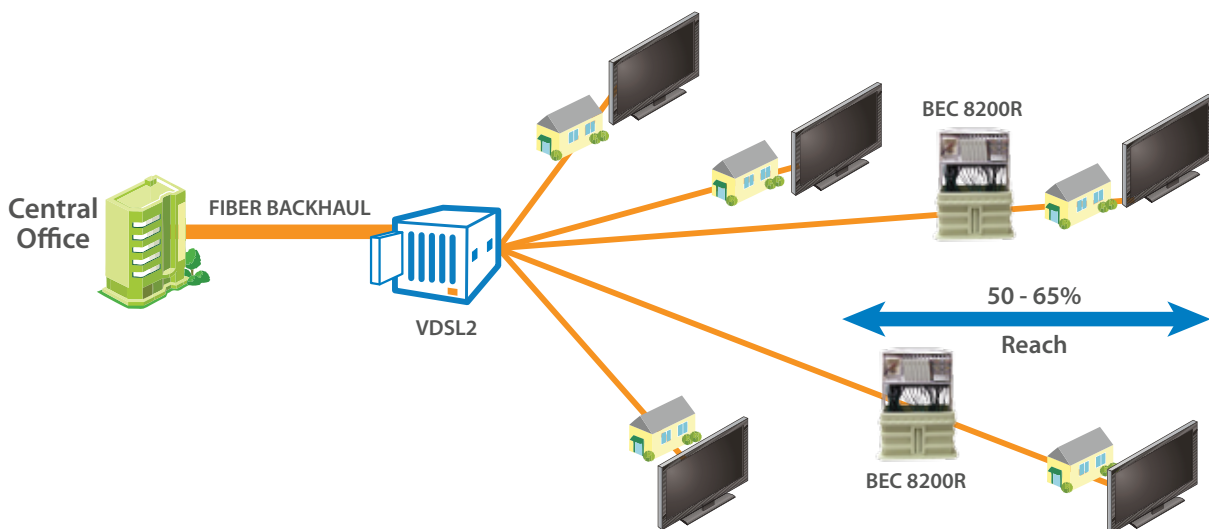


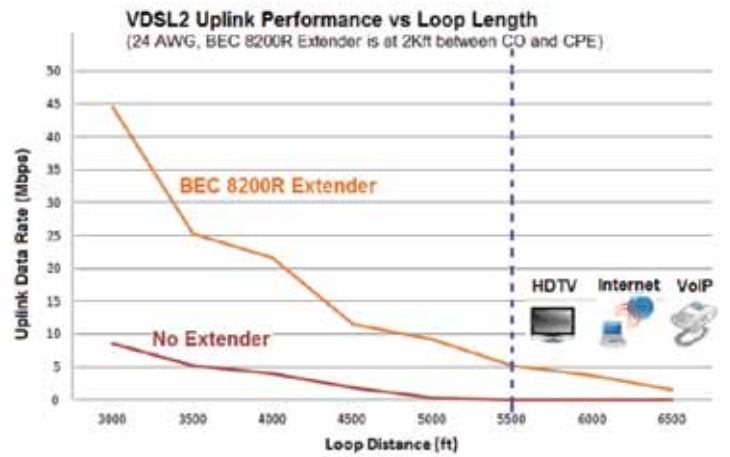
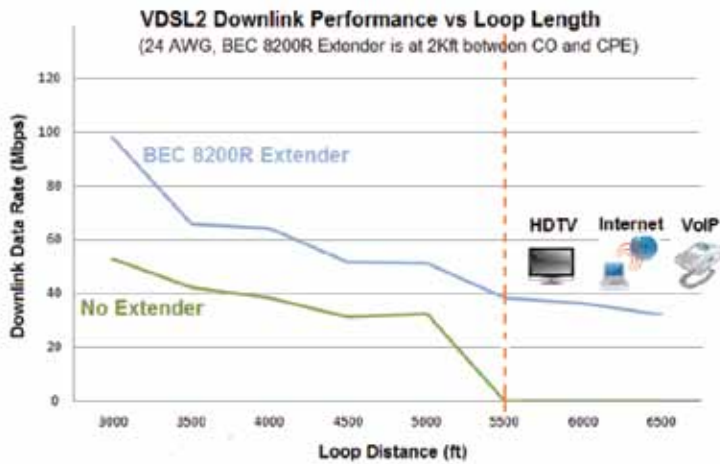
# Maximizing VDSL2 Reach & Performance with the BEC 8200R Line Accelerator

IPTV & High Bandwidth services are a valuable source of revenue for wire line service providers. While VDSL2 provides significantly more bandwidth than ADSL2+, it also challenges the copper loop because it uses a higher frequency spectrum. VDSL2 present greater technical challenges by requiring both faster bit rates and higher line quality. Today, many operators leverage VDSL2 technology to provide those premium services. As VDSL2 deployments are soaring and with every increase in rate, copper lines become more vulnerable to noise and stability problems. As high as 30% of the lines may exhibit stability problems with VDSL2 signal. To fundamentally improve quality and reach, many measures need to be taken on improving and conditioning the lines that VDSL2 network operates on, such as line optimization, prequalification of lines, and diagnostic tools for troubleshooting.



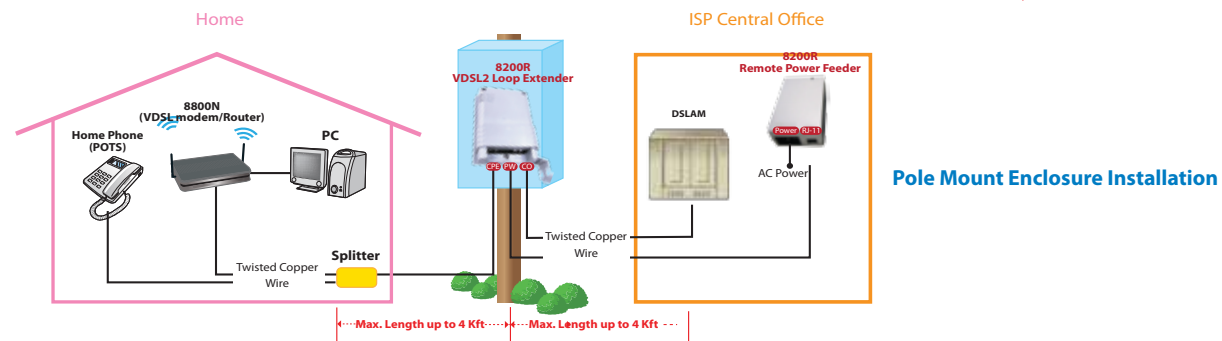
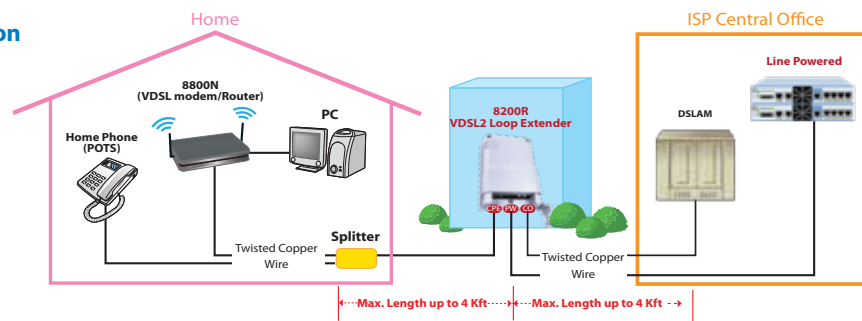
BEC's VDSL2 Line Accelerator incorporates the same VDSL2 signal detection technique as a VDSL2 CPE modem plus a noise-filtering amplification technology to apply proper DC power gain coming from the CO line cards. It profiles the carrier amplitude and re-initialize with the far end CPE modem. The result is a cleaner and optimized circuit that generates reduced power gain from the line cards. Here are example benefits of line accelerator:

- Doubles High Definition IPTV Service Coverage
- Leverages ROI on all existing VDSL2 assets, no additional infrastructure investment
- Re-condition copper line and minimize line noise.
- Reduce VDSL2 deployment costs and time.
- Installed as passive network element - powered via POTS.



The BEC VDSL2 Line Accelerator can be installed midway between the CO lines cards and router or modem at customer premise end. It can be powered via POTS 48V~96V by a power feeder from the customer's network closet or from the telco's central office. A recommended deployment diagram is shown:

#### In-ground Pedestal Installation



## Flexible Deployment Options



Pole Mount



In Ground Pedestals

### Future Proof Networks with VDSL2

Data rates increased with VDSL2 provide great market opportunities for operators and service providers, but they also increase the sensitivity of power noises and difficulties of maintaining quality of service. Major line quality degradation may cause service interruption if copper lines are not optimized. Copper loops that performed well for ADSL2+ may fail dramatically with full VDSL2 performance.

BEC 8200R VDSL2 Line Accelerator can eliminate most of these issues by amplifying and re-initializing the signal so that noises are minimized and signal are extended. Operators can now have a peace of mind while line conditions are optimized to provide much needed buffered data bandwidth for future services.