

Compact, Sealed, Full-featured OSP MSAP from eXpress Packet Family

- ✓ *Watertight OSP Enclosure for Pole, Pedestal, or Underground Deployment*
- ✓ *DC, AC and Line-Powered Options*
- ✓ *Fan less design*
- ✓ *Triple-Play Services in a OSP Multi Service Access Platform (MSAP)*
- ✓ *Integrated IP DSLAM, VoIP Line Access Gateway, and IP Video Delivery Platform*
- ✓ *Integrated Emergency Stand-Alone (ESA)*
- ✓ *Full-Featured VoIP: MGCP, SIP, SIP-PLAR, H.248*



The MALC XP OSP (outside plant) integrates the function of the MALC XP 1U into a tough, compact, and watertight enclosure. It delivers 48 ports of ADSL2+ and POTS (VoIP) service in a compact, sealed outdoor enclosure format specially suited for outside plant deployments.

The MALC XP OSP combines industry-leading functionality with ease of deployment for a robust and complete access solution. The MALC XP OSP extends the benefits of next-generation BLCs throughout the service territory, ensuring universal coverage of advanced services. The MALC XP OSP works seamlessly with Zhone's residential gateways and high-density MSAPs, providing a complete Access solution from the Central Office to the Remote Control.

The Fast/Gigabit Ethernet interfaces on XP family products can be configured as linear, RPR ring, or aggregated links.

Triple Play Services

MALC XP OSP includes high-performance packet processing with advanced IP capabilities to deliver secure, reliable, and efficient voice, data, and video services. MALC XP OSP delivers standard lifeline POTS to subscribers, then encodes voice traffic as carrier-class VoIP for transport over a resilient Gigabit Ethernet network. Integrated Emergency Stand-Alone (ESA) capabilities allow the MALC XP OSP to continue to provide local voice service in the event of a network disruption. Service providers can offer compelling bundles of multi-line voice, high-speed Internet access, and multi-set IP video (including HDTV) over their existing copper infrastructure.

Extending your multi-service broadband network

The watertight outside plant (OSP) enclosure enables pole-mount, pedestal, or underground deployment for even greater range and flexibility. The design allows for the development of future models with VDSL2 and GPON interfaces using the same enclosure.

Powering Options

Optional AC and Line-Power hardened supplies provide local AC or DC power over twisted pair lines, extending full ADSL2+ service from the central office. The power supply is a hardened unit that mounts to the inside or outside of existent cabinets, or by itself directly in the wall or pole.

End-to-End Access Management

The easy-to-use Zhone Management System (ZMS) provides OSMINE-certified management and provisioning across the access network, from CPE to the Central Office. The Raptor XP OSP is fully remote managed, allowing carriers to reduce service turn-up intervals, reduce truck rolls, and ultimately, improve customer service.

Technical Specifications

Dimensions

- With rear mounting bracket:
 - 22.13" x 15.16" x 9.48"
 - (56.21 cm x 38.51 cm x 27.08 cm)
- Without rear mounting bracket:
 - 22.13" x 15.16" x 8.51"
 - (56.21 cm x 38.51 cm x 21.62 cm)

Weight

- 45lbs (20.5kg)

Power

- Local Power DC: -43.75V to -59.9V
- Local Power AC: 90 to 260 VAC / 50,60 Hz
- Line Power LP: +/-130V or +/-190V

Interfaces

- Uplink Interfaces:
 - (2) 100/1000Mbps Ethernet (Copper or, Fiber) SFP slots
- Subscriber Line Interfaces:
 - 48 ADSL2+ (ITU G.992.5 A/B/M)
 - (Up to 4) 50-pin security connectors for local loop DSL and POTS connections
- Serial security craft and 10/100BT interface

Standards Support

- ANSI T1.413 Issue 2
- G.994.1 (G.handshake)
- G.997.1 (physical layer management)
- G.992.1 (full-rate G.dmt)
- G.992.3 (ADSL2) Annex A
- G.992.5 (ADSL2+) Annex A, Annex M

Voice Support

- MGCP (RFC 3435)
- SIP (RFC 3261)
- H.248 (MEGACO)
- G.711 encoding with G.168 echo cancellation
- G.729 with G.711 fallback
- T.38 Fax Relay (SIP/MGCP*)
- Hybrid signaling support

Protocol Support

- IP host and gateway support
- RIP v1 (RFC 1058) RIP v2 (RFC 2453)
- RFC 1483/2684 encapsulation
- DHCP server (RFC 2131, 2132), DHCP Relay with Option 82
- Bridging 802.1D support
- VLAN 802.1p/q support
- RSTP 802.w support
- Link Aggregation and LACP 802.3ad support
- Dense / sparse multicast support, IGMPv2
- Integrated access control and content protection
- PPPoA to PPPoE Interworking, PPPoE Intermediate Agent
- RADIUS Authentication

Management

- In-band IP
- Out-band IP over 10/100BT Ethernet or V.24 RS-232 serial for async terminal
- ZMS (Zhone Management System) via SNMP v2c for GUI and CORBA IDL machine interface
- Embedded Web Graphical Interface
- Command Line Interface (CLI)

Bandwidth/Distance

- Data rates provisionable up to 24Mbps
- Distances up to 24,000ft/7,320m

Regulatory Compliance

- Safety: UL 60950-1, CSA C22.2 No. 60950-1, AS / NZS 3260, TS 001
- Emissions: FCC Part 15 Class A, ICES-003 Class A, EN 55022A
- Immunity: NEBS GR-1089-Core level 3
- Environmental: NEBS GR-63-Core level 3, GR-487, NEMA 6, IP67
- Network Certification: FCC Part 68, CTR-12, CTR-13, DOC CS-03, TSO 16, GR-57

Operating Requirements

- Operating Temperature: -40°F to 149°F (-40°C to 65°C)
- Storage temperature: -40°F to 158°F (-40°C to 70°C)
- Humidity: Up to 95%, non-condensing
- Altitude: -200ft to 16,500ft (-60m to 5,000m)

Ordering Information

Models

OSP-MALC-XP-150A-SM-SM-DC	OSP MALC XP 48-PORT ADSL2+, 48-PORT POTS, 2 FE/GE, PORT1 SM, PORT2 SM, W/-48V DC
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Power Options

OSP-XP-AC-SUPPLY	OSP RAPTOR / MALC XP KIT WITH AC SUPPLY (90-240 VAC 50/60 Hz, 48VDC OUT)
OSP-XP-LP-SUPPLY	OSP RAPTOR / MALC XP KIT WITH LP SUPPLY (+/- 130/190 VDC IN, 48VDC OUT)
OSP-XP-LP-COPPER-CABLE-5FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR COPPER LINE POWER SUPPLY INTERFACE (5FT)
OSP-XP-LP-COPPER-CABLE-20FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR COPPER LINE POWER SUPPLY INTERFACE (20FT)
OSP-XP-LP-COPPER-CABLE-50FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR COPPER LINE POWER SUPPLY INTERFACE (50FT)
OSP-XP-LP-COPPER-CABLE-100FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR COPPER LINE POWER SUPPLY INTERFACE (100FT)

Mounting Accessories

OSP-XP-MOUNT-POLE	OSP RAPTOR / MALC XP KIT FOR POLE MOUNTING
OSP-XP-MOUNT-WALL	OSP RAPTOR / MALC XP KIT FOR WALL MOUNTING
OSP-XP-FIBER-SM-CABLE-5FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR SINGLE MODE FIBER UPLINK INTERFACE (5FT)
OSP-XP-FIBER-SM-CABLE-20FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR SINGLE MODE FIBER UPLINK INTERFACE (20FT)
OSP-XP-FIBER-SM-CABLE-50FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR SINGLE MODE FIBER UPLINK INTERFACE (50FT)
OSP-XP-FIBER-SM-CABLE-100FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR SINGLE MODE FIBER UPLINK INTERFACE (100FT)
OSP-XP-COPPER-C1-CABLE-5FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR COPPER ADSL2+ C1 (1-24) INTERFACE (5FT)
OSP-XP-COPPER-C1-CABLE-20FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR COPPER ADSL2+ C1 (1-24) INTERFACE (20FT)
OSP-XP-COPPER-C1-CABLE-50FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR COPPER ADSL2+ C1 (1-24) INTERFACE (50FT)
OSP-XP-COPPER-C1-CABLE-100FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR COPPER ADSL2+ C1 (1-24) INTERFACE (100FT)
OSP-XP-COPPER-C2-CABLE-5FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR COPPER ADSL2+ C2 (25-48) INTERFACE (5FT)
OSP-XP-COPPER-C2-CABLE-20FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR COPPER ADSL2+ C2 (25-48) INTERFACE (20FT)
OSP-XP-COPPER-C2-CABLE-50FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR COPPER ADSL2+ C2 (25-48) INTERFACE (50FT)
OSP-XP-COPPER-C2-CABLE-100FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR COPPER ADSL2+ C2 (25-48) INTERFACE (100FT)
OSP-XP-COPPER-C3-CABLE-5FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR COPPER POTS C3 (1-24) INTERFACE (5FT)
OSP-XP-COPPER-C3-CABLE-20FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR COPPER POTS C3 (1-24) INTERFACE (20FT)
OSP-XP-COPPER-C3-CABLE-50FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR COPPER POTS C3 (1-24) INTERFACE (50FT)
OSP-XP-COPPER-C3-CABLE-100FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR COPPER POTS C3 (1-24) INTERFACE (100FT)
OSP-XP-COPPER-C4-CABLE-5FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR COPPER POTS C4 (24-48) INTERFACE (5FT)
OSP-XP-COPPER-C4-CABLE-20FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR COPPER POTS C4 (24-48) INTERFACE (20FT)
OSP-XP-COPPER-C4-CABLE-50FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR COPPER POTS C4 (24-48) INTERFACE (50FT)
OSP-XP-COPPER-C4-CABLE-100FT	OSP RAPTOR / MALC XP KIT WITH CABLE FOR COPPER POTS C4 (24-48) INTERFACE (100FT)

Zhone Technologies, Inc.

7195 Oakport Street
 Oakland, CA 94621
 1 510.777.7000
www.zhone.com

For more information about Zhone and its products, please visit the Zhone Web site at www.zhone.com or e-mail info@zhone.com

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