

FalcoNet

Series 3 Module

User Guide



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1 Introduction

This document is designed to provide the user with hardware information on the FalcoNet Series 3 box solution.

2 Series 3 Module Overview

Feature	Specifications
Frequency Support	3600MHz – 4000MHz
Power Output	@5G TDD 29dBm
Receiver Sensitivity	@5G TDD >-95dBm
DC power In	24v to 36v
Average Power Consumption: Full power transmission (Idle mode)	135W (40W)
Peak Power Consumption at full power	250W
Environmental	
Operational Temperature range	0° to 45°C
Storage Temperatures	-20° to 65°C
Dimensions	563mm x 200mm x 86mm (2U half 19" drawer)
Weight	10kg (Box Only)

Supported 5G bands

Band	Frequency
Band n77 (TDD 3700)	3600-4000 MHz

3 Hardware Interfaces

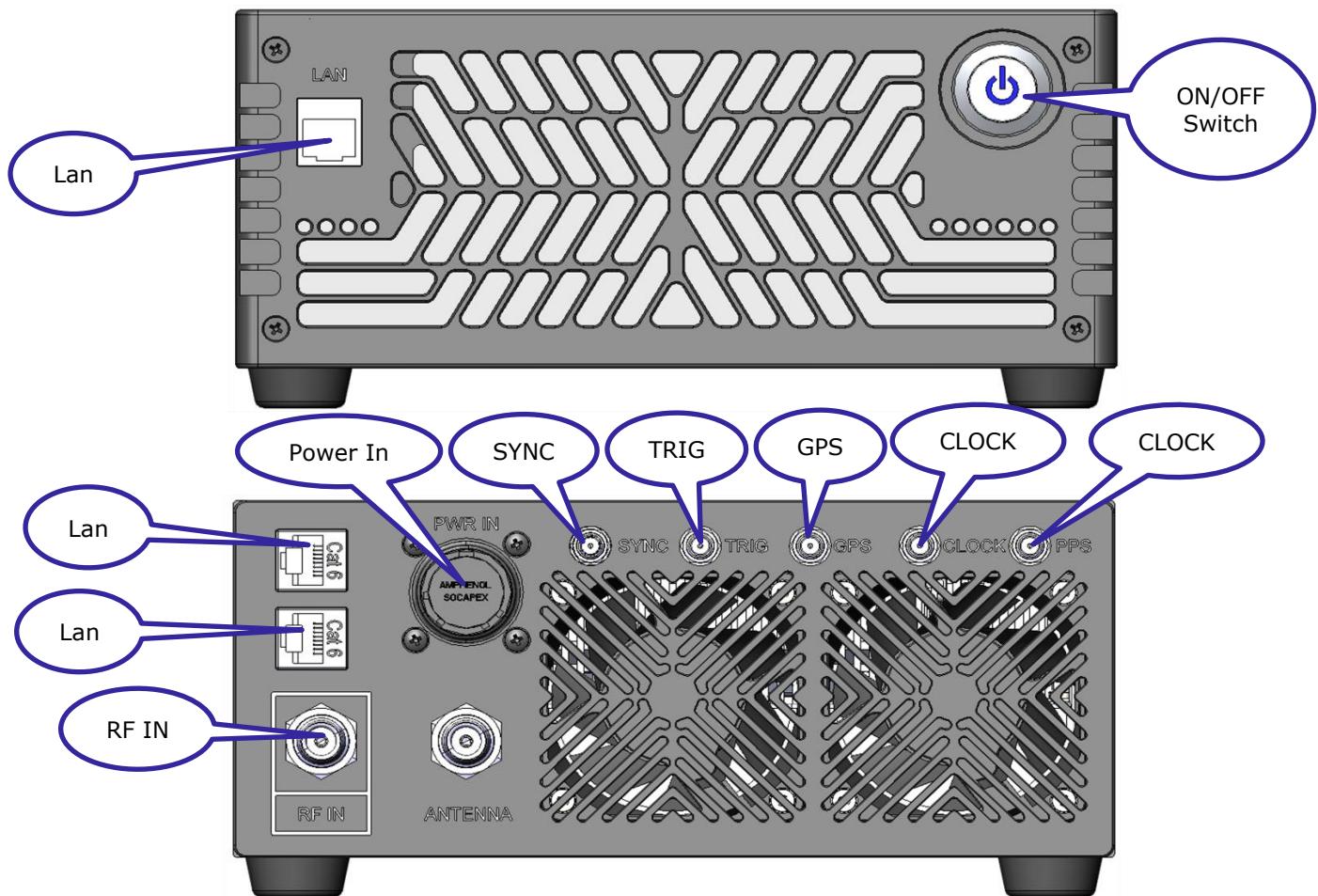


Figure 1 5G Box Front and rear panel

Front Panel:

1. LAN- RJ45 panel mount adaptor
2. On/Off Switch

Rear Panel:

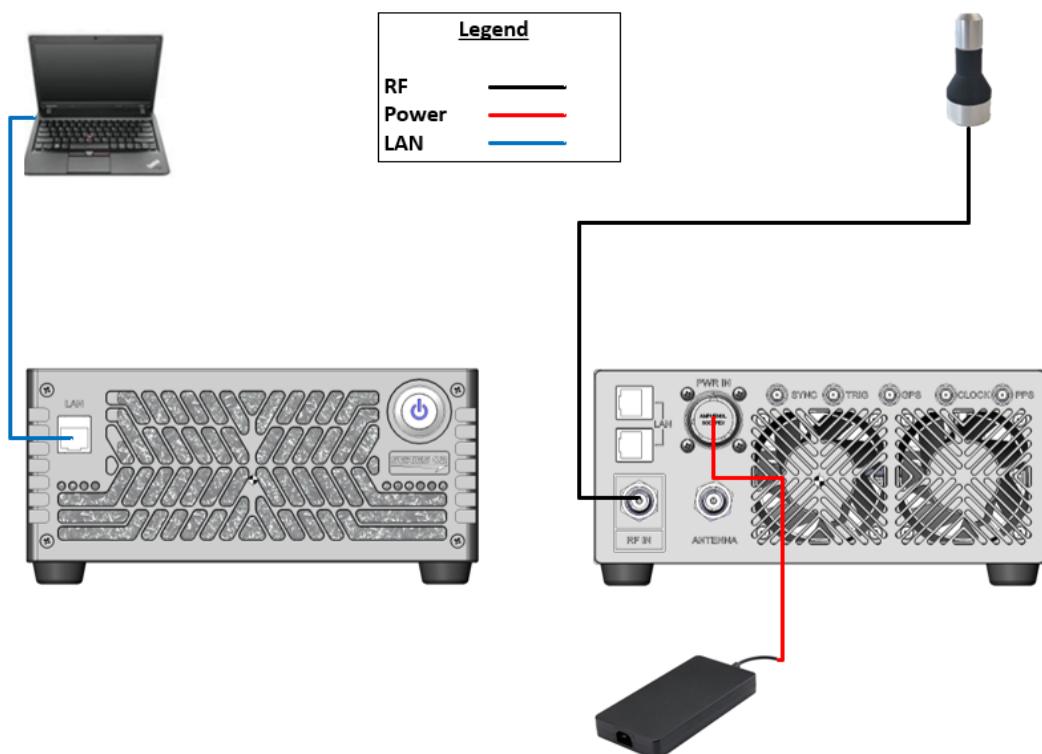
3. LAN- 2 x RJ45 panel mount adaptors
4. Power IN - 4 way Amphenol Power In connector
5. RF IN - QN-type connector RF in from external Gi2s or Series01 systems
6. Antenna - QN-Type connector RF out to 5G support Antenna
7. Sync - SMA Panel Connector for dual box Sync (connect two or three Series02/03 boxes)
8. TRIG - MA Panel Connector for TRIG (for future use)
9. GPS, CLOCK, 1PPS - SMA Panel Connector for GPS (for future use)

4 Solutions

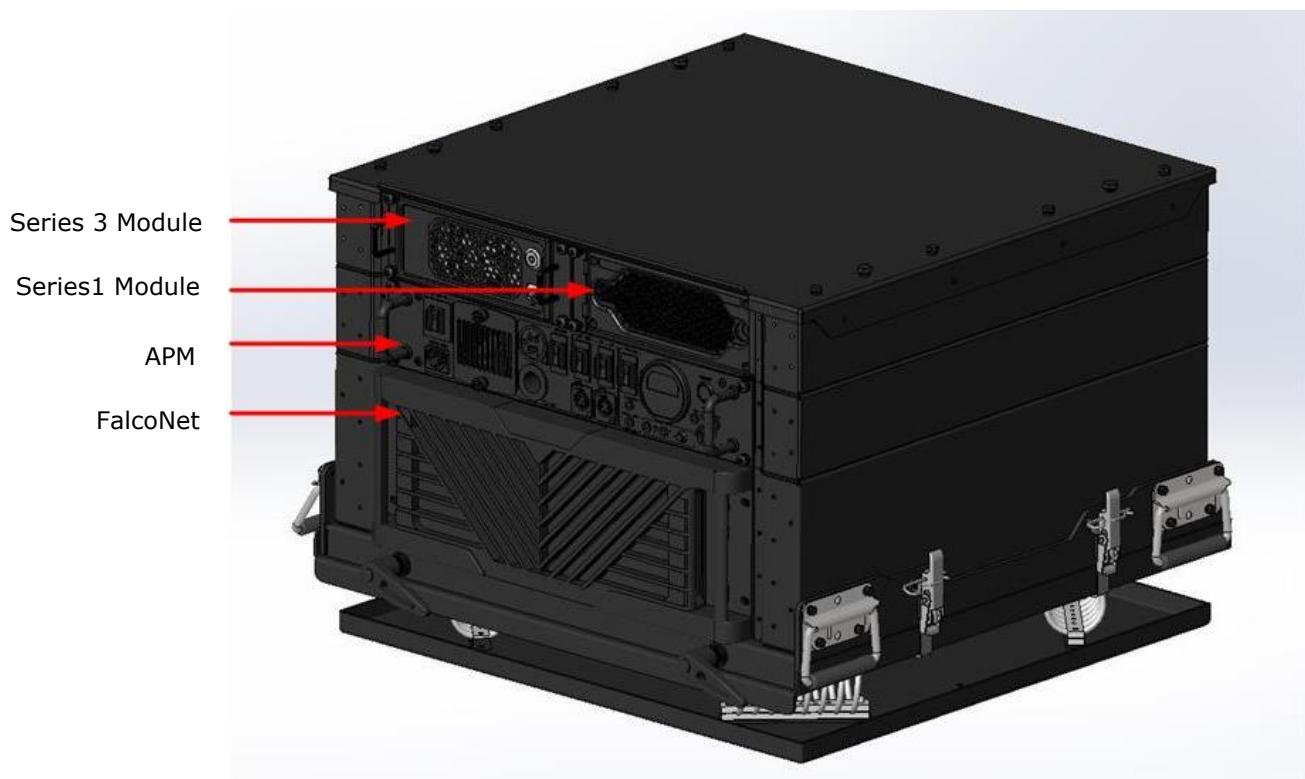
There are two design solutions:

1. Standalone – for desktop solution
2. Rack mounted – for vehicle solution

Standalone



Rack mounted



4.1 Antenna Options

- + Antenna Cable LMR240-3m or Spuma400-6m depending on customer needs
- + Omni-Directional antenna with Magnetic Base
 - o Frequency range – 617Mhz-4000Mhz
 - o Gain – >2.5dBi (617-960Mhz), >3dBi (1700-2700Mhz) >1.5dBi (3000-4000Mhz)
 - o Impedance – 50 Ohms
 - o Max. input power 100 Watts
 - o Polarization – Vertical



- + Directional antenna with Tripod
 - o Frequency range – 617-960MHz & 1.71-2.7GHz & 3.3-4.2GHz
 - o Gain – >5dBi (617-960MHz), >9dBi (1.7-2.7GHz), >10dBi (3.3-4.2GHz)
 - o Impedance – 50 Ohms
 - o Max input power 80w
 - o Polarization – Horizontal
 - o SWR <2



Cables

- + 3 meters LMR400
- + 6 meters SPUMA 400 only

5 RF Exposure Information

In the table below, Power and Gain are entered in units of dBm and dBi respectively and conversions to linear forms are used for the calculations.

Single Chain and non-colocated transmitters								
Band	Mode	FCC Limit (mW/cm ²)	Output AVG Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Duty Cycle (%)	EIRP (mW)	Separ. Distance FCC (cm)
5G NR n77	QPSK	1.00	29.00	13.00	42.00	100.0	15848.93	35.52

Notes:

- 1. The minimum separation distance – physical distance between the transmitting antenna and a person – is 35.52cm (14 inches)**
2. The manufacturer configures output power so that the maximum power after accounting for manufacturing tolerances, will never exceed the maximum power level measured
3. The output power in the table above is the maximum power per chain among various channels and various modes within the specific band
4. The antenna gain in the table above is the maximum antenna gain among various channels within the specified band

6 FCC Information

Supplier's Declaration of Conformity 47 CFR § 2.1077 Compliance Information

FCC ID: 2A7A2-S3

Unique identifier: Series03 Box

Responsible party – US contact information

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FCC Compliance statement subject to Part 15.105

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.