

Xsigo VP780E 10Gbps/port Ethernet I/O Director™

SERVER INTERCONNECTS:

Ports	32 non-blocking Ethernet server ports
Interconnect	SFP+ ports
Speed	10 Gigabits per second per port full-duplex

EXPANSION SLOTS:

Module Slots	15 slots for I/O and service modules 10 Gigabit per second full-duplex bandwidth available per slot
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10 GIGABIT ETHERNET I/O MODULE:

Physical Ports	One optical XFP or Cx4 XFP Port
Virtual Interfaces	Up to 128 virtual NICs (vNICs) per module Up to 4000 vNICs per VP780E IO Director
Quality of Service (QoS)	User-settable QoS features include: CIR – committed information rate PIR – peak information rate
PXE	Virtual NICs can be configured for PXE boot
MAC Addresses	Each vNIC is assigned a unique MAC address MAC addresses can dynamically migrate with specific virtual machine
Power Consumption	56 watts maximum

10-Port GIGABIT ETHERNET I/O MODULE:

Physical Ports	10 gigabit Ethernet ports, RJ-45 style
Virtual Interfaces	Up to 160 Virtual NICs (vNICs) per module Up to 4000 vNICs per VP780E I/O Director
Quality of Service (QoS)	User-settable QoS features include: CIR – committed information rate PIR – peak information rate
PXE	Virtual NICs can be configured for PXE boot
MAC Addresses	Each vNIC is assigned a unique MAC address MAC addresses can dynamically migrate with specific virtual machine
Power Consumption	75 watts maximum

4-GIGABIT FIBRE CHANNEL I/O MODULE:

Physical Ports	Two 4/2/1 Gbps auto-negotiating SFP ports
Connectors	Two SFP optical transceivers (850nm)
Virtual Interfaces	Up to 128 virtual HBAs (vHBAs) per I/O module Up to 4000 vHBAs per VP780 I/O Director (Two vHBAs per card reserved for internal card management)
Protocols	FC-AL, FCP (SCSI-FCP)
World Wide Name (WWN)	Each vHBA is assigned a unique WWN WWNs can dynamically migrate with specific virtual machine
Quality of Service	User settable QoS features include: CIR – Committed information rate PIR – Peak information rate
SAN Boot	Virtual HBAs can be configured for SAN Boot
Power Consumption	45 watts maximum

MANAGEMENT:

Management Interfaces	Java-based management GUI, command-line interface (CLI) through SSH and Advanced API for integration with third party software
Lights Out Management	Supports IPMI based LOM
Management Module I/O	Ethernet management network, RS232 console, auxiliary ports, USB

Xsigo VP780E 10Gbps/port Ethernet I/O Director™

REPLACEABLE PARTS:

Replaceable Modules I/O modules, management module, power supplies, fabric board, system controller, fan tray assemblies

HEAT DISSIPATION:

Base Chassis 300W or 1222BTU (@ 250W DC internal draw)
Loaded Chassis 1200W or 4887BTU
 Subject to system configuration

POWER:

Voltage 100 – 127 / 200 – 240 VAC
Max Current 12A @ 100 volts or 7.68A @ 180 volts
Frequency 47 - 63 Hz
Power Chassis (fully loaded): 1200 watt maximum

ENVIRONMENTAL:

Operating Temp 5 degrees C to 40 degrees C
Relative Humidity 10 to 80% at 35 C, non-condensing
Non-operating Temp -40 degrees C to 70 degrees C
Non-operating Humidity 90% at 65 degrees C, non-condensing
Altitude (Operating) Up to 3000 m
Altitude (Non-operating) Up to 15,000 m

CHASSIS DIMENSIONS AND WEIGHT:

Height 4U - 176 mm (6.93 inches)
Width 444.5 mm (17.5 inches)
Depth 768 mm (30.23 inches)
Weight 42 kg (93 lb.) with no modules - modules are approximately 0.9 kg (2 lb.)

REGULATIONS:

Safety UL 60950-1, CSA C22.2 No. 60950-1, EN 60950-1, IEC 60950-1
RFI/EMI FCC Class A, ICES Class A, VCCI Class A, EN 55022 Class A, CNS 13438 Class A, KN22 and KN24 Class A
Immunity EN5022:2006 including A1:2007, EN55024:1998 including A1:2001 and A2:2003, EN61000-3-2:2006, EN6100-3-3:1995
RoHS RoHS Level 5

MOUNTING SPECIFICATIONS:

Rack Mounting 19" universal EIA Rack, 2-post or 4-post mounting kit

Xsigo VP780 20Gbps/port DDR I/O Director™

SERVER INTERCONNECTS:

Ports	24 non-blocking InfiniBand server ports
Interconnect	Cx4 Copper (ports powered for fibre optic interfaces)
Speed	20 Gigabits per second per port full-duplex

EXPANSION SLOTS:

Module Slots	15 slots for I/O and service modules 10 Gigabit per second full-duplex bandwidth per slot
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4-Port 10 GIGABIT ETHERNET I/O MODULE:

Physical Ports	4 SFP+ Ports
Virtual Interfaces	Up to 256 virtual NICs (vNICs) per module Up to 3840 vNICs per I/O Director
Oversubscription	2:1 (4 ports)
Quality of Service (QoS)	User-settable QoS features include: CIR – committed information rate PIR – peak information rate
PXE	Virtual NICs can be configured for PXE boot
MAC Addresses	Each vNIC is assigned a unique MAC address MAC addresses can dynamically migrate with specific virtual machine
Power Consumption	70 watts maximum
Protocols	IPv4, IPv6

10 GIGABIT ETHERNET I/O MODULE:

Physical Ports	One optical XFP or Cx4 XFP Port
Virtual Interfaces	Up to 128 virtual NICs (vNICs) per module Up to 1,920 vNICs per I/O Director
Quality of Service (QoS)	User-settable QoS features include: CIR – committed information rate PIR – peak information rate
PXE	Virtual NICs can be configured for PXE boot
MAC Addresses	Each vNIC is assigned a unique MAC address MAC addresses can dynamically migrate with specific virtual machine
Power Consumption	56 watts maximum
Protocols	IPv4, IPv6

10-Port GIGABIT ETHERNET I/O MODULE:

Physical Ports	10 gigabit Ethernet ports, RJ-45 style
Virtual Interfaces	Up to 160 Virtual NICs (vNICs) per module Up to 2,400 vNICs per I/O Director
Quality of Service (QoS)	User-settable QoS features include: CIR – committed information rate PIR – peak information rate
PXE	Virtual NICs can be configured for PXE boot
MAC Addresses	Each vNIC is assigned a unique MAC address MAC addresses can dynamically migrate with specific virtual machine
Power Consumption	70 watts maximum
Protocols	IPv4, IPv6

4-GIGABIT FIBRE CHANNEL I/O MODULE:

Physical Ports	Two 4/2/1 Gbps auto-negotiating SFP ports
Connectors	Two SFP optical transceivers (850nm)
Virtual Interfaces	Up to 128 virtual HBAs (vHBAs) per I/O module Up to 1,920 vHBAs per I/O Director (Two vHBAs reserved for internal card management)
Protocols	FC-AL, FCP (SCSI-FCP)
World Wide Name (WWN)	Each vHBA is assigned a unique WWN WWNs can dynamically migrate with specific virtual machine
Quality of Service	User settable QoS features include: CIR – Committed information rate PIR – Peak information rate
SAN Boot	Virtual HBAs can be configured for SAN Boot
Power Consumption	34 watts maximum

8-GIGABIT FIBRE CHANNEL I/O MODULE:

Physical Ports	Two 8/4/2 Gbps auto-negotiating SFP ports
Connectors	Two SFP optical transceivers (850nm)

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Virtual Interfaces	Up to 128 virtual HBAs (vHBAs) per I/O module Up to 1,920 vHBAs per I/O Director (Two vHBAs reserved for internal card management)
Protocols	FC-AL, FCP (SCSI-FCP)
World Wide Name (WWN)	Each vHBA is assigned a unique WWN WWNs can dynamically migrate with specific virtual machine
Quality of Service	User settable QoS features include: CIR – Committed information rate PIR – Peak information rate
SAN Boot	Virtual HBAs can be configured for SAN Boot
Power Consumption	54 watts maximum

MANAGEMENT:

Management Interfaces	Java-based management GUI, command-line interface (CLI) through SSH and Advanced API for integration with third party software
Lights Out Management	Supports IPMI based LOM
Management Module I/O	Ethernet management network, RS232 console, auxiliary ports, USB

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REPLACEABLE PARTS:

Replaceable Modules I/O modules, management module, power supplies, fabric board, system controller, fan tray assemblies

HEAT DISSIPATION:

Base Chassis 200W or 685 BTU
Loaded Chassis 1220W or 4175 BTU
 Subject to system configuration

POWER:

Voltage 100 – 127 / 200 – 240 VAC
Max Current 12A @ 100 volts or 7.68A @ 180 volts
Frequency 47 - 63 Hz
Power Chassis (fully loaded): 1220 watt maximum

ENVIRONMENTAL:

Operating Temp 5 degrees C to 40 degrees C
Relative Humidity 10 to 80% at 35 C, non-condensing
Non-operating Temp -40 degrees C to 70 degrees C
Non-operating Humidity 90% at 65 degrees C, non-condensing
Altitude (Operating) Up to 3000 m
Altitude (Non-operating) Up to 15,000 m

CHASSIS DIMENSIONS AND WEIGHT:

Height 4U - 176 mm (6.93 inches)
Width 444.5 mm (17.5 inches)
Depth 768 mm (30.23 inches)
Weight 42 kg (93 lb.) with no modules - modules are approximately 0.9 kg (2 lb.)

REGULATIONS:

Safety UL 60950-1, CSA C22.2 No. 60950-1, EN 60950-1, IEC 60950-1
RFI/EMI FCC Class A, ICES Class A, VCCI Class A, EN 55022 Class A, CNS 13438 Class A, KN22 and KN24 Class A
Immunity EN5022:2006 including A1:2007, EN55024:1998 including A1:2001 and A2:2003, EN61000-3-2:2006, EN6100-3-3:1995
RoHS RoHS Level 5

MOUNTING SPECIFICATIONS:

Rack Mounting 19" universal EIA Rack, 2-post or 4-post mounting kit

Xsigo VP780 40Gbps/port QDR I/O Director™

SERVER INTERCONNECTS:

Ports	20 non-blocking InfiniBand server ports
Interconnect	QSFP ports
Speed	40 Gigabits per second per port full-duplex

EXPANSION SLOTS:

Module Slots	15 slots for I/O and service modules 20 Gigabit per second full-duplex bandwidth available per slot
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4-Port 10 GIGABIT ETHERNET I/O MODULE:

Physical Ports	4 SFP+ Ports
Virtual Interfaces	Up to 256 virtual NICs (vNICs) per module Up to 3840 vNICs per I/O Director
Oversubscription	2:1 (4 ports)
Quality of Service (QoS)	User-settable QoS features include: CIR – committed information rate PIR – peak information rate
PXE	Virtual NICs can be configured for PXE boot
MAC Addresses	Each vNIC is assigned a unique MAC address MAC addresses can dynamically migrate with specific virtual machine
Power Consumption	70 watts maximum
Protocols	IPv4, IPv6

10 GIGABIT ETHERNET I/O MODULE:

Physical Ports	One optical XFP or Cx4 XFP Port
Virtual Interfaces	Up to 128 virtual NICs (vNICs) per module Up to 1,920 vNICs per VP560 IO Director
Quality of Service (QoS)	User-settable QoS features include: CIR – committed information rate PIR – peak information rate
PXE	Virtual NICs can be configured for PXE boot
MAC Addresses	Each vNIC is assigned a unique MAC address MAC addresses can dynamically migrate with specific virtual machine
Power Consumption	56 watts maximum
Protocols	IPv4, IPv6

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Quality of Service (QoS)	User-settable QoS features include: CIR – committed information rate PIR – peak information rate
PXE	Virtual NICs can be configured for PXE boot
MAC Addresses	Each vNIC is assigned a unique MAC address MAC addresses can dynamically migrate with specific virtual machine
Power Consumption	70 watts maximum
Protocols	IPv4, IPv6

4-GIGABIT FIBRE CHANNEL I/O MODULE:

Physical Ports	Two 4/2/1 Gbps auto-negotiating SFP ports
Connectors	Two SFP optical transceivers (850nm)
Virtual Interfaces	Up to 128 virtual HBAs (vHBAs) per I/O module Up to 1,920 vHBAs per I/O Director (Two vHBAs reserved for internal card management)
Protocols	FC-AL, FCP (SCSI-FCP)
World Wide Name (WWN)	Each vHBA is assigned a unique WWN WWNs can dynamically migrate with specific virtual machine
Quality of Service	User settable QoS features include: CIR – Committed information rate PIR – Peak information rate
SAN Boot	Virtual HBAs can be configured for SAN Boot
Power Consumption	34 watts maximum

8-GIGABIT FIBRE CHANNEL I/O MODULE:

Physical Ports	Two 8/4/2 Gbps auto-negotiating SFP ports
Connectors	Two SFP optical transceivers (850nm)

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Virtual Interfaces	Up to 128 virtual HBAs (vHBAs) per I/O module Up to 1,920 vHBAs per I/O Director (Two vHBAs reserved for internal card management)
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World Wide Name (WWN)	Each vHBA is assigned a unique WWN WWNs can dynamically migrate with specific virtual machine
Quality of Service	User settable QoS features include: CIR – Committed information rate PIR – Peak information rate
SAN Boot	Virtual HBAs can be configured for SAN Boot
Power Consumption	54 watts maximum

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REPLACEABLE PARTS:

Replaceable Modules I/O modules, management module, power supplies, fabric board, system controller, fan tray assemblies

HEAT DISSIPATION:

Base Chassis 235W or 804 BTU
Loaded Chassis 1260W or 4300 BTU
 Subject to system configuration

POWER:

Voltage 100 – 127 / 200 – 240 VAC
Max Current 12A @ 100 volts or 7.68A @ 180 volts
Frequency 47 - 63 Hz
Power Chassis (fully loaded): 1260 watt maximum

ENVIRONMENTAL:

Operating Temp 5 degrees C to 40 degrees C
Relative Humidity 10 to 80% at 35 C, non-condensing
Non-operating Temp -40 degrees C to 70 degrees C
Non-operating Humidity 90% at 65 degrees C, non-condensing
Altitude (Operating) Up to 3000 m
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Immunity EN5022:2006 including A1:2007, EN55024:1998 including A1:2001 and A2:2003, EN61000-3-2:2006, EN6100-3-3:1995
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