
Server

(Residential Edition)

User Manual

Digital Home Appliance



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User Manual Information

Scope of the User Manual

mServer Models

This manual covers the mServer (Residential Edition) Digital Home Appliance only. For information related to the mServer (Commercial Edition), please contact Embedded Automation.

If your system is a custom configuration of mServer, most of this manual still applies.

Warranty Information

The User Manual does not contain any information related to mServer warranties. For warranty information, please refer to the “mServer Warranty” documentation.

User Manual Guidelines

Warnings



Use of the Warning icon (shown on left of this text) indicates that the information presented should be adhered to avoid personal injury and/or damage to equipment or data.




Additional Information

Source	Information
mControl v1 (Home Edition) User Manual	The mControl User manual provides extensive information on mControl software, which is a main component of the mServer product.
http://www.embeddedautomation.com	The Embedded Automation website provides the following information: <ul style="list-style-type: none">▪ User Manuals▪ Application Notes▪ Specifications▪ Software Downloads▪ Access to Technical Support

mServer Overview

What's Included

The following items are supplied as part of mServer (Residential Edition):

Item	Picture
<p>mServer (Residential Edition)</p>	
<p>mServer Power Adapter</p>	
<p>User Manual</p>	

System Requirements

- Network connection (10/100MB) – required to allow client user-interface access.
- Internet Explorer 6.0 or higher browser – required for mControl user interface.

Specifications

mServer (Residential Edition)

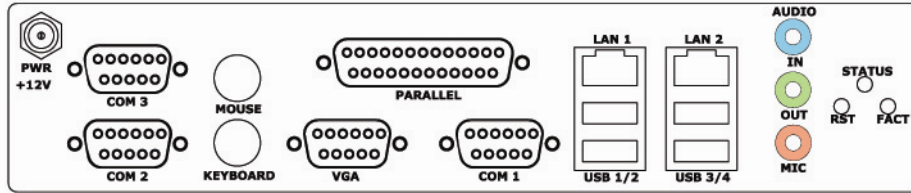
CPU	<ul style="list-style-type: none"> ▪ Compatible with Pentium (800 MHz) ▪ 256MB RAM (Memory) ▪ 512GB Compact Flash Card (Storage)
Interfaces	<ul style="list-style-type: none"> ▪ 2 x Ethernet (RJ-45) ▪ 1 x PS2 mouse port ▪ 1 x PS2 keyboard port ▪ 3 x Serial port ▪ 1 x Parallel ▪ 1 x VGA ▪ 4 x USB 2.0 ports ▪ 1 x VGA port ▪ 3 x Audio jacks: line-out, line-in and mic-in ▪ 1 x Power (from Power Adapter or 12VDC equivalent)
Environmental	<ul style="list-style-type: none"> ▪ Operating: 0 - 45°C (32 - 110°F) ▪ Relative Humidity: 5% - 90% (non-condensing)
Physical	<ul style="list-style-type: none"> ▪ Chassis: 1.75" (1U) (height) x 8.5" (width) x 7.25" (depth) or 44.45mm (height) x 215.9mm (width) x 184.15mm (depth) ▪ Mount points provided as part of chassis
Weight	2.20 lbs (1 kg)

mServer Power Adapter

Input Range	AC 100~240V 50~60Hz
Output Voltage	12VDC 6.67A 80W (max)
Safety	IEC
Dimensions	6.74" (length) x 2.37" (width) x 1.38" (height) or 171mm (length) x 60mm (width) x 35mm (height)
Weight	1.10 lbs (0.5 kg)

mServer Interfaces

The following section is a summary of the interfaces available:



Interface	Description
PWR +12V	<ul style="list-style-type: none"> Power input to mServer This input is typically provided by the mServer Power Adapter, but can be from an equivalent 12VDC source
STATUS	<ul style="list-style-type: none"> Status LED – indicates system power
RST	<ul style="list-style-type: none"> Reset button
FACT	<ul style="list-style-type: none"> Reset to factory settings (not currently supported)
LAN 1, LAN 2	<ul style="list-style-type: none"> 10/100MB Ethernet
COM 1, COM 2, COM 3	<ul style="list-style-type: none"> Serial port interfaces Typically used for interfacing to automation devices (e.g., security systems, computer adapters, etc.)
USB 1, USB 2, USB 3, USB 4	<ul style="list-style-type: none"> USB 2.0 port interfaces Typically used for interfacing to automation devices (e.g., security systems, computer adapters, etc.)
PARALLEL	<ul style="list-style-type: none"> Parallel port interface
AUDIO IN, AUDIO OUT, AUDIO MIC	<ul style="list-style-type: none"> Analog audio interfaces Audio IN – incoming audio signal Audio OUT – outgoing audio signal Audio MIC – microphone signal
KEYBOARD, MOUSE	<ul style="list-style-type: none"> Standard connections for keyboard and mouse

Installed Software

- Microsoft Windows® Embedded XP
- .NET Framework v1.1
- mControl v1 (Home Edition) – Digital Home Automation Software
 - Use mControl to manage your home using your media center's remote control. mControl allows you to control lighting systems, HVAC control, IP cameras, security systems and IR messaging. For a complete list of supported devices, please refer to the mControl v1 (Home Edition) User Manual.



Supported Automation Hardware

mServer support the following devices and protocols:

Device	Manufacturers ¹
IP-based Security Cameras	Axis, D-Link
Security System	Elk M1Gold
HVAC Climate Control Systems	RCS, ACT
Irrigation Controllers	SimpleHomeNet
IR and Relay Systems	Global Cache
Home Automation Protocols	INSTEON, Z-Wave, X10

¹ - For an updated and complete list of supported hardware, please refer to the mControl v1 (Home Edition) User Manual.

mServer Installation

Safety Information

Power Safety Guidelines



All of the items below are related to safe operation of mServer. Please follow these guidelines to ensure personal safety and to avoid damage to mServer and/or attached peripherals.

- Use the mServer Power Adapter provided with mServer. Follow instructions provided in the set-up section.
- For your safety, the power cord provided with mServer has a grounded plug. Always use the power cord with a properly grounded wall outlet.

Installation Guidelines

Mounting

The mServer (Residential Edition) chassis includes 4 mounting holes. Use these holes to mount mServer within utility enclosures or directly on a wall.

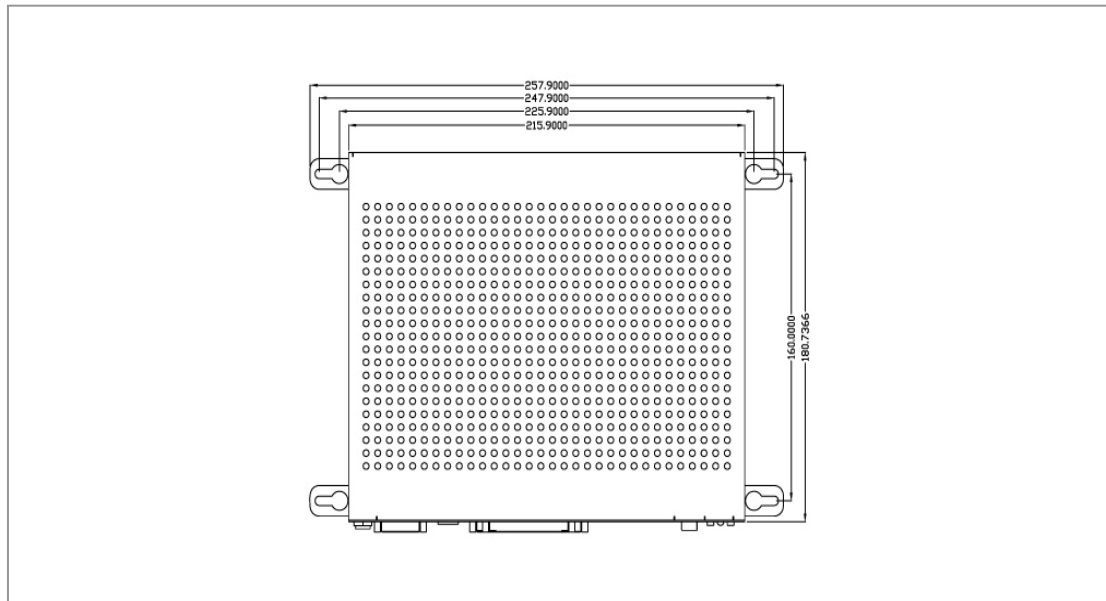


Figure 1: mServer positioning

To ensure the proper operation, please follow these guidelines when mounting mServer:

- Please allow a minimum of 3.00 inches (76.2mm) for cabling. For convenience, ensure that the interface ports, LEDs and buttons are easily accessible and visible.
- Ambient temperature of where mServer is mounted should be within the range of 32-110°F (0 - 45°C).
- Allow 1.00 inch (25.4mm) on top for ventilation.
- mServer should not be subjected to excessive vibration or moisture.
- Ground the mServer chassis to earth ground for safe and stable operation

Packaging

It is highly recommended to keep the original packaging for mServer. This packaging has been designed to safely ship mServer. This is important because if you have to ship mServer back for repair and improper packaging is used, you will be responsible for any damage caused during shipment.

mServer Set-up

It is highly recommended that mServer be powered off during the connecting of cables. In addition, it is recommended that all power to other devices attached to cables also be powered off.

Powering mServer

To power mServer, plug the mServer Power Adapter's output to the mServer's "PWR +12V" input and then plug the mServer Power Adapter's plug in to the AC source.

Once powered, mServer will automatically start running, including mControl software. The "STATUS" LED will indicate that mServer has power and is running. Use the "RST" (Reset) button to reset mServer.

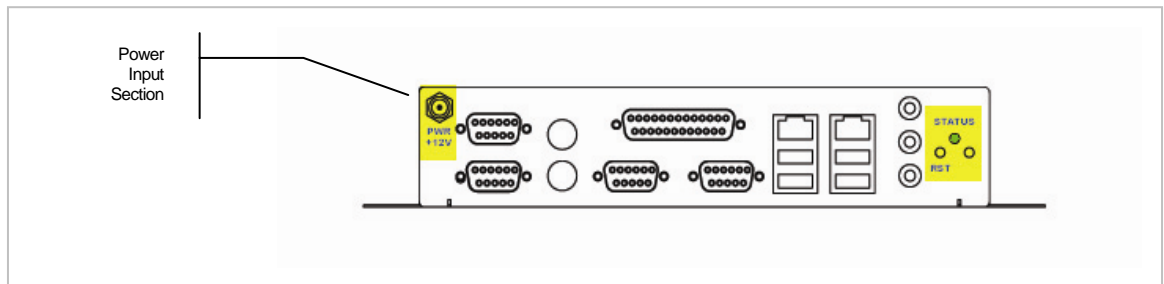


Figure 2: Power Input and Status

Keyboard, Mouse and Video

mServer is meant to be operated "headless", that is, without attached keyboard, mouse or video monitor. However, it may be useful during initial set-up to connect a keyboard, mouse and video using the connections provided.

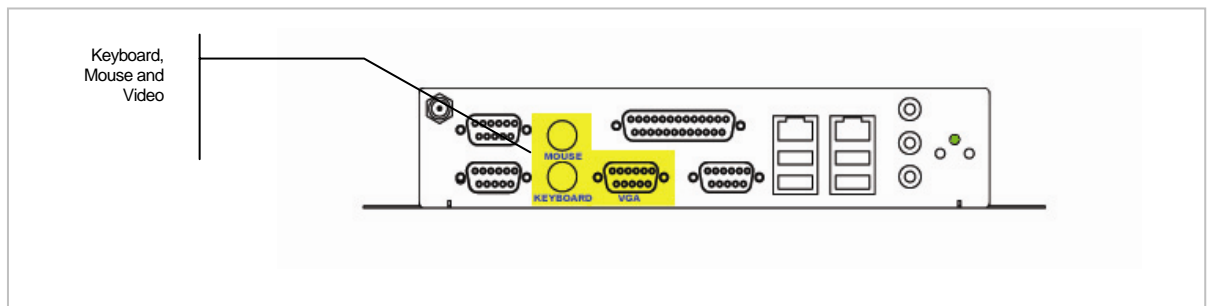


Figure 3: Keyboard, Mouse and Video Connections

Networking mServer

By default, mServer uses DHCP to automatically provide IP addresses to the two LAN ports from the existing LAN. In addition, by default, the computer name of mServer is "mserver".

To change these settings, you must attach a keyboard, mouse and video connection to mServer and use the Windows Networking Control Panel to make adjustments.

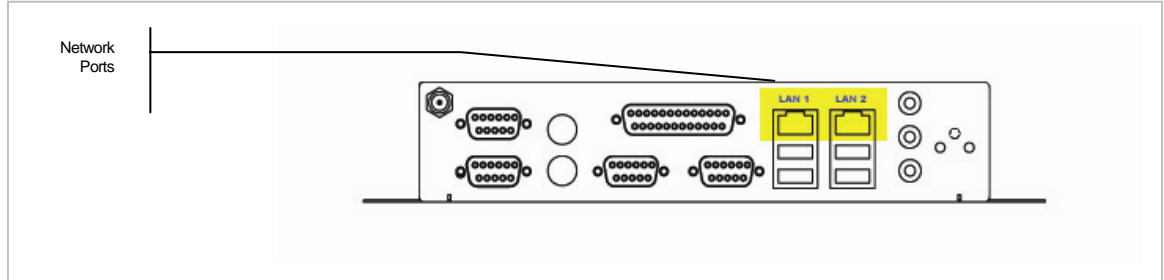


Figure 4: Networking Connections

Peripheral Connections

The following table summarizes the ports available on mServer for connecting peripherals.

Format	Picture/Label	Connection Information
USB 2.0		4 connections available (USB 1, USB 2, USB 3, USB 4)
Serial		3 connections available (COM 1, COM 2, COM 3)

To use these ports with mControl, you may need to:

- Configure the mControl.exe.xml file, which contains the configuration details for each computer adapter (e.g., port settings, baud rates, etc.)²
- Confirm and/or install drivers for USB adapters.

² - Please refer to the mControl v1 (Home Edition) User Manual for more information on adapter configuration.

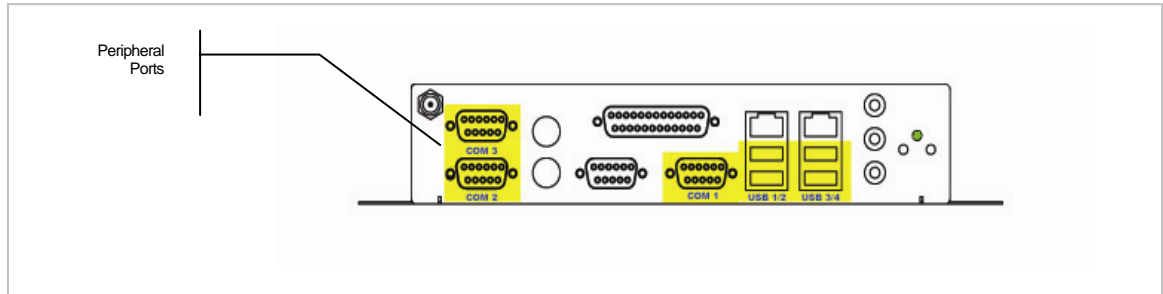


Figure 5: Peripheral Port Connections

Using mControl Software

mControl (Automation) Service

At the heart of mServer's automation control is mControl software which is pre-installed on mServer and runs as a Windows service. The mControl service provides the following functionality:

- Manages and controls zones and devices
- Manages and executes automation macros
- Provides remote user interface (via a built-in web server system)



The mControl Service will automatically start upon power-up of mServer and will remain running until power from mServer is disconnected. The mControl Service manages all macro operation. Hence, the PC must be on and mControl Service must be running, for all macros to execute at their required times and triggers.

Accessing mServer

Local Access of mServer

While it is possible to use mServer via local access, that is, using a keyboard, mouse and video connections, this direct access is only recommended for the following tasks:

- Adapter configuration changes via the mServer.exe.xml file.
- Z-Wave adapter configuration using mControl's Z-Wave Adapter Utility.

Accessing mServer locally is not recommended for general operation of mControl.

Remote Access of mServer

mServer Clients

mServer can be accessed in a variety of methods:

User Interface	Screen Size	Information
Internet browser	1024 x 768	<ul style="list-style-type: none"> ▪ Use this method to access mServer from any computer with a IE 6.0 (or higher) browser ▪ Use this method for accessing mControl when you are away from your home ▪ URL: http://mserver:29990/default.aspx
Windows XP Media Center Edition 2005	1024 x 768	<ul style="list-style-type: none"> ▪ Use this method to access mServer from any Media Center computer. ▪ To add mServer access to your MCE PC, please refer to the “<i>Adding mControl to a remote Windows XP Media Center Edition PC</i>” or the “<i>Adding mControl to the Start Menu of a Windows XP Media Center Edition PC</i>” section of the mControl v1 (Home Edition) User Manual
Media Center 2005 Extenders	1024 x 768	<ul style="list-style-type: none"> ▪ Use this method to access mServer from any Media Center extender. ▪ To allow extender access, you must first allow enable access to mServer from the master Media Center system.
Ultra-Mobile PC browser	800 x 480	<ul style="list-style-type: none"> ▪ Use this method to access mServer from an Ultra-Mobile PC – mServer will automatically recognize and adjust to the UMPC screen size. ▪ URL: http://mserver:29990/default.aspx
Touch Screen Operation	1024 x 768	<ul style="list-style-type: none"> ▪ Any touch screen that allows either browser-based access of a Media Center interface can be used to access mServer

*mControl Editor*³

The mControl Editor utility allows for remote configuration changes to the mServer system. Use the mControl Editor to add, delete and edit information related to mControl Zones, Devices, Macros, Macro Triggers and Macro Actions.

The mControl Editor utility is available from the Embedded Automation website (<http://www.embeddedautomation.com>) and can be installed on any computer which will be used to access mServer remotely.

³ - For more information on mControl Editor, please refer to the mControl Editor section within the mControl v1 (Home Edition) User Manual

Support

Log Files

Log files contain journalized information of mControl operation, informational messages and errors. Log files can be found in the following folder: C:\Program Files\Embedded Automation\mControl\logs.

Log files are named mControl<xxx>.log, where <xxx> represents a numeric value. The most recent log file is mControl1000.log. If this log is full, it is renamed to mControl1001.log and a new mControl1000.log is opened for use. Up to 10 log files can exist, named incrementally, via this cascading copying process.

Log files are also available for the MCE Add-in. These log files can be found in the following folder: C:\Program Files\Embedded Automation\mControl\logs. Log files for the MCE Add-in are named MSASAddIn<xxx>.log, where <xxx> represents a numeric value. As with mControl log files, these files are enumerated similarly.

If you are contacting our support team, it may be useful to zip these log files and email them as part of your support message.

Contact Us

Send us an email to: support@embeddedautomation.com or go to the Support page at www.embeddedautomation.com.

Participate in the forum: www.embeddedautomation.com/forum