

# JBox Series

## Smart Deployable IoT Platform



### Overview

Integrating many latest technologies in lithium battery, cellular communication and solar PV, the JBox offers the cost effective industrial grade telemetry and surveillance solution for many remote control applications.

Users are able to remotely access all-onboard devices through cellular link. The whole system is 100% self sufficient, easy to be installed, deployed and managed. It is also designed to work with the harsh Australian outdoor environment.


## Key Specifications:

<b>Automation interface</b>	4 * Ethernet, Serial RS232 or 485, I/O (optional)
<b>Data Storage</b>	MicroSD or SSD based storage with Low Power NAS adaptor
<b>Communication</b>	Industrial grade LTE Router, supporting the full Telstra / Optus frequency bands
<b>Power Storage</b>	LiFePO4 battery
<b>Power Source</b>	Solar Panel and / or Wind Turbine
<b>Enclosure</b>	Powder coated steel or Stainless steel (316), 100% outdoor rated

## Modular components

### Data / Video Storage



A reliable, low power consumption NAS can also be added to the platform to store any local data

Storage Options		
	Description	Avg Power Consumption
	<b>SanDisk Ultra 128GB</b>  Approx 10 days for single HD Camera on 24 x 7 video recording	0.5 Watts
	<b>Storage expansion NAS</b>  Can take additional 2 x 128GB MicroSD card for extra storage, up to 30 days for single camera on 24 x 7 video recording  ***requires IR615 for router***	3.2 Watts

### 3G/LTE (Cellular) Comms

JBox utilises the Inhand® industrial cellular routers for internet connectivity. These routers were designed for harsh operating environment, with internal watchdogs to ensure that your surveillance system is always online.



Also, it is possible to monitor the battery status over this remote link.

Comms Selection Chart		
	Description	Avg Power Consumption
	<b>IR611 3G/LTE</b>  Industrial Grade Router Offering reliable connection for remote access and control Telstra Approved Comms Module included  Ideal for single network device	2.1 Watts
	<b>IR615 3G/LTE</b>  Industrial Grade Router Offering reliable connection for remote access and control Telstra Approved Comms Module included  Ideal for multi multi network devices	3.1 Watts
	<b>IR915 3G/LTE</b>  Industrial Grade Router Python Programming platform available, allowing local data manipulation before upload Dry contact (I/O) available for direct control	3.5 Watts

## Battery

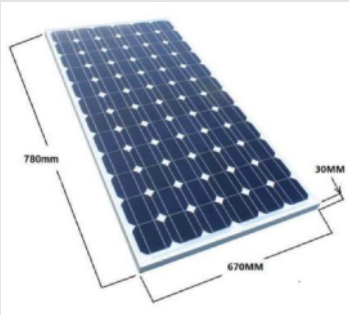

Typically the lead acid battery offers the most cost effective power storage option, however the effective capacity is approx 60% of its rated capacity.

Lithium battery on the other hand can have effective capacity close to 95% of the rated capacity.

Battery Selection Chart	
	Description
	<p><b>LiFePO4 Lithium Battery 12V</b></p> <p>LiFePO4 cell battery, effective battery capacity up to 95%  MPPT charging controller included  Light weight and small form factor design</p> <p>12V, 20AH.- 181*167*77mm, approx 3kg  12V, 60AH - 140*170*165mm, approx 7kg  12V, 100AH - 270*178*178mm, approx 11kg</p>
	<p><b>Battery bank 12V 350AH *</b></p> <p>Battery bank, designed to work with high power setup (25W+)  Smart Charging Controller with remote monitoring capability included</p>

## Power source

To ensure the JBox is self-sustained, solar PV technologies are employed to keep the system powered up, in conjunction with batteries.  
Also, wind turbines can be used together as a hybrid system in less sunny regions.

Power source	
	Description
	<b>12V Solar Panel</b>  Monocrystalline Solar Panel is ideal for regions with plenty of sunny days,  80W 100W 150W 200W
	<b>Wind Turbine</b>  In Southern States (VIC, SA and TAS) where the yearly average sun light is lower, a wind turbine will work as a good supplement to solar panel. Starting wind speed 10km/hr, three phase synchronised generator used  A MPPT hybrid wind/solar charging controller included

## Standard JBox Models

The following JBox Models were designed to fit for some common surveillance applications:

Model number	Key Specs	Features and applications	Indicative Trade pricing
<b>JBox-L10</b>	Powder coated steel enclosure (pole mounting brackets included)  12V 60AH Lithium Battery  3G Router (IR611)  12V 80W Solar Panel + PWM Charger  Ideal for total load under 10 Watts (i.e., single fixed lens camera)	Entry level Self-sufficient IoT platform, ideal to host 1 network device and 1 serial device  Battery to support 72 hours operation without charge	\$3000 + GST
<b>JBox-L20</b>	Powder coated steel enclosure (pole mounting brackets included)  12V 100AH Lithium Battery  3G Router (IR615)  12V 150W Solar Panel + MPPT Charger  Ideal for total load under 20 Watts	Lithium Battery powered IoT Platform that is capable of hosting up to 20 watts of load  Battery to support 72 hours operation without charge	\$4500 + GST
<b>JBox-L40</b>	Powder coated steel enclosure (pole mounting brackets included)  12V 200AH Lithium Battery  LTE Router (IR915)  128GB Micro SD  12V 300W Solar Panel + MPPT Charger  Ideal for total load under 40 Watts	Lithium Battery powered IoT Platform that is capable of hosting up to 40 watts of load  Battery to support 72 hours operation without charge	\$5700 + GST

## About Us:

JDK Technologies Pty Ltd is a Sydney based technology supplier specialising in industrial communication systems and IP based security systems.

## Our value adding services

### DDNS

Since most of service providers (except Optus) do not provide static public IP addresses anymore, to remotely access an IP camera would require a DDNS domain to be attached on a cellular router. JDK Technologies will provide a DDNS domain name for **\$20 + GST** per year, with the setup on router included.

### Cloud Storage

Many cameras these days are capable of uploading **data** to ftp/cloud server, JDK technologies is also hosting a ftp server in-house, at **\$10 + GST** per month for each 1GB.

### SIM cards and data plans

JDK Technologies also offers a good range of “plug-n-play” SIM and Data packages to cater the different requirements, unlike consumer data plans where excess data are often charged at high rates, our capped data plan will make sure clients don't get surprises in the data bill. Also we have catered our lost cost data plans for industrial projects where monthly data usage is lowered then 100MB.

## Contact:

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