

The G-Wave Solutions LightLink design integrates system balance and future service upgrades by allowing RF control for distinct operators in multi-operator deployments. The Headend equipment connects to one or more operator sources such as Repeaters and/or Bi-Directional Amplifiers (BDAs) and includes the RF-specific conditioning modules. The LightLink headend converts RF signals from electrical to fiber optic for distribution to single or multiple remote locations using standard single mode optical fiber.

**Headend Components**

**Headend Combiner Module (HCM):** Combines UHF, 700/800 MHz, and 900 MHz services and interfaces with the Headend Optical Module (HOM). The HCM has individual gain adjustment to balance each service interfacing with the HOM.

**Headend Optical Module (HOM):** A wideband headend device that performs the RF to fiber optic conversion for signals transmitted to and from the remote end equipment. Equipment is available in 1 or 4 port configurations for Single Mode optical fiber.

**Optional Coverage Headend Module (CHM):** If coverage is needed within or near the headend LightLink equipment, an optional coverage headend module can be installed. This will provide a common node for all services to cover the area around the headend, while interfacing with the Headend Combiner Module (HCM).

**Remote Components**

**Remote Optical Module (ROM):** A wideband remote device that performs the RF to fiber optic conversion for signals transmitted to and from the headend equipment.

**Remote Combiner Module (RCM):** The RCM combines all services and feeds conditioned RF signals to the Remote Optical Module (ROM). Additional, it distributes the services to the Remote Active Module (RAM).

**Remote Amplifier Module (RAM):** The RAM amplifies each service from the Remote Combiner Module (RCM) to the desired output power to drive the service antennas. RF signals from the service providers are conditioned for the Headend Optical Module (HOM).

**Remote Service Combiner Module (RSCM):** The RSCM combines all operators from the Remote Active Module (RAM) and feeds the RF signals going to the service antennas. Additionally, it distributes each service to the RAM.

G-Wave Solutions LightLink headend distributes services from 380 MHz to 1 GHz for Public Safety UHF, 700, 800 and 900 MHz. Users can control a single DAS headend with any number and types of remotes; (+20, +25, +27, +30, +33, & +37dBm) for custom balance.

\*Standard units to be available February 2013

**Typical Solution**

This diagram illustrates the Headend equipment

