The EV8010 is a highly integrated system-on-chip (SoC) solution that combines the baseband modem with integrated Analog Front End (AFE) and line driver intelligence for power line control and communications applications. The baseband units comprises Physical Layer (PHY), Media Access Control (MAC) and Convergence Layers (6LowPAN and IEC 4-32).

The EV8010 offers multimode modulation supporting advanced OFDM line coding with high-performance algorithms to enable robust data transmission over power line networks.

EV8010 is designed with a programmable architecture that supports several modulation modes including orthogonal frequency division multiplexing (OFDM) technique that allows reliable data transmission under channel conditions with excessive impulsive noise.

OFDM constellations as per standards requirements are supported. Forward Error Correction (FEC) further improves the signal to noise ratio available under noisy channel conditions. EV8010 supports advanced coding algorithms to provide maximum system robustness under severe impulsive noise presence.

Standards and Implementations Supported:
- ITU G.9903 G3-PLC
- ITU G.9904 PRIME

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**EV8010 Specifications**

- Integrated convergence layer up to and including 6LoWPAN and IEC 4-32, Media Access Controller (MAC), Physical Layer (PHY), and Analog Front End (AFE)
- Integrated 2MB Secure Flash memory
- Compatible with
  - CENELEC A, B, C (10kHz to 140kHz)
  - FCC (10kHz to 490kHz)
  - ARIB (10kHz to 450kHz)
- SPI, I2C, and UART interfaces and PWM Counters
- OTW (Over The Wire) field upgrades
- Industrial temperature operating range (-40°C to +85°C)
- 64LQFP and 56QFN packages
**Network Diagram**

- EnVerv head-end installed at transmission and/or distribution substations
- Multi-standard EnVerv head-end allows for connectivity with various meters with different technologies
- High-performance EnVerv EV8010 SoC ensures more service nodes per head-end and higher coverage

**Applications**

- Automatic Meter Infrastructure (AMI)
- Intelligent Lighting Control
- LED Array Control
- Home Automation
- Heating Ventilation & Air Conditioning (HVAC)
- Industrial Automation
- Sensor Control and Data Acquisition
- Remote Monitoring & Control
- Security Systems / Keyless Entry