

# Lucid PAC

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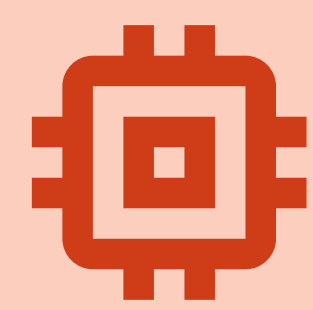
**Lucid PAC (Power Amplifier Controller)** is a device for controlling and monitoring power amplifiers (PA) of different types used in devices. One Lucid PAC can control one amplifier. Controller can switch on/off power amplifier using PA\_Enable signal regarding to Lucy SDR device synchronization signal. 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.



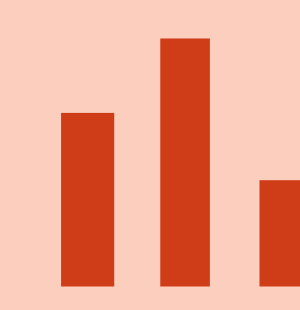
7 configurable alarms



CAN, SWD and One-Wire interfaces



ARM Cortex M3  
STM32F103C8T6

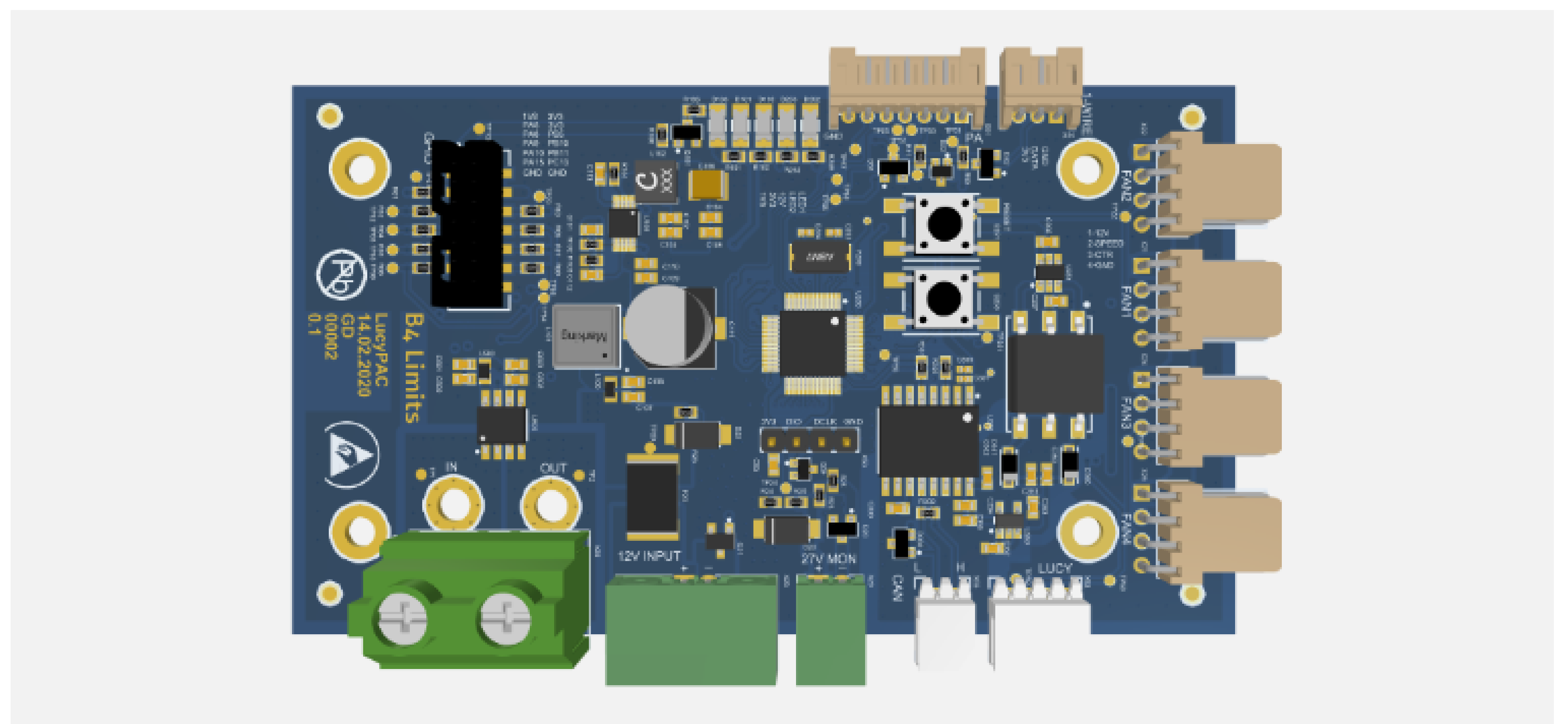


voltage, current, power and temperature measurement

## 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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