Last Gasp Battery Backup
User Guide
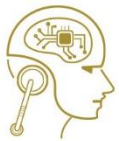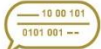
Overview

The last-gasp backup battery is a modular unit designed to connect to an Intercel Smart SAM modem, allowing the modem to detect a loss of power supply and send an alert back to a remote server.

An alert signal can be sent via an SMS to a preset number, or a using a data packet depending on the preferred configuration.

Battery Characteristics:

The internal Lithium Phosphate (LiFePO4) battery can last up to a total of 30 minutes on a full charge and is easily replaced by the end user. The battery is capable of 1000 charge/discharge cycles. This product is supplied with a 2-year warranty, however depending on the frequency of power outages, battery lifetime can be expected to extend well beyond the warranty period without requiring replacement. For further peace of mind, battery charge level can be measured and reported remotely.

The following table provides an overview of expected battery life based on number of power outages experienced within a given timeframe.

Outages per Annum	Estimated Battery Life*
50	10 years
100	5 years
150	3.3 years
200	2.5 years

*When connected to Intercel SAMXT modem, ambient temperature 25°C ±5°C, max 30-minute outage*

RJ45 Socket Configuration:

Pin	Signal	Description
1	VIN	Input Voltage 5Vdc – 32Vdc
2	DCD	Data Carrier Detect
3	Do Not Use	This signal provides last gasp
4	GND	Common Ground
5	RXD	Serial Data OUT of SAM Modem
6	TXD	Serial Data IN to SAM Modem
7	CTS	Cleat to Send
8	RTS	Ready to Send

Operational & Installation Notes:

When storing or transporting, make sure the RJ45 plug is NOT connected to a SAM modem, this will cause unwanted battery drain.

When installing the last gasp battery unit, make sure the RJ45 **plug** is connected to the SAM modem, and the RJ45 **socket** is connected to the meter or other external unit.
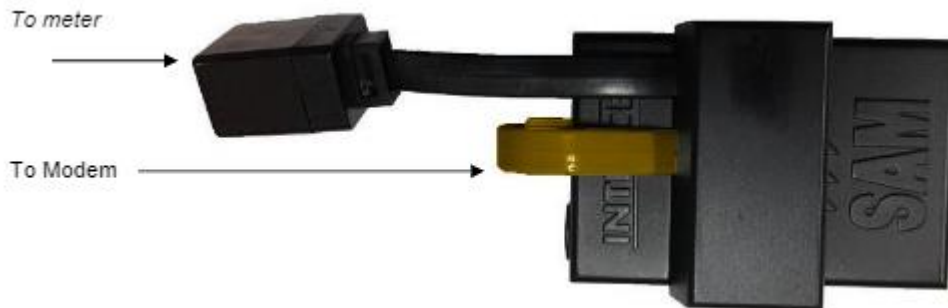
Enabling Functionality:

To enable last gasp functionality, the connected SAM modem requires a special AT command to configure all necessary parameters, which will allow the modem to send an alert upon detecting mains power-disconnection.

AT$LGSMS

Configurable parameters:

LGSMSMSG=   SMS message text (Defaults to: "SAM4Q-D low power detected…")

LGSMSDELAY=   Time delay (seconds) to ensure the power is down for this time before sending last gasp SMS

LGSMSNO=   Phone number to send SMS alert

Example:

```
AT$LGSMS=LGSMSMSG=SAMXT Power Supply is low,LGSMSDELAY=60,LGSMSNO=+61437373999

AT$LGSMS?
$LGSMS:
LGSMSMSG:SAMXT Power Supply is low
LGSMSDELAY:60
LGSMSNO:+61437373999
OK
```

ABOUT INTERCEL

Intercel is an Australian designer and manufacturer of modems and mobile equipment for use with GSM, 3G and 4G telecommunication networks. Our products provide remote connectivity for Serial and Ethernet devices in critical industrial applications. We are located in Melbourne, Australia and our head office is in Mulgrave.

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