



SKYFIBER™

SOLUTIONS BRIEF

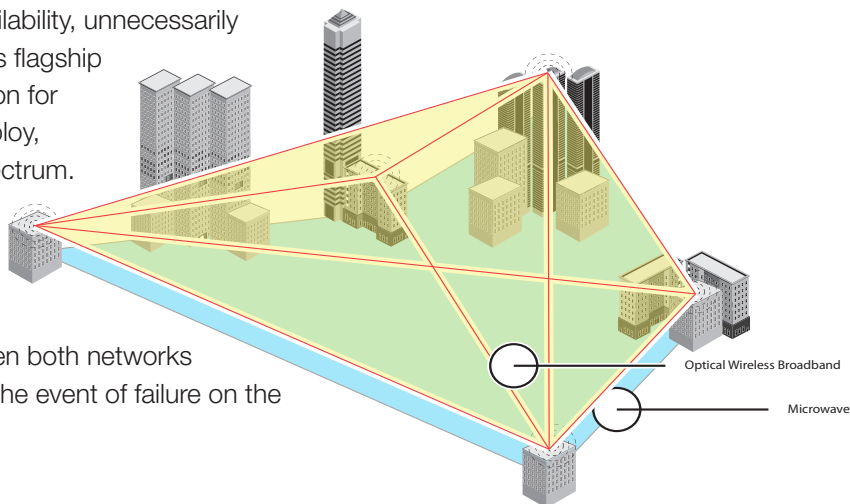
TURBO CHARGED HYBRID NETWORK

To ensure carrier-grade availability, many operators today require redundant connectivity in their networks to protect against transmission-impacting events such as fiber cuts, natural disasters, weather-related wireless challenges, or other unexpected issues. With legacy technologies like Fiber or Microwave, implementing multiple paths in a network can be very costly, but SKYFIBER's Optical Wireless Broadband (OWB) technology introduces an easy to deploy, low-cost alternative for turbo-charging your network.

Turbo-Charging & Reinforcing Existing Networks

In an existing networks that use traditional technologies such as in-ground Fiber, WiMAX, or Millimeter/Microwave, adding additional capacity often requires considerable hardware expense, new permits and more spectrum availability, unnecessarily draining time and money. SKYFIBER's flagship product SkyLINK provides a low-cost option for boosting a network's capacity that is fast to deploy, requires no new capital expenditure, and no new spectrum. SkyLINKs are overlaid on top of an existing network to create a hybrid solution that vastly increases the overall capacity of the network.

This overlay provides a full Gigabit of extra capacity when both networks are functional, and also provides a redundancy path in the event of failure on the legacy network.



SkyLINK-PLUS Hybrid Solutions

In addition to turbo-charging existing networks, SKYFIBER also offers the hybrid SkyLINK-PLUS product, which consists of a standard SkyLINK optical unit paired with an 802.11n Radio operating in the unlicensed bands (2.4GHz or 5GHz). This product uses the Gigabit SkyLINK as the main path during normal operations, delivering 1 Gbps of connectivity, with the 802.11n as a redundant link. When the monitoring system detects a drop in link integrity, the primary OWB link automatically switches to the 802.11n backup radio which provides up to 100Mbps of bandwidth ensuring no loss of connectivity.

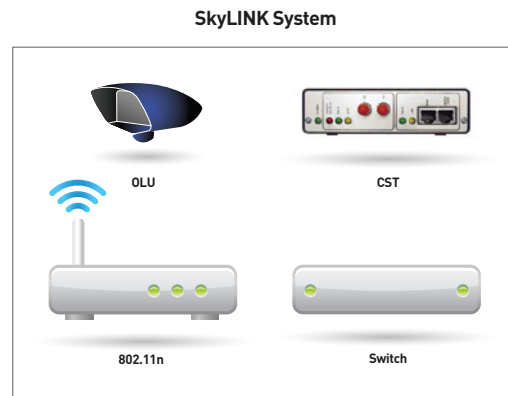
This product can be deployed in four general configurations:

Configuration 1: SKYFIBER provides all system components: SkyLINKs (OLU & CST), Switch/Router, and 802.11n Radios

Configuration 2: SKYFIBER SkyLINKs and Switch/Router are integrated with customer's existing 802.11n radios

Configuration 3: SKYFIBER SkyLINKs and 802.11n radios are integrated with customer's existing Switch/Router

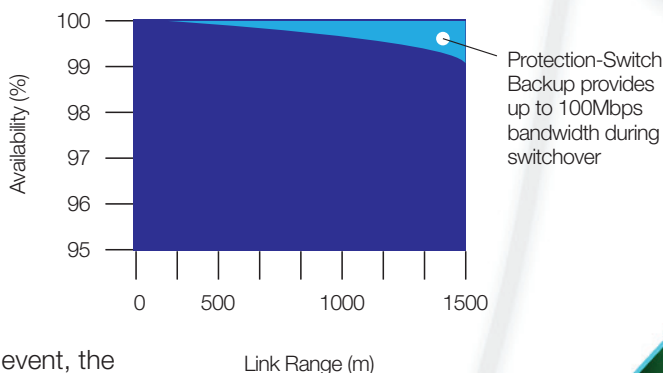
Configuration 4: SKYFIBER SkyLINKs are integrated with customer's existing Switch/Router and 802.11n radios



The SkyLINK-PLUS Optical-to-Radio “Protection-Switch” Process

More than 99% of the time, the 1Gbps Optical Wireless Broadband SkyLINK component of the SkyLINK-PLUS product is operational as the main broadband path in the system. The link integrity of the SkyLINK is monitored at regular intervals, and if link effectiveness dips below critical level, the SkyLINK-PLUS takes action to protect the connection by implementing a “Protection-Switchover”.

Figure 1: Availability of the SkyLINK-Plus System



The “Plus” in SkyLINK-PLUS

Bandwidth: Standard 1 Gbps capacity, average of 100Mbps during protection-switch event.

Frequency: Operates in the 2.4GHz or 5GHz bands, unlicensed spectrum.

Antennas: Directional antennas are used to minimize inference.

System Availability: 99.999%

Typical transition time is 50ms, but this can be modulated depending on the customer's network needs.

For the duration of the impact event, the bandwidth provided by the SkyLINK-PLUS drops to 100Mbps, but the link connectivity is maintained.

The system continues to re-check the optical link integrity at regular intervals, and once data integrity is restored, the connection is swapped back over to the Optical Wireless Broadband link, and connectivity speed is restored to the full 1 Gbps of data throughput.

Optical Wireless Broadband Hybrid Solutions

SKYFIBER's Optical Wireless Broadband provides an effective low-cost method to bring extra capacity to existing networks, or to deliver high-capacity Greenfield networks with full backup redundancy. Offering multiple configurations and implementation options, SKYFIBER has solutions to meet a variety of network needs.

Contact Us

For further information on SKYFIBER™ products and solutions, please contact sales@skyfiber.com

Or visit us on the web at www.skyfiber.com.

