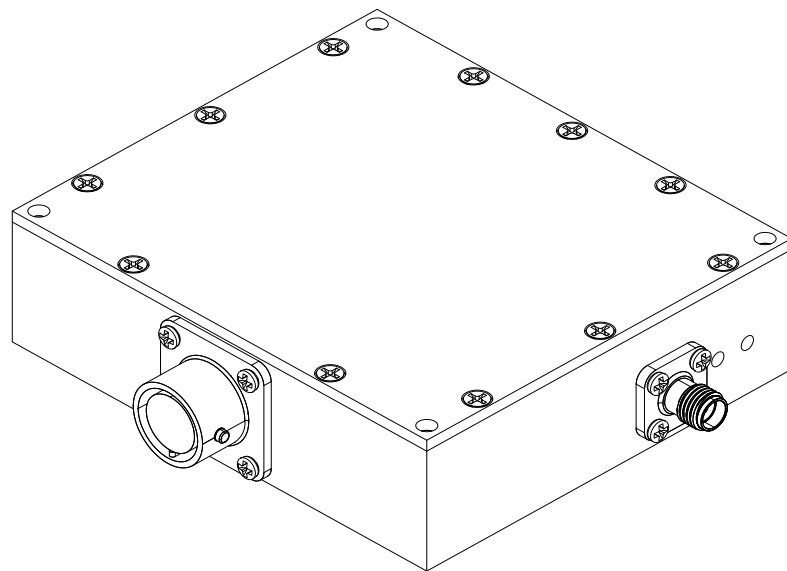




# Operating Manual

## **DDL Amplifier** 10W 2.4GHz Linear Amplifier

Document: DDL Amplifier.Operating Manual.v1.0.1  
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# DDL Amplifier

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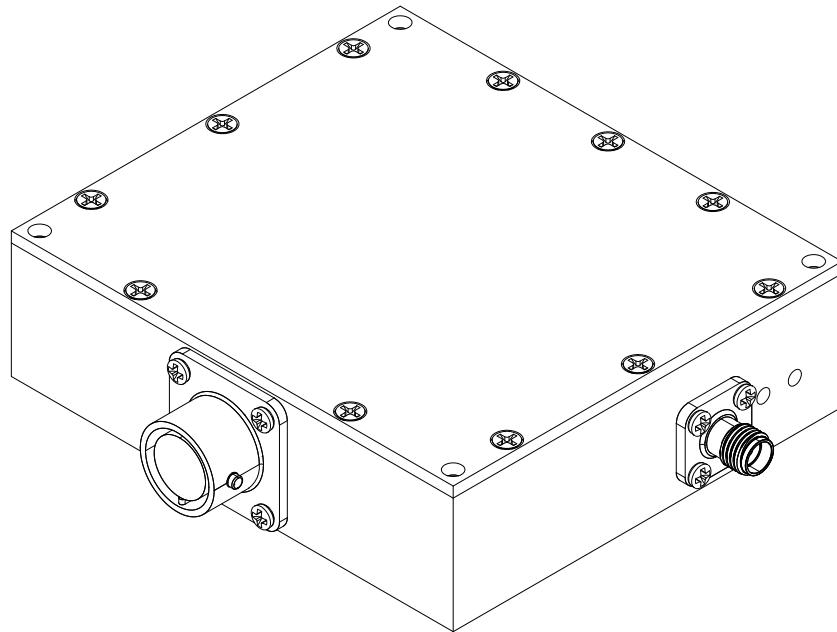
## Revision History

Revision		Description	Initials	Date
1.0.1		First Release	PEH	Jan 2017

## 1.0 Overview

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The DDL amplifier is a 10W 2.4GHz linear amplifier, designed for Digital Data Link applications. The DDL Amplifier offers a compact, rugged design, that features high speed automatic TX/RX switching. The DDL Amplifier is a COTS device that does not require an export permit.



### 1.1 Performance Features

Key performance features of the DDL Amplifier include:

- 2.4 GHz Frequency Band Operation
- Rx Band-pass filtering
- Automatic Tx/Rx switching
- External Tx-RX triggering, if required
- Overvoltage protection on all ports
- Tx/Rx LEDs
- Light Weight
- Compact & Rugged design
- Direct mounting of optional (not included - 3rd Party) 60mm cooling fan

## 1.0 Overview

### 1.2 DDL amplifier Specifications

#### Electrical/General

**Supported Frequency:** 2.4 GHz

**Tx Power Gain:** 10-11 dB Typical

**Tx O/P Power:**

Modulation	Power
P1dB	>25W
QAM 64	9W
QAM 16	10W
QPSK	13W

**Rx Gain:** 5 dB  $\pm$  1 dB

**Rx/TX Switching:** 1  $\mu$ s Typical, 2  $\mu$ s Max

**Impedance:** 50  $\Omega$

**DC Supply Voltage:** 24-30 VDC

**Current Draw:** 2.5A @ 28VDC OFDM Conditions w/Adequate Heatsink

#### Environmental

**Operation Temperature:** -40°F(-40°C) to 185°F(85°C)

**Humidity:** 5% to 95% non-condensing

#### Mechanical

**Dimensions:** Approx: 3.3" x 3.0" x 0.95"  
(85mm x 75 mm x 24 mm)  
4.1" x 3.4" x 0.95" (including connectors)

**Weight:** Approx. 275 grams

**Connectors:** Radio: Female SMA  
Antenna: Female SMA

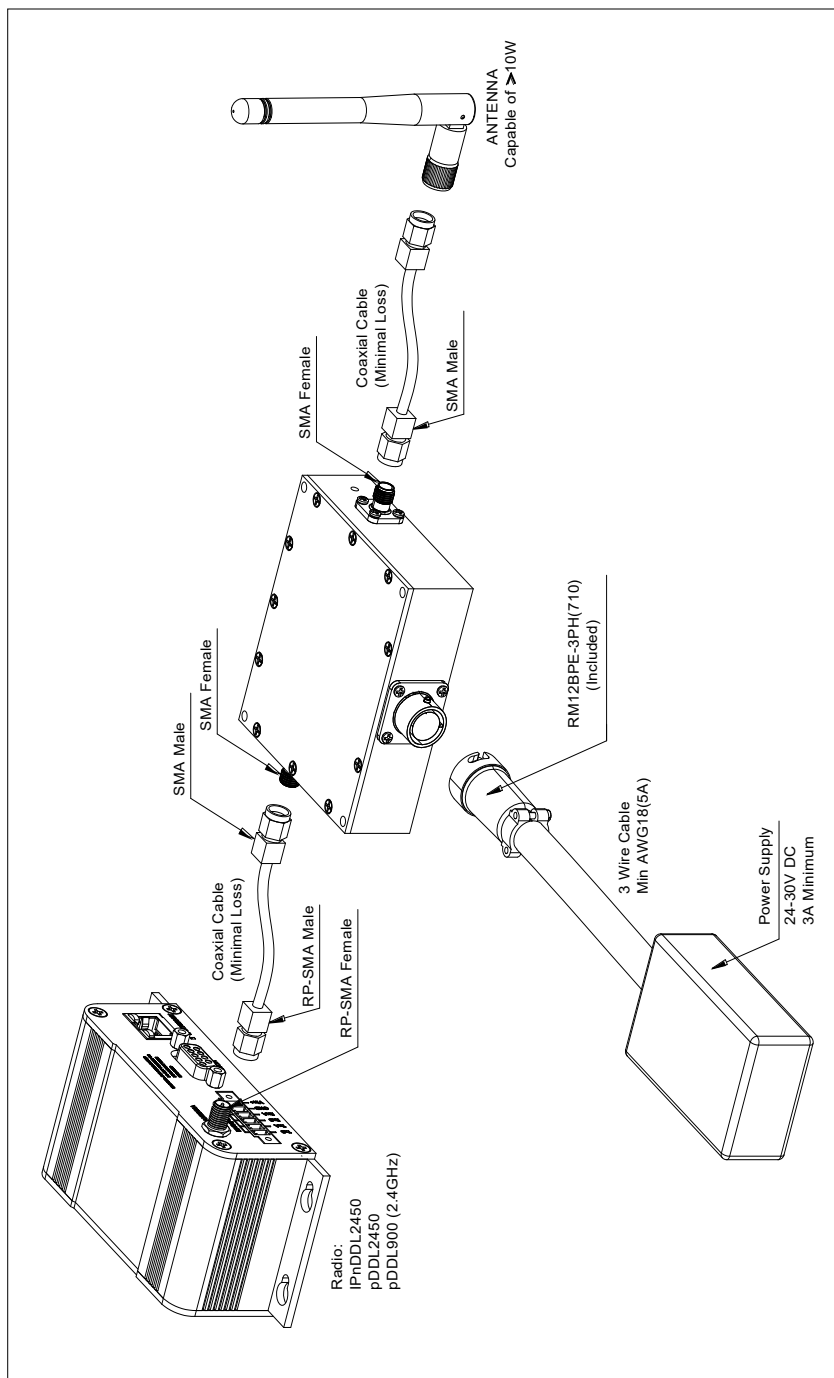
**Power:** Circular Bayonet 3pin (1 Mating connector Included\*)

*\*Additional Mating Connectors can be sourced independently:  
(Hirose Electric Co Ltd - RM Series: RM12BPE-3PH(71))*

## 2.0 Hardware Description

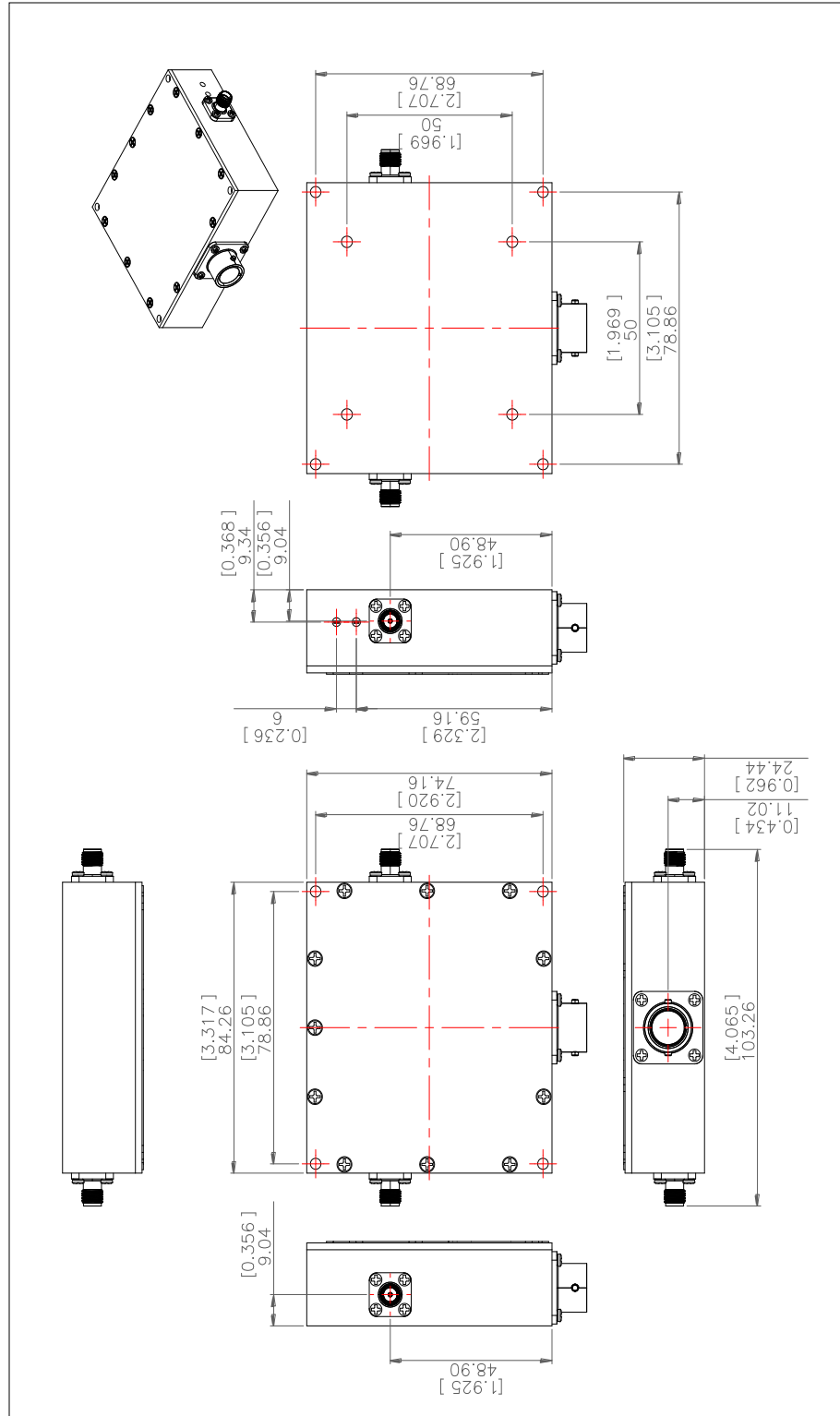
### 2.1 Connection Diagram

The diagram below illustrates the connection and basic requirements of the DDL Amplifier in a system. Antenna types and power supplies are shown for illustration purposes and may vary from application to application.



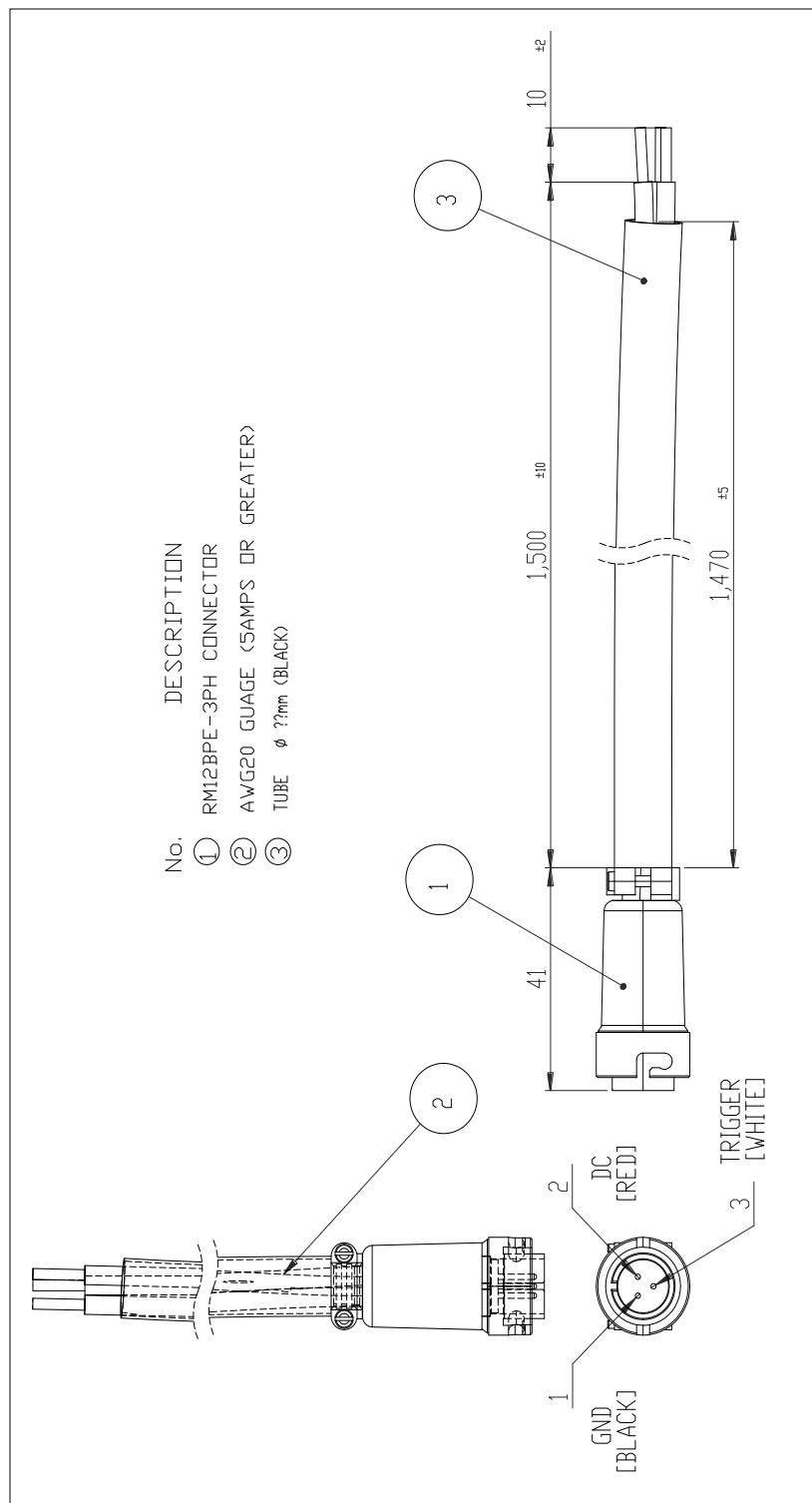
## 2.0 Hardware Description

### 2.2 Mechanical Drawings



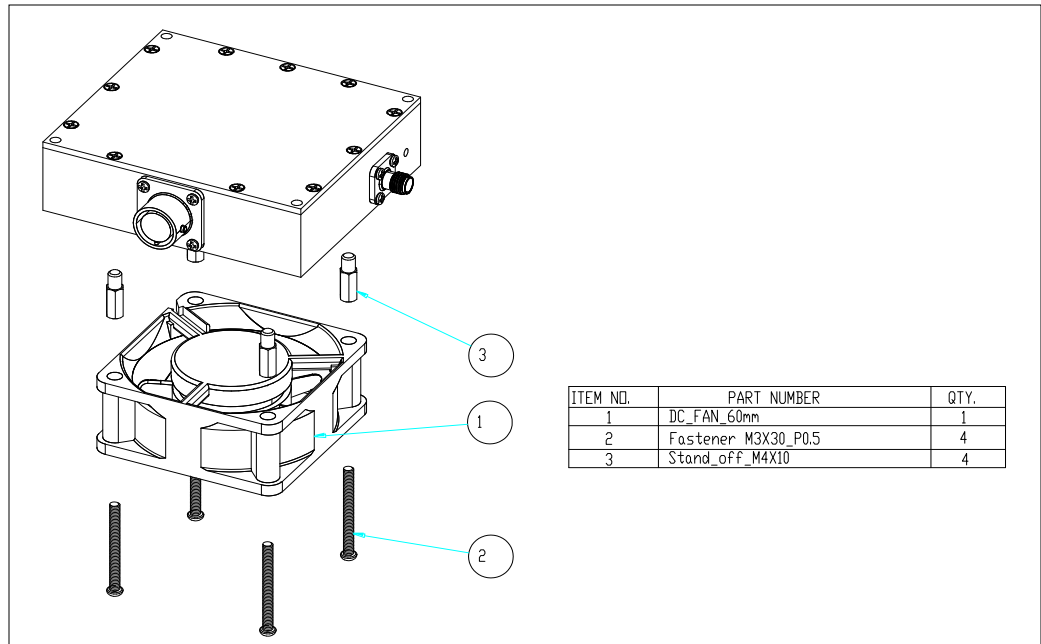
## 2.0 Hardware Description

### 2.3 Power Cable Connection Diagram



## 2.0 Hardware Description

### 2.4 Optional Cooling Fan Installation (Not included)





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