

# Solution Overview

## 5 GHz Legacy System Upgrade to High Capacity TDM and Ethernet

Applicable Products: EX-5i, EX-5i-16, EX-5i-DS3

### The Problem

Organizations and carriers worldwide have enjoyed the benefits of license-exempt 5 GHz microwave systems, in some cases for a decade or more. In that time, voice and data traffic have risen exponentially, leaving many legacy systems near or at their operational capacity and ill-equipped to accommodate a rising demand for IP-based applications. Yet organizations have already invested significant amounts in both the radio systems and the antenna and cable infrastructure.

Organizations thus need a quick, cost-effective way to upgrade their legacy systems while simultaneously leveraging as much of their current investment as possible.

### The Solution

In many cases, an upgrade to a higher capacity, TDM and IP-capable 5 GHz microwave link can be accomplished with a minimum of effort and cost. By making use of the existing transmission infrastructure and antenna systems – which often costs more than the radios themselves – a modern tri-band Exalt microwave radio system can instantly and cost-effectively replace the existing system capabilities with 200 Mbps of aggregate Ethernet capacity and up to 16xT1 or 1xDS3.

### Solution Description

The 5 GHz upgrade can be accomplished in any existing 5 GHz microwave installation operating between 5.250 – 5.350 GHz, 5.470 – 5.725 GHz or 5.725 – 5.850 GHz. The solution entails use of two primary elements: an Exalt tri-band license exempt radio system and the existing antenna and cable infrastructure. Depending upon the TDM capacity required, the EX-5i, EX-5i-16, or EX-5i-DS3 radio systems may be used, supporting 4xT1, 16xT1 and 1xDS3, respectively. All three systems support 200 Mbps aggregate Ethernet throughput.

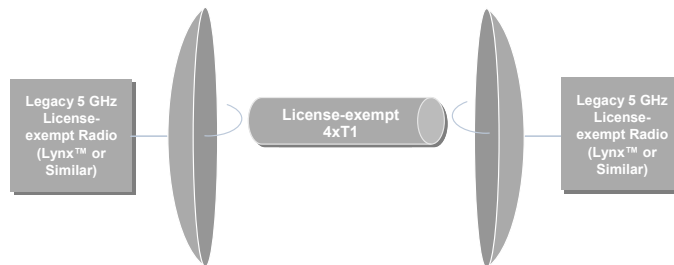


Fig. 1 – Legacy Configuration (Before)

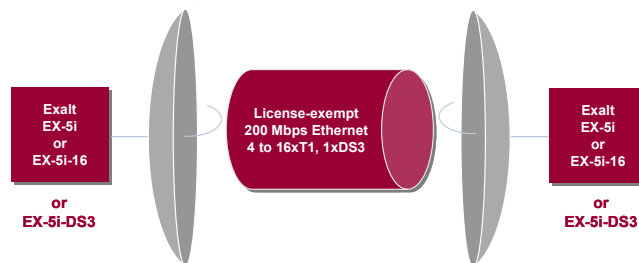


Fig. 2 – Exalt Configuration (After)

An entire 5 GHz Exalt radio installation requires between 1 and 1.5 rack spaces and typically can be installed in less than one hour per end.