

# Lucid PAC

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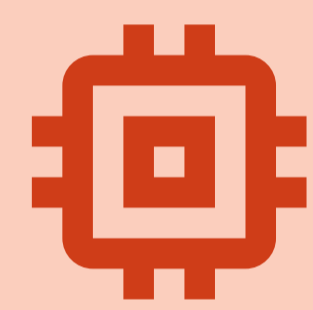
**Lucid PAC (Power Amplifier Controller)** is a device for **controlling and monitoring power amplifiers (PA)** of different types used in devices. **One Lucid PAC can control one amplifier.** Controller can switch on/off power amplifier using PA\_Enable signal regarding to Lucy SDR device synchronization signal. The Lucid PAC is able to **collect measurement data from different types of PA sensors:** forward and reflected PA power, PA temperature, PA supply voltage, PA current consumption and optionally – ambient temperature. The Lucid PAC also can **control PA cooling system** (up to 4 fans with RPM control) regarding to PA temperature. **Lucid PAC also indicates several alarms** in case of abnormal work of power amplifier or power supply unit. **Lucid PAC can be connected to rest of the jamming system and configured via CAN interface.**



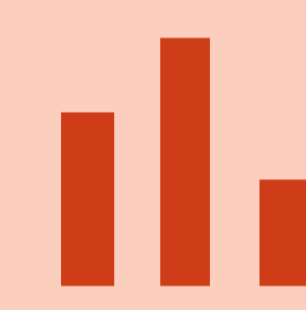
7 configurable alarms



CAN, SWD and One-Wire interfaces



ARM Cortex M3  
STM32F103C8T6

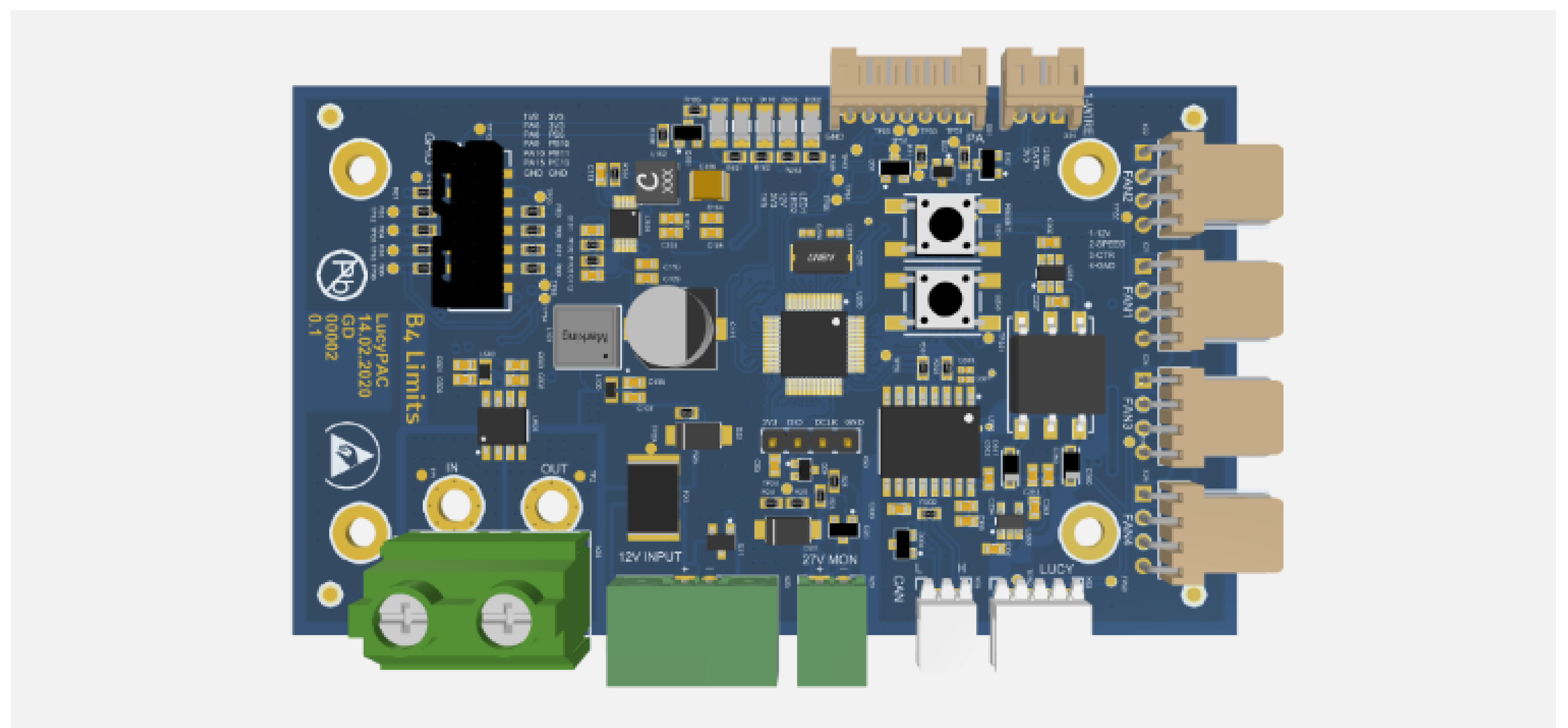


voltage, current, power and temperature measurement

## ABOUT B4 LIMITS

B4 Limits highly qualified and experienced PhD level team created our **signal processing SDR platform** offering **full flexibility** of use. Our platform can be applied for solutions ranging from **vector signal generator, BTS, spectrum analyzer, jamming and repeater applications** to **uplink activity detection/decoding**.

B4 Limits team also developed **state of the art solutions** around our base product: **Software Defined Radio Platform**. The entire range of products consists of mainly support devices: **power amplifier controller, smart system controller** and the heart of the system **B4 Limits produced SDR**.





# SHORT SPECIFICATION

MAIN FEATURES	ELECTRICAL
switching on/off power amplifier	Supply voltage: <b>12 V</b>
can use external <b>PA on/off synchronization signal</b>	Maximum current consumption: <b>2.5 A (with 4 fans)</b>
<b>measurement of RF signal parameters</b> from PA (forward power, reflected power, VSWR)	Analog voltage range for power and temperature measurements: <b>0 – 5 V</b>
<b>measurement of consumed current, supply voltage and temperature</b>	Analog voltage range for supply voltage measurements: <b>0 – 33 V</b>
<b>configurable and flexible cooling fan control and RPM measurement</b> (up to 4 fans)	<b>Voltage levels of digital signals:</b>
indicating device incorrect operation / malfunction via <b>7 configurable alarms</b>	for alarm and PA control: <b>3.3 V (5 V tolerant)</b>
<b>supports RFCore and other amplifier manufacturers</b>	for synchronization and GPIO: <b>1.8 V</b>
<b>VSWR and temperature protection</b>	Current measurement range: <b>0 – 30 A</b>
<b>configurable source of temperature and VSWR measurements</b>	<b>Communication interfaces:</b>
<b>support for DS18B20</b> temperature external sensor	for external communication: <b>CAN</b>
1 communication interface: <b>CAN</b>	for ambient temperature sensor: <b>One-Wire</b>
	for programming/debugging: <b>SWD</b>
MEASUREMENTS	MECHANICAL
The Lucid PAC is able to collect <b>measurement data from different types of sensors:</b>	PCB dimensions (L x W): <b>100 x 58 mm</b>
<b>forward power sensor</b> (voltage input)	
<b>reverse (reflected) power sensor</b> (voltage input),	Housing dimensions (L x W x H): <b>111 x 71 x 35 mm</b>
<b>PA temperature sensor</b> (voltage input)	
<b>PA supply voltage</b> (voltage input)	
<b>PA current sensor</b> (current input/output)	
<b>ambient temperature sensor</b> (one wire interface)	
<b>fan RPM sensors</b> (digital counter input).	
	ENVIRONMENTAL
	Operating temperature: <b>-25 – 85 °C</b>

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