

The Eaton logo, featuring the word "EATON" in a bold, white, sans-serif font with a vertical line separating it from the "Cutler-Hammer" text.The Cutler-Hammer logo, featuring the words "Cutler-Hammer" in a bold, white, sans-serif font.

PanelMate® ePro™ PS EE Operator Interface Models 7685T-12E, 7685T-15E and 7600E

Product Focus

.NET Framework and IIS Server Compatible
Performance and Flexibility

Ethernet and Serial Communications Plus OPC
Innovation with Migration

Introduction

The Cutler-Hammer® PanelMate ePro PS EE (Enterprise Edition) is a high performance yet cost-effective operator interface from Eaton's electrical business. The EE is based on the PanelMate ePro PS platform which sets the standard for hybrid OI systems by combining the flexibility of Microsoft® Windows® XP Embedded technology with the stability and reliability achieved through the ePro's solid-state hardware design and exclusive Protect Mode™ that provides protection for the operating system and software.

The EE models provide a more comprehensive set of Windows XP components and services. By adding Microsoft XP components such as .NET Framework, IIS Server and Outlook® Express to the standard ePro PS operating system image, the ePro PS EE is capable of providing greater extensibility than any Embedded platform on the market. The ePro PS EE models also have increased processor performance and CompactFlash® capacity.

Performance and Flexibility

The PanelMate ePro PS EE has the performance and flexibility of a PC-based operator interface without the associated complexity of a PC. With integrated high-speed Ethernet, serial ports, USB ports, optional removable CompactFlash, PCMCIA and an optional PCI expansion adapter, the ePro PS EE can be adapted for a wide variety of application requirements.

In addition, the EE supports many third-party software packages, including Visual Basic®, which can interface directly to the Runtime software. Support for wireless Ethernet and cell phone cards, modem cards, and a multitude of non-volatile memory and input devices make the ePro PS EE the most flexible OI device in the industrial control market.

Communications and Convenience

The ePro PS EE comes standard with over 80 OPC drivers for both Ethernet and serial connectivity to virtually any PLC platform or network, as well as a wide array of drives, motion controllers and databases. No additional fees or activation are required for connecting directly to the OPC server engine and drivers, you just load the configuration and go. With PCMCIA and PCI availability, you have a wide selection of both proprietary and open network interfaces from DeviceNet™ and PROFIBUS® to Data Highway Plus, ControlNet™ and Modbus® Plus.

Protect Mode

With the built-in Protect Mode feature you can be confident that the ePro PS EE will be secure from unexpected changes or corruption and that the integrity of the system will remain intact. Protect Mode locks out all unauthorized modifications to the operating system in addition to protecting your critical application programs and drivers. This means that you don't suffer from the common problems associated with industrial PCs. As a result, you can treat the ePro PS EE like your PLC instead of your PC.

Configuration Tools

The ePro PS EE is configured with the ePro Canvas® editing software. The ePro Canvas editor supports a modern suite of graphical templates, called controls, for replacing hardwired panel devices such as pushbuttons, indicator lights, bars, readouts and message displays. These new controls allow existing PanelMate users to upgrade the look of their applications while keeping the same familiar user interface that has made PanelMate the preferred operator interface by operators worldwide.

The ePro PS EE's multi-language support allows you to create a single configuration supporting any combination of languages and supports on-the-fly online language changes.

The editor comes in two versions: ePro Canvas and ePro Canvas Professional. Both versions support application development for the complete PanelMate ePro PS family of products including the EE and OD models.

Rugged Design/Global Standards

The PanelMate ePro PS EE carries UL®, cUL®, CSA® Class I Div 2, and CE Mark certification and it meets NEMA® 4, 4X, 12 and IP65 ratings when installed in a correspondingly rated enclosure. The ePro PS EE operates from 24 Vdc power which is an emerging standard for global installations. An array of 24 Vdc power supplies is available from Eaton to accommodate installations requiring 120/240 Vac power.



Application Examples

Whether replacing hardwired pilot devices and pushbuttons or providing machine control and SCADA functions such as data archiving, recipe management, document browsing, remote desktop, and data base connections, the ePro PS EE can fit from both a form and functional standpoint. The ePro PS EE is ideal for replacing more costly SCADA systems that require a disk-based standard Windows platform with a solid-state protected Windows Embedded platform for both OI and MES applications.

In process monitoring, alarming and diagnostics, operator controls for critical start/stop, ramp/jog, and set point adjustments, as well as supervisory control applications, the ePro PS EE offers a reliable and safe interface for a wide range of industrial applications in industries such as:

- Water and waste water treatment — central and remote stations
- Material handling
- Automotive assembly
- High-speed packaging and palletizing
- Metal forming and machine press controls
- Engine test stand quality tracking and diagnostics
- Power generation and co-generation
- Primary metals
- Tire and rubber
- Pulp and paper
- Chemical and petrochemical
- Metal foundry
- Machine tool

For over 20 years, Eaton's PanelMate products have offered users "Innovation with Migration." The PanelMate ePro PS EE continues the tradition by offering a powerful and flexible operator interface in a variety of rugged packages and display sizes.

General Features and Capabilities

- Display 7685T-12E
 - 12.1 inch (307.3 mm), color TFT display, 16 million colors

- Resolution: SVGA (800 x 600)
- Brightness: 370 nits
- Backlight: Field replaceable, 50,000 hours typical life
- Auto dimming
- Display 7685T-15E
 - 15.0 inch (381.0 mm), color TFT display, 16 million colors
 - Resolution: SVGA (1024 x 768)
 - Brightness: 250 nits
 - Backlight: Field replaceable, 50,000 hours typical life
 - Auto dimming
- Blind Node (No Display) 7600E
 - Resolution: SVGA (800 x 600), XGA (1024 x 768), SXGA (1280 x 1024), UXGA (1600 x 1200)
 - Colors: 16 million colors (SXGA & UXGA — 65K colors)
- Operator Entry
 - Touchscreen interface with resistive technology for gloved-hand operation
 - Pop-up, on-screen alphanumeric keypad support
- Hardware/Mounting
 - Single piece design for easy panel mounting
- Powerful OI Capabilities
 - Supports ePro Canvas controls and templates
 - Built-in two-touch control
 - Full math and logic expressions
- Communications and I/O Capabilities
 - 1 Integrated Ethernet port: 10/100Base-T
 - 2 Serial ports: 1-RS-232, 1-RS-232/422/485 optically isolated
 - 4 USB ports (2 - V1.1, 2 - V2.0)
 - 1 CompactFlash memory card slot
 - 2 PCMCIA Type II slots (or 1 Type III)
 - Support for optional PCI adapter
 - Built-in OPC Client/Server support

Product Specifications

- Voltage
 - 24 Vdc
- Power Consumption
 - 7685T-12E: 32 watts
 - 7685T-15E: 44 watts
 - 7600E: 20 watts
- Heat Output
 - 7685T-12E: 32 watts (109 BTU/hour)
 - 7685T-15E: 44 watts (150 BTU/hour)
 - 7600E: 20 watts (68 BTU/hour)
- Current
 - 7685T-12E: 1.5 A
 - 7685T-15E: 2.0 A
 - 7600E: 1.0 A
- Peak Inrush Current
 - 7685T-12E: 7.0 A
 - 7685T-15E: 8.0 A
 - 7600E: 7.0 A
- Installation Rating
 - The ePro PS EE display models are approved for use in Type 4, 4X, 12 and IP65 installations when properly mounted in a correspondingly rated enclosure
- System Ambient Temperature
 - Operating: 0 – 55°C (32 – 131°F); 0 – 50°C (32 – 122°F) with optional PCI adapter
- Non-operating: -25 – 70°C (-13 – 158°F)
- System Vibration
 - Operating: 1G from 5 – 500 Hz
 - Non-Operating: 1G from 5 – 500 Hz
- System Shock
 - Operating: 30G
 - Non-Operating: 30G
- Relative Humidity
 - Operating: 20 – 95% non-condensing
 - Non-operating: 20 – 95% non-condensing
- Altitude
 - Operating: 10,000 ft Above Sea Level (3,048 m)
 - Non-operating: 40,000 ft Above Sea Level (12,192 m)
- Emissions
 - CISPR 22 Class A-Radiated and Conducted
- Noise Immunity
 - IEC 801-2,3,4,6,8
 - IEC 6100-4-2,3,4,5,6,8
- Agency Certifications
 - CE Mark
 - UL/cUL and CSA Class I, Div 2, Groups A, B, C, D

MODEL NUMBER	OVERALL DIMENSIONS H X W X D	CUTOUT DIMENSIONS H X W	WEIGHT
7685T-12E ①	11.60 x 15.90 x 3.90 in (295 x 404 x 99 mm)	10.12 x 14.34 in (257 x 364 mm)	14.0 lbs (6.35 kg)
7685T-15E ①	13.50 x 18.60 x 5.00 in (343 x 472 x 127 mm)	12.05 x 17.01 in (306 x 432 mm)	18.0 lbs (8.16 kg)
7600E ①	9.30 x 12.00 x 4.90 in (236 x 305 x 124 mm)	Designed for mounting in a cabinet	5.0 lbs (2.27 kg)

① Add 1.30 in (33 mm) to depth for optional PCI adapter.

OPTIONAL ACCESSORIES MODEL NUMBER	DESCRIPTION
76PCI	PCI Adapter Module for 12", 15" and Blind Node
76MLEEB	PanelMate ePro PS EE Restore Kit – Blind Node
76MLEED	PanelMate ePro PS EE Restore Kit – 12" and 15"

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