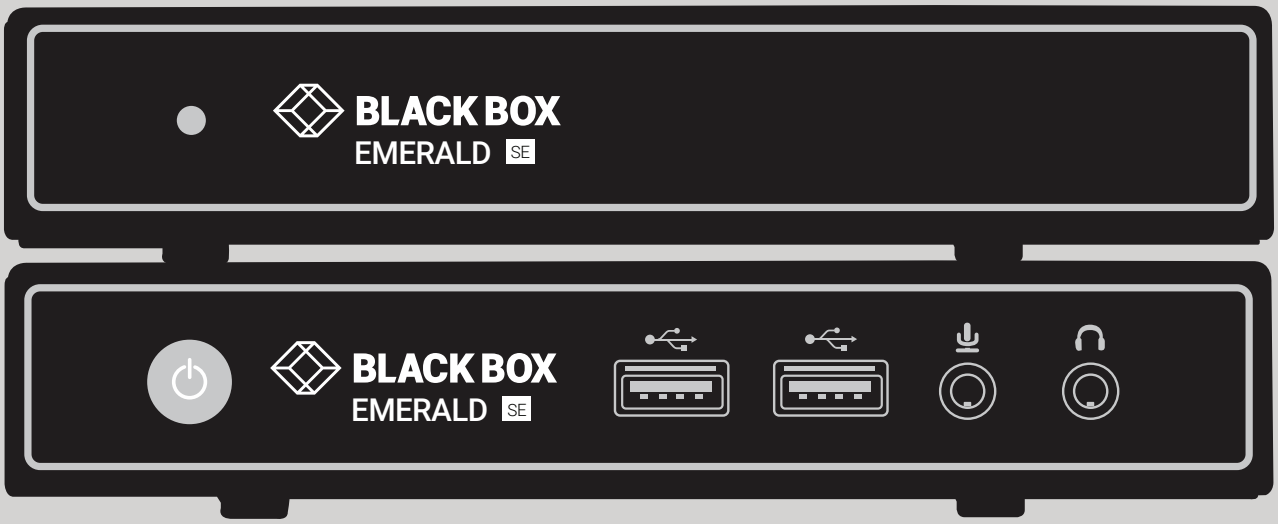
DATA SHEET

EMD2000SE-T, EMD2000SE-R

EMERALD SE KVM OVER IP TECHNOLOGY

24/7 TECHNICAL SUPPORT AT 877.877.2269 OR VISIT BLACKBOX.COM



BLACK BOX

OVERVIEW

BOXILLA 2.0 ENTERPRISE LEVEL KVM AND AV/IT MANAGER DATA SHEET

INTRODUCTION

The Emerald SE system provides users with a seamless desktop experience anywhere on a TCP/IP network, while allowing the actual hardware to be securely housed in a corporate data center or in the cloud. Emerald SE enables the same high fidelity experience of a desktop PC even for media-rich applications, for example, watching videos, photo editing with Photoshop or 3D design with AutoCAD. The remote desktops may be hosted on a physical PC / workstation or may be a virtual desktop hosted on a private server or in the cloud. The Emerald SE system provides its users with Receivers that communicate with target computer nodes (whether physical PC or virtual desktop) over a standard TCP/IP network. Physical PCs/Workstations/Servers have an Emerald SE Transmitter unit physically connected to provide communication over the TCP/IP network. The performance of Emerald SE allows them to be deployed on standard corporate networks and even across Wide-Area-Networks (WANs).

Desktop users can access remote keyboard, mouse, video, audio, USB mass storage devices, headsets and other USB devices from the Receiver unit to the remote PC/workstations or Virtual Desktop via the Emerald SE system.

NOTE: Some USB 2.0 devices have been found to be incompatible. Please report these devices to Black Box.

NOTE: References to the Emerald SE system in this document refer to both Receivers (EMD2000SE-R) and Transmitters (EMD2000SE-T).

FEATURES

- **VISUALLY LOSSLESS VIDEO QUALITY: THE EMERALD SE SYSTEM USES A COMPOUND COMPRESSION ALGORITHM TO PROVIDE A LOSSLESS VIDEO EXPERIENCE AT A LOW NETWORK BANDWIDTH. NONE OF THE BANDWIDTH VARIABILITY AND NOISE EFFECTS OF ANALOG EXTENSION SCHEMES EXIST. EMERALD SE CAN SUPPORT A 1080P HD MOVIE IN <40 MBPS.**
- **SHARE MODE ALLOWS MULTIPLE RECEIVERS TO SIMULTANEOUSLY USE ONE SOURCE.**
- **SEAMLESS INTEGRATION OF PHYSICAL AND VIRTUAL DESKTOPS: THE EMERALD SE SYSTEM CONNECTS TO PHYSICAL PCS, SERVERS, AND VIDEO SOURCES AS WELL AS VIRTUAL DESKTOPS HOSTED ON SERVERS OR IN THE CLOUD. THIS ALLOWS SEAMLESS CONNECTION TO PHYSICAL RESOURCES AND VIRTUAL RESOURCES FROM THE SAME RECEIVER UNIT. IT PROFESSIONALS USE THIS CAPABILITY TO OPTIMIZE THEIR DEPLOYMENTS AND MIGRATIONS TO CLOUD SERVICES.**
- **HIGH RELIABILITY AND HIGHLY SECURE**
- **TRANSPARENT USB RE-DIRECTION: THE EMERALD SE SYSTEM PROVIDES TRANSPARENT USB RE-DIRECTION FOR BOTH VIRTUAL AND PHYSICAL DESKTOP CONNECTIONS.**
- **EASY DEPLOYMENT:**

WHAT'S INCLUDED

EMERALD SE KVM OVER IP TECHNOLOGY (EMD2000SE)

TRANSMITTER FRONT VIEW

TRANSMITTER BACK VIEW

RECEIVER FRONT VIEW

RECEIVER BACK VIEW

WHAT'S INCLUDED WITH THE TRANSMITTER (EMD2000SE-T)

- **(1) EMERALD SE TRANSMITTER**
- **(1) 5 VDC POWER SUPPLY**
- **(1) US POWER CORD**

WHAT'S INCLUDED WITH THE RECEIVER (EMD2000SE-R)

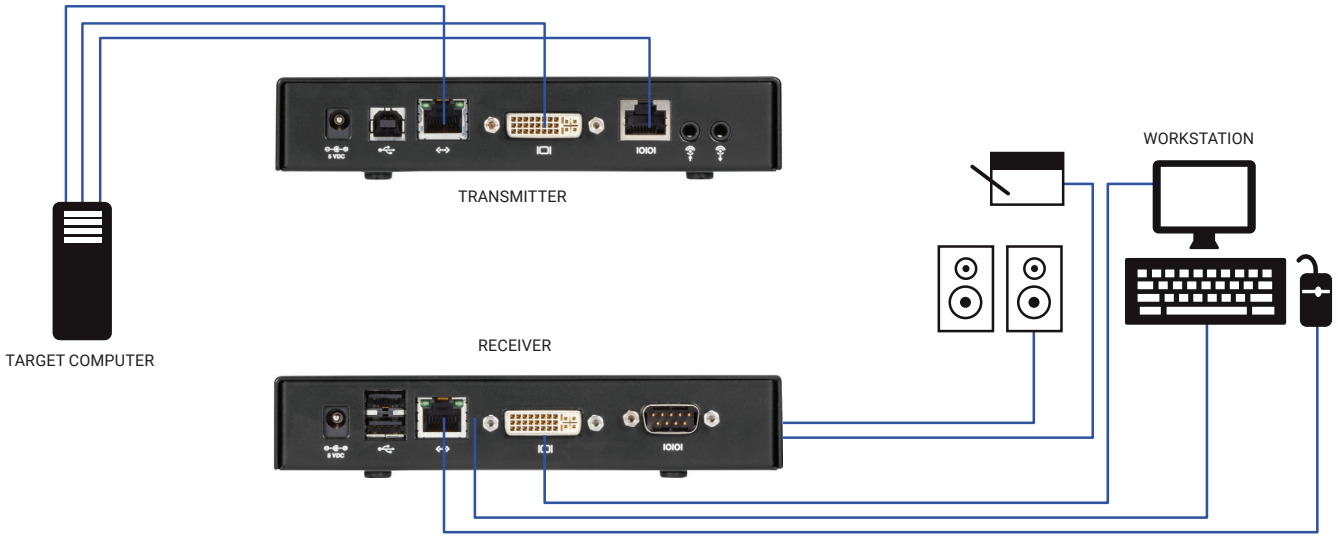
- **(1) EMERALD SE RECEIVER**
- **(1) 5 VDC POWER SUPPLY**
- **(1) US POWER CORD**

SPECIFICATIONS

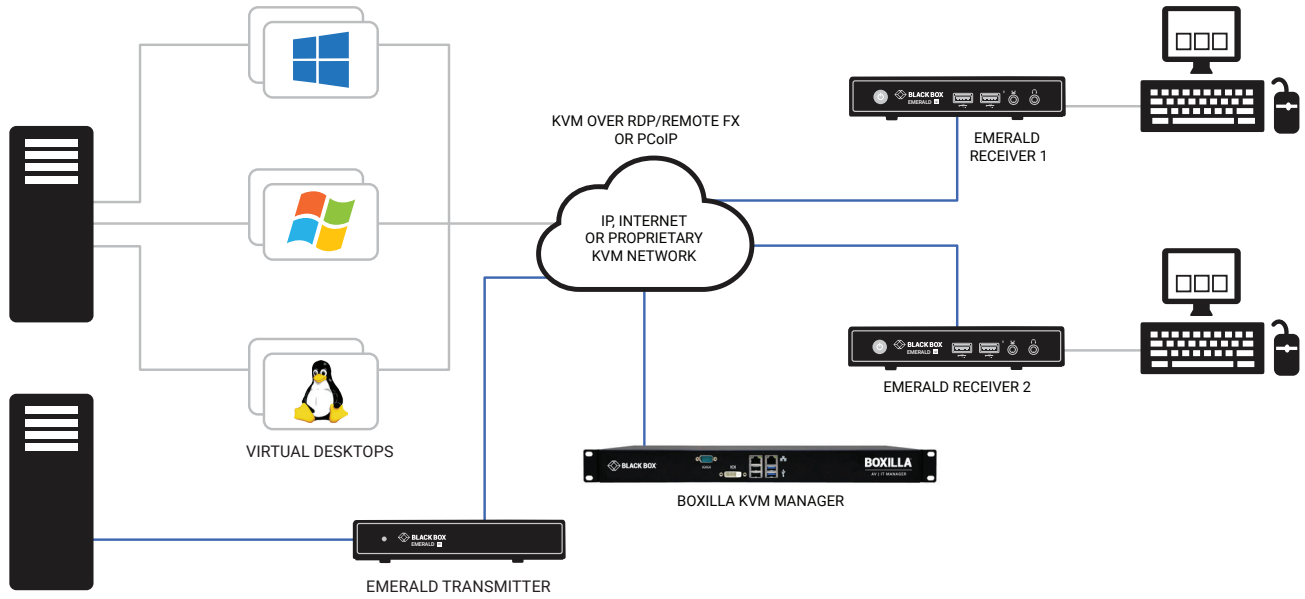
SPECIFICATIONS FOR EMERALD SE TRANSMITTER AND RECEIVER (EMD2000SE-T AND EMD2000SE-R)	
APPROVALS	
UNIT	FCC, CE, RoHS, WEEE
POWER SUPPLY	TUV, UL
PHYSICAL	
LED INTERFACE	(1) Power LED button (deactivated, not used); NOTE: Unit automatically powers on when plugged in; must be powered off at the power source. (1) RJ-45 Speed LED (green, located on top left of RJ-45 connector): Blinks three times when the network connection is 1000 Mbps, Blinks two times when network connection is 100 Mbps, Blinks once when the network connection is 10 Mbps, Not blinking: No Link to network; (1) Activity LED (green, located on top right of RJ-45 connector): Solid green: Link up, Blinking: Activity on the link, OFF: No link
MAXIMUM DISTANCE FROM CPU TO TRANSMITTER	EMD2000SE-T: 16 ft. (5 m), DVI-D and USB limitations
MAXIMUM DISTANCE BETWEEN TRANSMITTER AND RECEIVER	328 ft. (100 m), use a network switch to get farther distances
OPERATING SYSTEM SUPPORT	Microsoft Windows® Vista, XP, Windows 7, Windows 8, Windows 10, Server 2003, Server 2008, Server 2012, LInux®, Mac OS
CONNECTORS	EMD2000SE-T: (1) DVI input, (1) USB Type B female, (1) RJ-45 network, (1) RJ-45 serial, (2) 3.5 mm audio, (1) 2.5 mm barrel for power; EMD2000SE-R: (1) DVI output, (4) USB Type A female, (1) RJ-45 network, (1) DB9 serial, (2) 3.5 mm audio for SPK and MIC, (1) 2.5 mm barrel for power
DIMENSIONS	EMD2000SE-T, EMD2000SE-R: 1.15"H x 6.2" W, 4.2"D (2.92 x 15.75 x 10.67 cm)
WEIGHT	EMD2000SE-T, EMD2000SE-R: 1.18 lbs (0.54 kg)
OPERATION	
DEFAULT IP ADDRESS	EMD2000SE-T: 192.168.1.22; EMD2000SE-R: 192.168.1.21
ENCRYPTION	Secure Sockets Layer (SSL) over TCP/IP, 128-bit between TX and RX, user set between RX and Hyper-V
DEFAULT USERNAME	admin
DEFAULT PASSWORD	The password is blank by default
DDC SUPPORT	Built-in/clone of remote
POWER	
POWER SOURCE	External in-line power supply
INPUT VOLTAGE	100–240 VAC, 50/60 Hz
INPUT CURRENT	0.9 amps maximum
POWER CONSUMPTION	Unit: 6.5 watts with keyboard and mouse attached; Power supply is 20 W to support USB based powered devices
HEAT DISSIPATION	(5 VDC x 4 amps) x 3.41 = 68.2 BTU/hour maximum (Voltage x Nominal Current) x 3.41 = BTU/hr
OUTPUT CONNECTOR	2.5-mm barrel
INPUT CONNECTOR	IEC-320, C8
POWER SUPPLY CORD LENGTH	6 ft. (1.8 m)
ENVIRONMENTAL	
OPERATING TEMPERATURE	32 to 104° F (0 to 40° C)
STORAGE TEMPERATURE	-4 to +140° F (-20 to 60° C)
OPERATING HUMIDITY	5 to 95%, noncondensing

APPLICATION DIAGRAMS

BASIC EXTENDER APPLICATION



EMERALD SE MANAGED APPLICATION



ORDERING INFORMATION

ITEM	CODE
Emerald SE KVM Over IP Technology	
Transmitter	**EMD2000SE-T**
Receiver	**EMD2000SE-R**
Boxilla	
25 Users, Devices or Connections	**BXAMGR**
50 Users, Devices or Connections	**BXAMGR-50**
100 Users, Devices or Connections	**BXAMGR-100**
200 Users, Devices or Connections	**BXAMGR-200**
300 Users, Devices or Connections	**BXAMGR-300**
Unlimited Users, Devices or Connections	**BXAMGR-ULT**
Upgrade Licenses	
Add 25 Users, Devices or Connections	**BXAMGR-LIC-25**
Add 100 Users, Devices or Connections	**BXAMGR-LIC-100**
Add Unlimited Users, Devices or Connections	**BXAMGR-LIC-ULT**

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ABOUT BLACK BOX

Black Box is a world leading technology solutions provider specializing in complete high-performance KVM, professional A/V signal distribution and extension and switching solutions for mission-critical applications. Black Box is dedicated to delivering superior project engineering, technical support, and 24/7 customer service you can rely on for your most critical operations.

Every day, our customers trust us to design, integrate, and maintain reliable control room solutions for broadcasting, post-production, stadiums & arenas, medical, air traffic control, oil & gas, government & military, and utility industries. Leave the tech to us and our comprehensive technology solutions will deliver secure connections, fast-response times, real-time collaboration and more.

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