UL listed Class I, Div 2

Power Requirements

Input Voltage -- 12 to 30 VDC
Power Usage -- 2.5 watts typical

Communications

- One RS-232/RS-422/RS-485 serial port (RJ45) used for OIT configuration and controller communications
- Baud rates from 300 to 19200
- Point-to-point serial communications for all protocols (network support with ASCII and Modbus protocols)

Keypad

- Membrane with audible feedback
- Up to 5 million operations
- 16 or 24 user-definable keys with slide-in legend

Available Keys

- Up to 16 Global and 8 Screen-Dependent Function keys configurable as momentary, push on/off, latch or screen display
- Numeric keys (0 to 9, +/-)
- Alarm Ack key to acknowledge the current alarm
- Arrow keys to move the cursor between read/write register monitors in the screen
- Clear key to clear the current register monitor contents and activate data entry mode
- Delete key to perform a destructive backspace at the cursor current position in a register monitor
- Delta+ and Delta- keys to immediately increment/decrement the value in the current register monitor by the preset amount
- Enter key to accept the data entered by the operator and update the current register

(continued on next page)

Specifications *(continued from previous page)*

- Help key to display customized help screens
- Last Message and Next Message keys to display the screens in the screen stack
- Page Up and Page Down keys to move through a group of chained screens
- Setup key to place the OIT into setup mode
- Toggle key to immediately change the value in the current binary register monitor

Screens

- Up to 500 configurable as message, recipe, alarm, menu or help screens
- Can display blinking characters
- Can display characters from the extended character set

Message Screens

- Beep on display
- Chain to other message screens
- Display for a preset length of time from 1 to 255 sec.
- Display one line of scrolling text up to 128 characters long (adjustable rate)
- Display up to 25 register monitors

Recipe Screens

- One step download/upload with a Function Key
- Include up to 20 preset values (operator adjustable)
- Beep on display
- Display for a preset length of time from 1 to 255 sec.
- Display one line of scrolling text up to 128 characters long (adjustable rate)
- Display up to 25 register monitors

Alarm Screens

- 4 priority levels
- 9 audible alert types
- Display one line of scrolling text up to 128 characters long (adjustable rate)
- Display up to 25 register monitorsMenu Screens
- Beep on display
- Branch to a max. of 9 message, recipe or menu screens
- Chain to other menu screens
- Display for a preset length of time from 1 to 255 sec.
- Display one line of scrolling text up to 128 characters long (adjustable rate)
- Display up to 25 register monitors

Help Screens

- Display from any message, recipe or menu screens

Register Monitors

- Adjustable decimal location
- Adjustable field width
- Fully programmable linear scaling on decimal, signed and long formats
- High/low limits
- Increment/decrement value
- Left/right justification
- Optional comma insertion
- Optional “Hide Data” format for secure data entry
- Optional leading zeros
- Read only or read/write

Register Monitor Formats

- Decimal
- Signed
- Long
- 4-digit BCD
- 8-digit BCD
- Binary - 1/0 coil, on/off coil, bank 8 or bank 16
- ASCII character
- ASCII string (allows display of ON/OFF or other text strings in place of 1/0 values)

Additional Features

- Easy-to-use, Windows-based configuration software
- Downloadable operational and protocol software
- Up to 16 set points that monitor the value in a register and display a screen if the low/high limit is exceeded
- Screen saver
- Screen and Alarm stacks
- Message Request and Current Message registers
- Status and Key coils

About Maple Systems

Elevating the Art of the Operator Interface . . .

Maple Systems is unique in the industrial marketplace. We are operator interface (OIT) experts who have specialized in the design, manufacture and support of operator interface solutions for 25 years. This specialized experience is evident in the quality, versatility and affordability of each of our operator interface terminals.

Presented by

Whether you need to display simple text or complex data entry and process monitoring, our team of OIT experts can help you to find the perfect solution for your application.

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