

# **Section 1 General Description**

## **1-1 Introduction**

This manual contains information and procedures for the operation of the model G3L-1900-31 and G3L-1900-31-A Wideband (WCDMA) Multi-Carrier Power Amplifier (MCPA). The manual is organized into the following sections and appendix.

Section 1	General Description
Section 2	Operation
Appendix A	Specifications

## **1-2 General Description**

The amplifiers are wideband, linear, feed-forward power amplifiers (WPAs) that operate in the 60 MHz frequency bandwidth from 1930 to 1990 MHz with an instantaneous bandwidth of 20 MHz. The amplifier provides linear amplification for single or multi-carrier WCDMA signals. The amplifiers communicate with the base station via a TLCI control interface bus; passing alarm and measurement information to the base station and receiving control information from the base station.

## **1-3 Hardware Interface**

There are three groups of interface connections located on the amplifier chassis. These are RF, power, and control interface (TLCI bus) as described in the paragraphs that follow.

### **1-3.1 RF**

The RF interface is located on the power amplifier front panel consists of the RF-In (TX-In) and RF-Out (TX-Out) connectors as shown in Figure 1-1.

### **1-3.2 Power Supply**

Power supply voltages (-48 VDC or 230 VAC) from the base station subrack are connected to the amplifier via connector X3, pins A – D located on the power amplifier rear panel as shown in figure 1-1. Table 1-1 lists the voltages and descriptions for each pin.

**Table 1-1 Primary Power Connections**

<b>Signal Group</b>	<b>X3 Connector Pin</b>	<b>Signal Name</b>	<b>Description</b>
AC	A	L	AC Phase (isolated from amplifier chassis)
	B	N	AC Zero (isolated from amplifier chassis)
	C	PE	AC Protective Ground (connected to chassis)
DC	D	-48VDC	DC Minus (isolated from amplifier chassis)
	E	+48VDC	DC Plus (isolated from amplifier chassis)