

# Gateways to Business Services

APPLICATION NOTE

LINDSAY  
BROADBAND

## Lindsay Broadband Solutions Enable Multiple Revenue-Generating Applications

Lindsay Broadband's DOCSIS® and optical gateways (LBOG, LBDG) are ideal solutions for bringing new sources of revenue to your network. Robust, flexible, with high data capacity and delivering power directly from the outdoor plant, these go-anywhere devices enable a broad range of IP applications for business services in a wide variety of outdoor locations. They are highly cost-effective, allowing for a short return on investment (ROI) and are compatible with most third-party IP devices. The LBDG utilizes the existing HFC infrastructure and the cable operators' best-of-breed cable modem for power and DOCSIS backhaul. The LBOG leverages existing outdoor fiber assets of any service provider and is available with SFP-based media converter and single or paired fiber links up to 120 km. Both are adaptable to an operator's existing infrastructure, with many power, backhaul, radio and mounting options.

### SEIZE THE OPPORTUNITIES

Lindsay is engaged with service providers worldwide, helping them meet the revenue-generating opportunities of today and tomorrow. Our approach is to combine well-established and new technologies, toughen them for environmental extremes, and offer operators a wide variety of rock-solid, high-quality configurations to meet their unique business needs.

Gateway-enabled applications that operators are leveraging today include:

- **Digital Cameras:** Opportunities have arisen for operators to provide power and/or IP transport for surveillance and monitoring. Lindsay gateways can provide power and connectivity for digital cameras at public and high value sites such as intersections, highways, parking lots, substations, loading ramps, etc.
- **Outdoor Fixed Telephony:** By incorporating Embedded Multimedia Terminal Adapters (eMTAs) within DOCSIS gateways, Lindsay's gateways enable operators to provide telephone service in cases where an equipment closet is unavailable, such as security gates and shopping malls.
- **Digital Signage:** As digital signage continues to win market acceptance, operators have an opportunity to stream video or deliver data to this type of street furniture. Lindsay gateways, utilizing either plant or local 120 V powering and the internal DOCSIS modem, provide the communications link and power to such displays.

## A Versatile Family of Gateway Solutions

*Lindsay's gateway are compact, HFC-powered, strand-mount devices that empower the HFC network with the ability to accommodate virtually any Ethernet-based IP device. The gateways provide the IP device with a gigabit twisted pair connection and PoE. Virtually all forms of PoE are supported, including 802.3at, 802.3af and passive, at voltages of 12, 24, and 48 volts.*

*The gateway uses the HFC network to provide Ethernet backhaul via DOCSIS or optical transport. The LBDG implements DOCSIS backhaul with a Cablelabs® certified DOCSIS 3.x modem. The LBOG uses an SFP-based media converter to provide backhaul on any optical wavelength.*





- **Wireless Point-to-Multipoint (PTMP):** Establish connectivity to your clients in remote locations quickly and cost-effectively. The Lindsay gateway will support a business link utilizing a central base station AP to multiple customers offering the security of individual SSID per client. A strand-based deployment will not require any additional certification or permission prior to installation.
- **Wi-Fi® hotspots:** Lindsay can provide an integrated or two-box WiFi access point (AP) solution for an operator's value-added WiFi service. The two-box option is more flexible in placement, more efficient in power and more open to ongoing improvements in technologies than many alternatives.
- **LTE Small-cell and DAS Backhaul:** Mobile network operators (MNOs) are deploying LTE small cells in a more granular topology to cope with extreme congestion in some areas of their coverage. Lindsay gateways provide the necessary power and communication to these LTE devices.
- **Power Supply:** For those cases when a service provider needs, in effect, a substation on the strand, a Lindsay gateway can convert a 40 to 90 VAC voltage to 48 Volt power over Ethernet (PoE), with current requirements up to 250 Watts. Ideal for dark fiber, LTE small cell and DAS deployments.
- **Optical-to-Ethernet:** Available with SFP transceivers and WDM links up to 120 km, Lindsay optical gateways enable Ethernet business services for clients who have no closet space or may not want the equipment in their premise for other reasons.
- **Wholesale Ethernet (WSE):** Higher standards, greater interoperability and declining cost structure have made Ethernet an increasingly popular option for wholesale transport. Lindsay (SLA) DOCSIS gateways can serve as highly reliable, cost-effective demarcation points in a legacy T1 replacement-line strategy.

## LIGHT TOUCH, BIG RETURN

Each of these applications has its business case. For some, the revenue could be substantial. The common element is that operators deliver these services by leveraging their existing assets. A light touch on the outside plant – on the strand or in a pedestal – can yield significant returns. Let Lindsay's highly configurable DOCSIS and Optical Gateways link your optical fiber, IP routing, DOCSIS, workforce and other assets with a growing array of new business opportunities to drive further growth and customer satisfaction.

## CONTACT LINDSAY BROADBAND TODAY

*Lindsay Broadband sales engineers develop customized applications to meet customers' needs. Lindsay Broadband solutions enable you to turn up new services quickly and reliably.*

**Call us today - +1.705.742.1350  
or [info@lindsaybb.com](mailto:info@lindsaybb.com)**

## ABOUT LINDSAY BROADBAND

Headquartered in Peterborough, Ontario, Canada, Lindsay Broadband is a designer, manufacturer, and integrator of broadband communication solutions. Lindsay's range of technologically advanced, proven solutions are helping communication service providers deliver new business services from their networks, find new sources of revenue, and meet the exponentially growing data needs of business and consumers. Lindsay's solutions include strand-mounted Wi-Fi hotspots, optical and DOCSIS Gateways, LTE small cell backhaul solutions, powering and UPS solutions, end-to-end FTTx and RF solutions. Founded in 1953, Lindsay distributes its solutions globally.