

MICROS PC Workstation 2015 for MICROS and Retail POS Applications



MICROS PCWS 2015 Overview

The MICROS PCWS 2015 sets a new standard for performance and configurability for Point of Sale terminals. Based on the latest Intel processor platform, the MICROS PCWS 2015 is unmatched in today's marketplace, providing unsurpassed processing power for the most demanding applications, and delivering that power efficiently, with low thermal output and electrical consumption.

The new MICROS PCWS 2015 was designed to meet the requirements of Retail point of sale.

MICROS PCWs 2015 Feature Summary

Feature	PC Workstation 2015
Processor (2 Choices)	Intel Celeron P4505 1.8Ghz Dual Core, Dual Thread Processor Intel Core i5 2.4Ghz Dual Core, Quad Thread Processor w/Hyperthreading
Operating System	Microsoft® Windows® 7 Professional (available for either Processors) Microsoft® Windows® POSReady 2009 (available for Celeron Processor only)
BIOS	Phoenix Secure Core Tiano BIOS UEFI 2.2 Supports Intel Active Management Technology (AMT) with Core i5 Processor
Volatile Memory	Up to 8Gb DDR3 1066 MHz RAM (Two SODIMM Sockets) 2Gb DDR3 1066Mhz Standard in One Socket Expansion Socket Externally Accessible
Hard Drives	1-160G SATAII Hard Drive Standard 2 - 2.5" SATAII Hard Drive Bays, Externally Accessible
Flash Storage	1 – Type 1 Compact Flash Socket 1 - Internal eUSB Flash Drive Header
Networking	10/100/1000BaseT on Board
Display	15" TFT High Bright LCD with LED Backlight 1024x768 Resolution 16 Million Colors 250+ NIT Brightness
Touch Screen	5-Wire Resistive Touch Screen Standard
Power Supply	Internal 175W Universal Input
Magnetic Card Reader	Modular Integrated Three Track MSR Standard
Audio	Mic In, Line Out Ports Integrated Stereo Speakers
Video	15 Pin VGA Connector for 2 nd Independent Display
Cash Drawer Ports	Ports not used when configured with MICROS Cash Drawer with Epson Printer Interface, Part #400018-034, and connected to MICROS Serial Thermal Printer
USB Ports	4 - Standard USB 2.0 Ports 2 – Custom Powered USB 2.0 Connectors (1 – 5/12/24V Selectable, 1 – 5/12V Selectable) 3 - Internal USB 2.0 Headers (1 Reserved for Optional eUSB Flash Drive) All External USB Ports can be Individually Disabled
Serial Ports	1 – Powered 9 Pin RS232 (5/9/12V BIOS Selectable) 1 – 9 Pin RS232 1 – RJ45 RS232 1 – RJ45 MICROS IDN Port (RS422/485/232 Switchable)
Customer Display Ports	2 – One for Remote Pole Display, One for Integrated Rear Display
Mini-PCI Socket	For Options, Including Internal Modem, Wireless Networking
Certifications	FCC Class A, UL, CE, TUV, CCC, RoHS, China RoHS
Dimensions	15.4"W x 13.0"D x 4.3"H (H without Stand)
Operating Temperature	0° C to 45° C (32F to 114F)

Please see the MICROS PCWS 2015 Setup Guide for Complete Specifications and Details

All-In-One Touch Screen Design

MICROS PCWS 2015 simplifies installation in a number of ways. The all in one design integrates the system board, display, touch screen and magnetic card reader into one low profile, lightweight package.

Reliable

MICROS PCWS 2015 is designed for years of trouble free operation. Heat is the primary enemy of computer systems, and special attention was paid to selecting energy efficient components and developing a robust cooling system for the new workstation. This attention resulted in a unique cooling system that ensures all components of the MICROS PCWS 2015 operate well within their specification.

MICROS has spent almost 35 years developing point of sale terminals for real world hospitality and retail environments. The MICROS PCWS 2015 proudly carries forward this distinctive pedigree.

Adaptable

The flexibility of the MICROS PCWS 2015 is greatly enhanced by its modular design and available options.

Mounting

In addition to the optional adjustable stand, MICROS PCWS 2015 features a VESA 100 mounting pattern on the bottom of the workstation. This allows the unit to be used with a variety of mounting hardware, from adjustable arms to wall mounts, providing a number of ways to install the terminal.

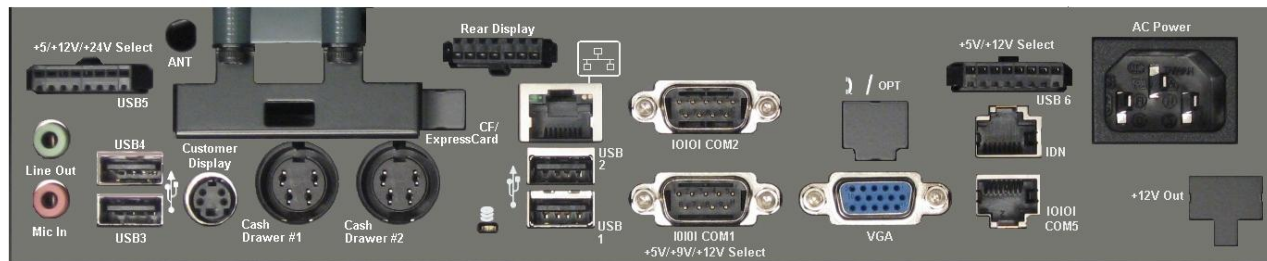
Touch Screen Options

MICROS constantly reviews touchscreen technology to make sure the best balance of functionality, durability and cost are maintained. Currently, 5-Wire Resistive touchscreens achieve this goal. The chart provides a quick guide to the differences between resistive and capacitive technologies.

Feature	5-Wires Resistive	Capacitive
Linearity	Very Good	Good
Calibration Retention	Very Good	Good
Durability	Good	Very Good
Stylus or Gloved Hand operation	Yes	No
Cost	\$\$	\$\$\$

Peripheral Support

MICROS PCWS 2015 supports a wide variety of peripherals, with ports that include 10/100/1000 BaseT network, 9 USB (3 internal), 4 Serial ports (2 - RS-232 DB9, 1 IDN- switchable, 1 RJ45 serial); all ensure the MICROS PCWS 2015 will accommodate the range of devices found in typical retail installations.



MICROS PCWS 2015 Technology

The MICROS PCWS 2015 is designed around embedded and industrial components; those items identified by their manufacturer for long life cycle, superior specification, and tightly controlled quality.

Processors

The MICROS PCWS 2015 utilizes the latest embedded processors from Intel's Calpella family, the Celeron P4505 and Core i5. These processors are part of the mobile lineup from Intel, ensuring high levels of performance while maintaining efficient use of power and low thermal output.

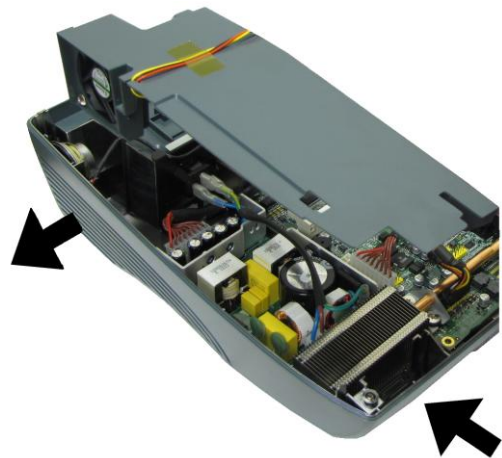
The Calpella family of processors provides substantial performance gains compared to the Intel Core 2 Duo processors used in most competitive POS terminals.

Cooling System

MICROS PCWS 2015 features an actively cooled heat pipe technology. The heat pipe channels heat from the processor to a heat sink located within a cooling tunnel. A thermostatically controlled fan draws cool air from the front edge of the workstation over the heat sink, and across the power supply, before discharging it out the side of the workstation. The intake and exhaust vents for the cooling air are designed to channel spills away from the interior of the workstation.



Internals of MICROS PCWS 2015, showing copper heat pipe leading from processor into cooling tunnel.



Cooling tunnel assembly lifted, showing heat sink, power supply and air flow direction.

Copper Bonding

To assist with overall system cooling while maintaining MICROS high standards for EMI (electro-magnetic interference) and ESD (electro-static discharge) an advanced new method of thin film coating has been introduced with the MICROS PCWS 2015. This coating eliminates the need for an internal metal cage assembly, replacing it with a layer of copper bonded to the rugged PC-ABS casework.

This process allows for improved airflow through the system, ensuring proper cooling of all components while retaining MICROS traditional wide operating temperature range.

Microsoft Operating System Support

The MICROS PCWS 2015 is offered with Microsoft Windows 7 Pro preinstalled on a single 160G SATA II hard drive. Microsoft Windows Embedded POSReady 2009 (POSReady 2009) is also available for applications that can support this operating system.

It should be noted that both Microsoft POSReady 2009 and Microsoft Windows 7 require the use of anti-malware (anti-virus) software to meet PCI-DSS requirements. Also, end users must provide a mechanism to receive regular operating system updates from Microsoft to ensure they remain up to date with any security related corrections.

Microsoft POSReady 2009

POSReady 2009 replaces Microsoft Windows Embedded for Point of Service (WEPOS) as Microsofts operating system targeted for POS devices. POSReady 2009 is a prepackaged version of Windows XP embedded, the componetized version of Windows XP. By tailoring this operating system for the specific needs of POS, Microsoft is able to reduce the overall size of the operating system and offer it at a lower cost.

POSReady 2009 improves on WEPOS in a number of areas, including the ability to install and remove OS components and applications at will, addition of the most current Microsoft technologies such as .NET framework 3.5, Silverlight and SQL Server Express, and seamless connectivty using the latest POS peripheral drivers.

Microsoft Windows 7 Professional

Windows 7 Professional is Microsoft's full desktop operating system, providing capabilities beyond that found in the POSReady 2009 embedded operating system.

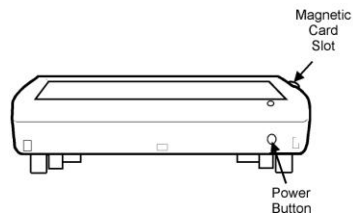
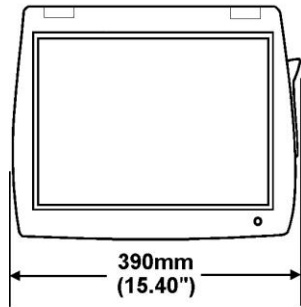
As part of MICROS licensing agreement with Microsoft, the Windows 7 Certificate of Authenticity applied to the MICROS PCWS 2015 allows users to downgrade the Windows 7 operating system to Microsoft Windows XP Professional if desired. This capability allows users to purchase the MICROS PCWS 2015 with Windows 7, downgrade to Windows XP and use it with applications that may not be ready to support the newer operating system. When the user is ready, they can restore the original Windows 7 operating system.

MICROS PCWS API and MICROS OPOS Drivers

The MICROS PCWS API is used by MICROS applications to control MICROS specific ports, such as those for the cash drawers, IDN printers, customer displays and the Magnetic Card Reader. The API also provides control for items such such as the operator display brightness, status LED, and USB port enabling/disabling.

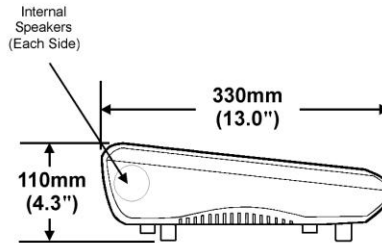
Third party applications can also utilize the MICROS PCWS API to directly control these ports, or alternatively they can use the MICROS OPOS drivers. The MICROS OPOS drivers provide 3rd party applications with an industry standard structure for controlling point of sale peripherals. The OPOS drivers do not directly control the MICROS ports, but interact with the MICROS PCWS API to do so. The MICROS OPOS drivers are included in the POSReady 2009 and Windows 7 images, but are not installed.

Dimensions



NOTES:

1. Cables from IO Panel exit through bottom of unit.
2. Leave room at front/side of unit for card swipe and power button.
3. Orient unit to avoid glare on touchscreen from overhead lights.
4. Cash Drawers located at customer's discretion.
5. 77mm hole required under unit if Cash Drawer mounted under counter.



NOTES:

1. Cables from IO Panel routed through cable slot to exit stand.
2. Leave room at front/side of unit for card swipe and power button.
3. Orient unit to avoid glare on touchscreen from overhead lights.
4. Cash Drawers located at customer's discretion.
5. 77mm hole required under unit if Cash Drawer mounted under counter.

