

FalcoNet

Series 1 Module

User Guide

Revision 1.2, September 2022

Cognyte

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Table of Contents

1	INTRODUCTION	2
2	SERIES 1 MODULE OVERVIEW	3
3	HARDWARE CONFIGURATION	4
	Interfaces	4
4	SOLUTIONS	6
	Antenna solution	7
5	RF EXPOSURE INFORMATION	9
6	FCC INFORMATION	10
	Supplier's Declaration of Conformity 47 CFR § 2.1077 Compliance Information	10
	FCC Compliance statement subject to Part 15.105	10

1 Introduction

This document is designed to provide the user with hardware information on the FalcoNet Series 1 box solution.

2 Series 1 Module Overview

The Series 1 Module solution is an LTE base station.

Basic Specifications

- + Length – 563mm
- + Width – 200mm
- + Height – 86mm
- + Weight: Approx. 5Kg
- + Target output power on unit connector – 33 dBm (+/-1)

Electrical Specifications

Power Input

- + 36V for Vehicle solution - provided from DC APM
- + 24V for Desktop solution – provided from AC-DC power supply

Consumption

- + 152W Typical
- + 380W Max

Supported LTE bands

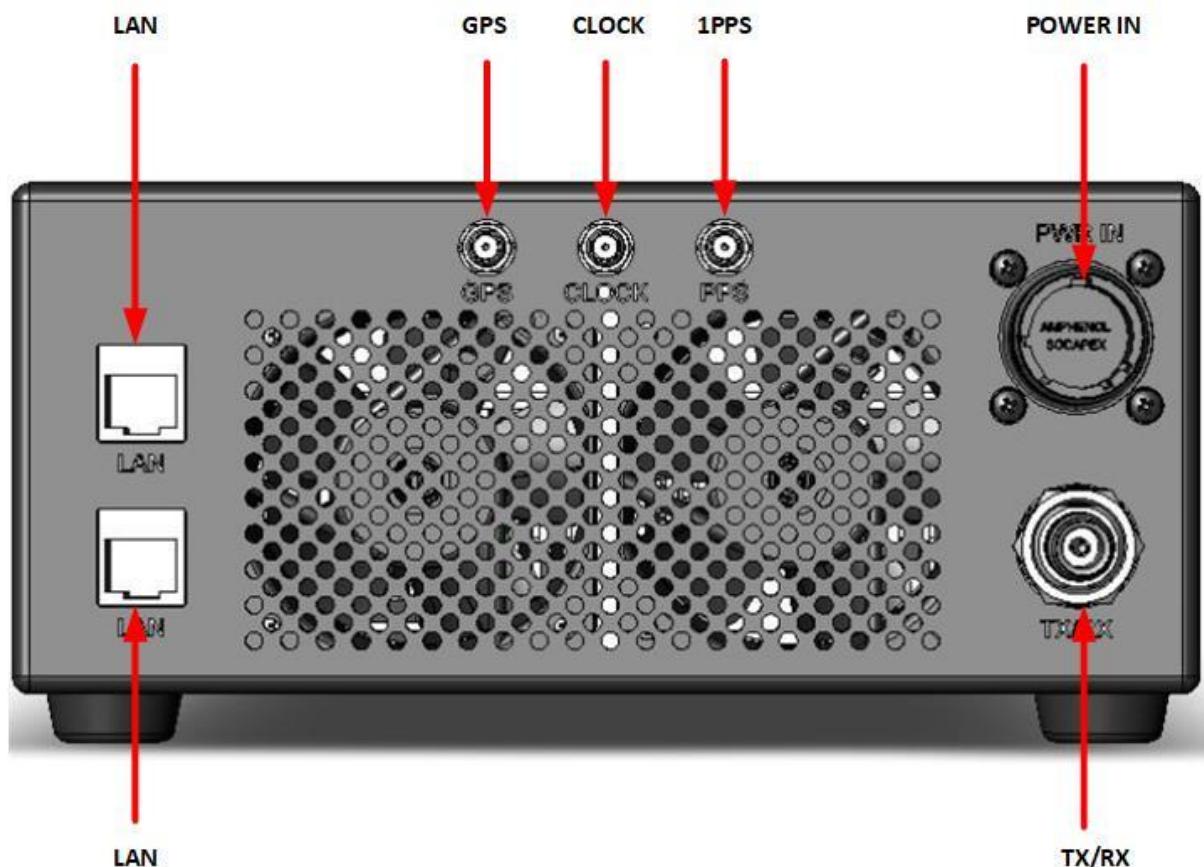
Band	Frequency
Band 41 (TDD 2500)	2496-2690 MHz

3 Hardware Configuration

Interfaces

No.	Interface	Designation	Description
1	Power IN	From PSU/APM	4 way Amphenol Connector
2	TX/RX	To Ext Omni/Directional Antenna	QN-type Connector
3	LAN	To Laptop or FalcoNet	Standard RJ45 socket
4	LAN	To Laptop or FalcoNet	Standard RJ45 socket
5	GPS	To External GPS Antenna	Standard SMA Female
6	CLOCK	Not connected	Standard SMA Female
7	1PPS	Not connected	Standard SMA Female
8	ON/OFF Switch	System ON/OFF	Push Button with LED

Back view



Front view

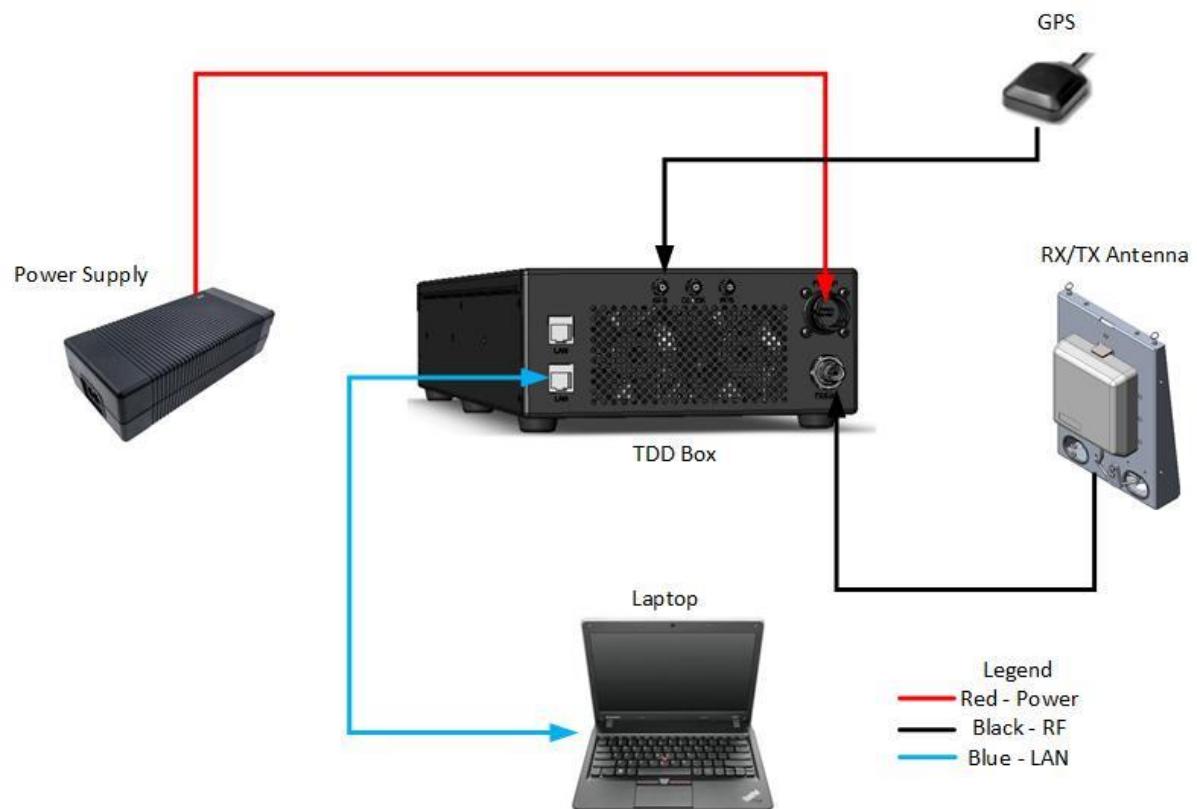


4 Solutions

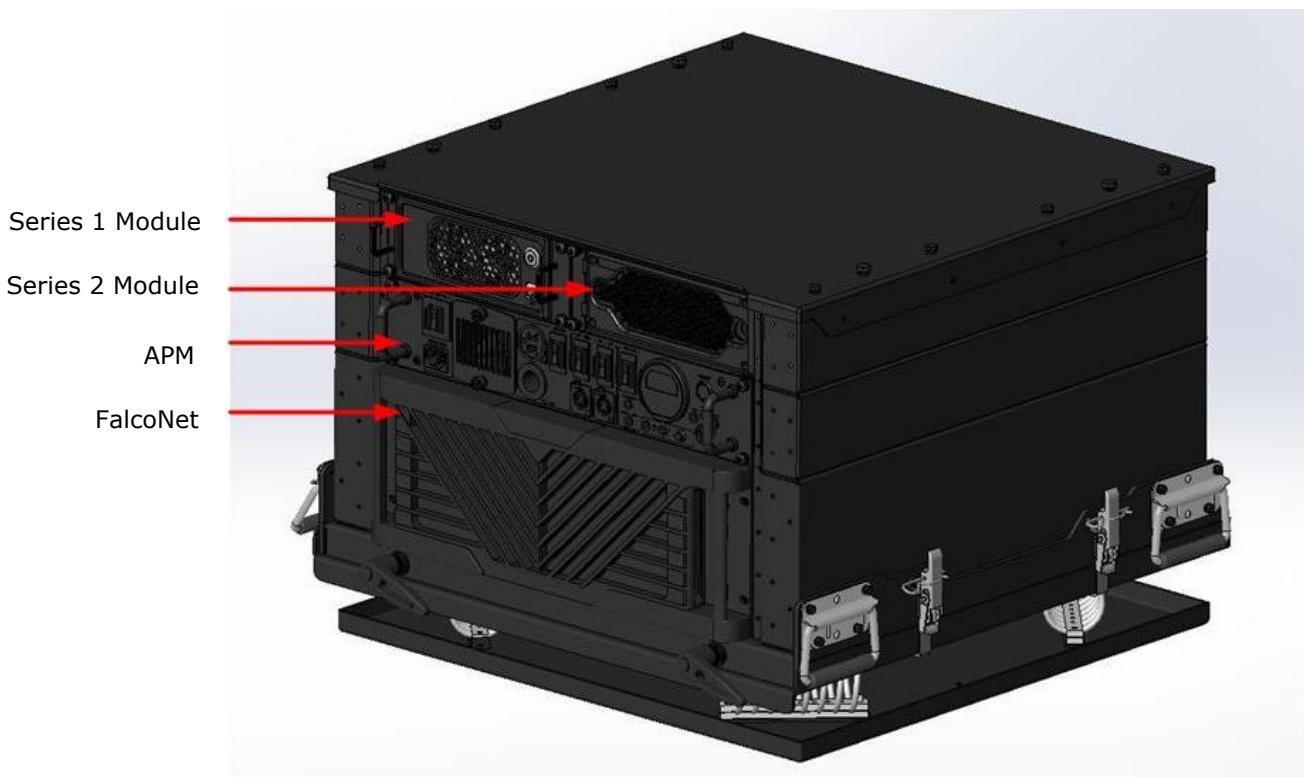
There are two design solutions:

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

Standalone



Rack mounted



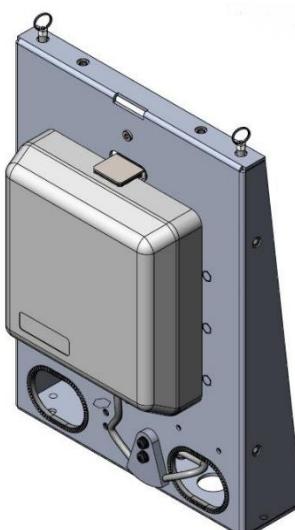
Antenna solution

Series 1 module can be configured for two solutions

1. Directional Antenna on tripod
2. Omnidirectional Antenna – for vehicle installation

Directional Antenna on tripod

- + Freq. Range - 698-960MHz, 1710-2700MHz
- + Gain - 6-9 dBi
- + Impedance - 50Ohm
- + Max. Input Power - 100 Watts
- + Polarisation - Vertical



Omnidirectional Antenna – for vehicle installation

- + Freq. Range - 698-960MHz, 1710-2700MHz
- + Gain – 3.5-5.5 dBi
- + Impedance - 50Ohm
- + Max. Input Power - 100 Watts
- + Polarisation – Vertical



Cables

- + 3 meters LMR240
- + 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)
LTE Band 41	QPSK	1.00	33.00	10.00	43.00	100.0	19952.62	39.86

Notes:

1. The manufacturer configures output power so that the maximum power after accounting for manufacturing tolerances, will never exceed the maximum power level measured
2. The output power in the table above is the maximum power per chain among various channels and various modes within the specific band
3. 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-S1

Unique identifier: Series01 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.