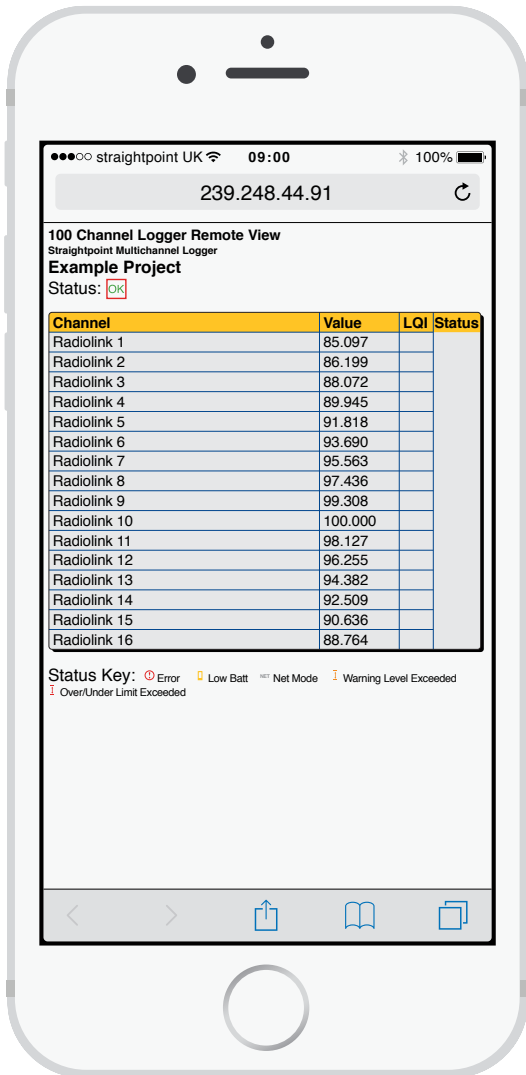
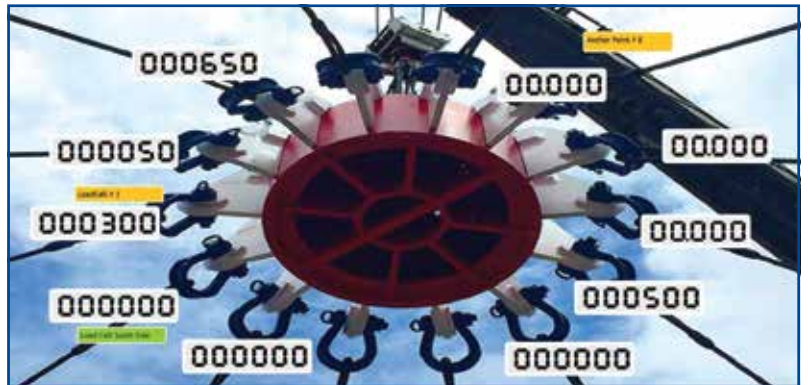
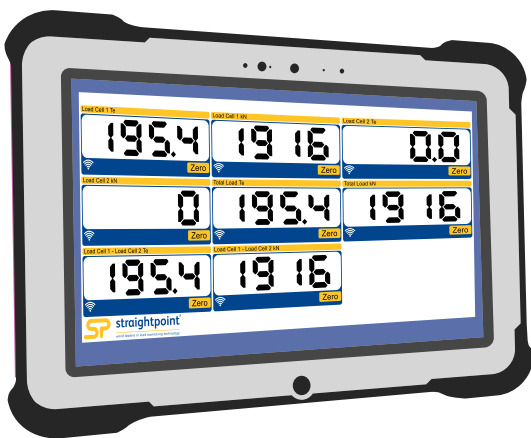
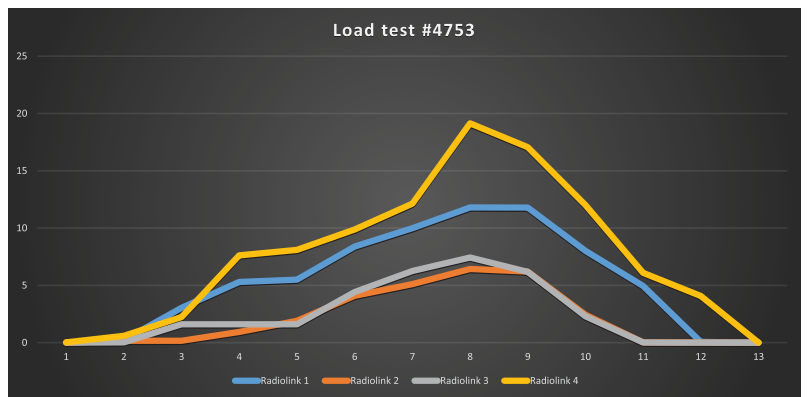


SW-MWLC



Date	Time	Elapsed mS	Radiolink 1	Radiolink 2	Radiolink 3	Radiolink 4	Total Load
10/03/2015	10:41:38	1000	0.01	0	0	0.02	0.03
10/03/2015	10:41:39	2000	0.23	0.16	0.03	0.59	0.73
10/03/2015	10:41:40	3000	3.04	0.16	1.6	2.23	14.17
10/03/2015	10:41:41	4000	5.3	0.94	1.6	7.62	32.45
10/03/2015	10:41:42	5000	5.5	1.9	1.6	8.1	36.72
10/03/2015	10:41:43	6000	8.39	4.09	4.42	9.87	46.37
10/03/2015	10:41:44	7000	9.99	5.11	6.26	12.13	62.56
10/03/2015	10:41:45	8000	11.8	6.43	7.43	19.14	72.8
10/03/2015	10:41:46	9000	11.79	6.2	6.18	17.06	73.85
10/03/2015	10:41:47	10000	8.01	2.43	2.3	12	52.72
10/03/2015	10:41:48	11000	4.94	0.02	0.01	6.09	32.69
10/03/2015	10:41:49	12000	0.06	0.01	0	4.08	15.19
10/03/2015	10:41:50	13000	0	0	0	0	-3.53



Straightpoint's Multiple Wireless Load Cell Controller (SW-MWLC) software package is a versatile, user friendly, wireless load cell control, display and data logging tool designed for use on the Windows PC platforms, Vista, Win 7, 8 & 10.

SW-MWLC allows simultaneous, wireless communication between Straightpoint wireless load cells and a Windows PC. A resizable window displays a table of up to 100 wireless load cell channels of live data. Channels can be setup with user defined mathematical functions that can be used to calculate a multitude of results.

For example, a display can show the value from a single load cell or the sum of multiple load cells. Visual display and audio alarms can indicate under and over range as well as loss in communications, low battery and error reports. SW-MWLC can log on demand, at pre-set intervals, on entering and leaving a pre-set overload and during an overload. Data is logged to a CSV file which can be opened for analysis by software programs such as Microsoft Excel. JSON format data is also available on demand via the built in web server.

For more complex applications, graphical pages can be built showing the data in a variety of formats including digital display or bar graphs. Up to eight pages can be defined and the pages easily navigated between a variety of image formats that can be imported, including JPG, GIF, PDF and DXF.

Custom applications including branding and colour scheme are available. Please contact Straightpoint's sales department for pricing.

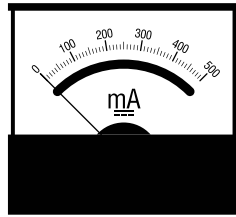
SW-MWLC software is supplied with a SW-USBBSE extended range USB transceiver.

Features and benefits:

- Displays and logs data up to 100 Straightpoint wireless load cells simultaneously
- Mapping/graphical capabilities
- Webserver offers remote viewing on iPads/tablets/smart phones and also supplies JSON data on demand
- Logging at timed intervals, manual or on overload/underload
- Visual and audible alarms indicates overload, low battery and communications error
- Zoom in to channel to see data trends and history
- Export and log data in CSV format

Part Number	SW-MWLC
IP rating (SW-USBBSE)	IP67 NEMA 6
Operating Temp	-20°C to 55°C -4°F to 131°F
Licence	Licence free
Frequency	2.4 GHz
Range	700 metres 2300 feet
Load Cell Inputs	Up to 100
PC Requirements	Intel i3 processor with 2GB RAM
Operating System	Windows XP, Vista, Windows 7, 8 or 10

SW-AO1i *Wireless base station with analogue output*



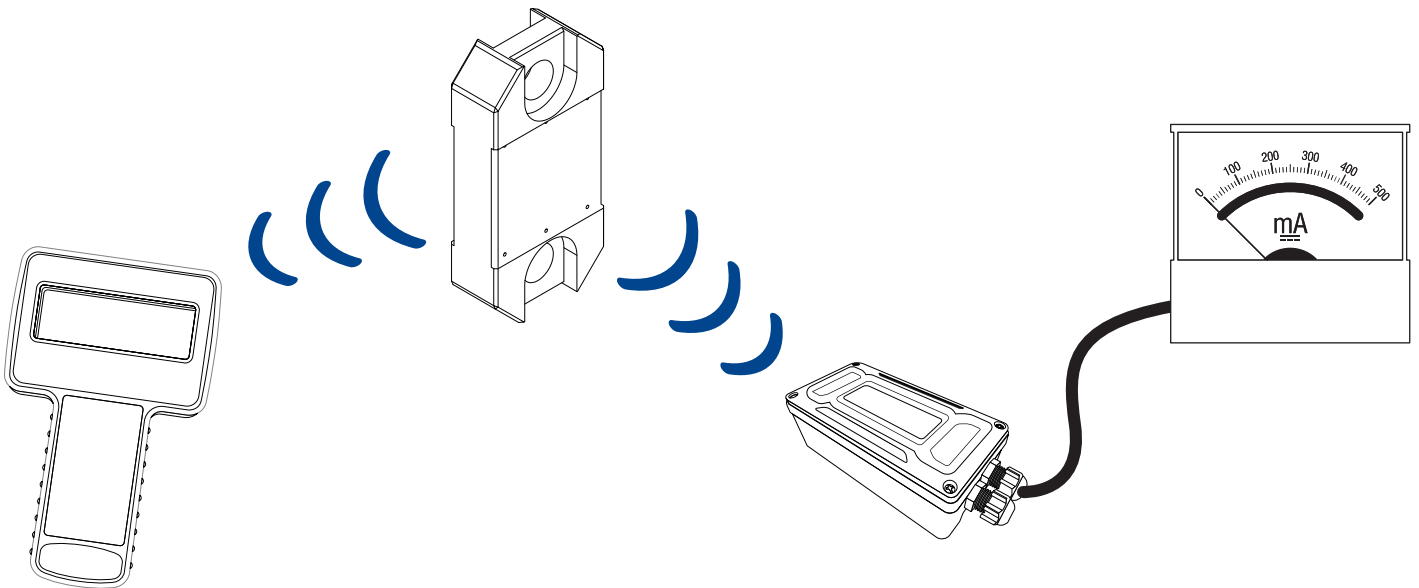
The SW-AO1i provides a configurable analogue output for any single Straightpoint wireless load cell and is ideal for integration to a PC, PLC or other data acquisition system.

Housed in a IP65/NEMA4X enclosure, the output can be selected from pre-calibrated voltage and current ranges of 0-5vdc, +5vdc, 0-10vdc, +10vdc, 0-20mA, 4-20mA.

Features and benefits:

- Full option of analogue outputs such as 0-10v & 4-20mA
- Output can be changed in the field to suit different devices
- Wireless connection to load cell
- Fully configurable
- Wide range for power supply input
- IP65/NEMA 4 Enclosure

Solution



Parameter	Minimum	Typical	Maximum	Units
Licence		Licence exempt		
Modulation method		MS (QPSK)		
Radio type		Transceiver (2 way)		
Data rate		250		K bits/sec
Radio frequency	2.4000		2.4835	GHz
Power		1		mw
Range			700 (2300)	Metres (feet)
Channels (DSSS)		16		

SW-GW1 Modbus RTU/ASCII Gateway



Features and benefits:

- Proprietary 2.4GHz Wireless
- Industry Leading Wireless Range
- Error Free Data Transmission
- Modbus RTU or ASCII interface (RS232/RS485)
- Gathers data from up to 100 transmitters
- Environmentally Sealed (IP65/ NEMA4)

The SW-GW1 is a Modbus interface gateway that provides a simple interface allowing users to gather data from Straightpoint Wireless devices using either the standard Modbus RTU protocol or a simple ASCII protocol.

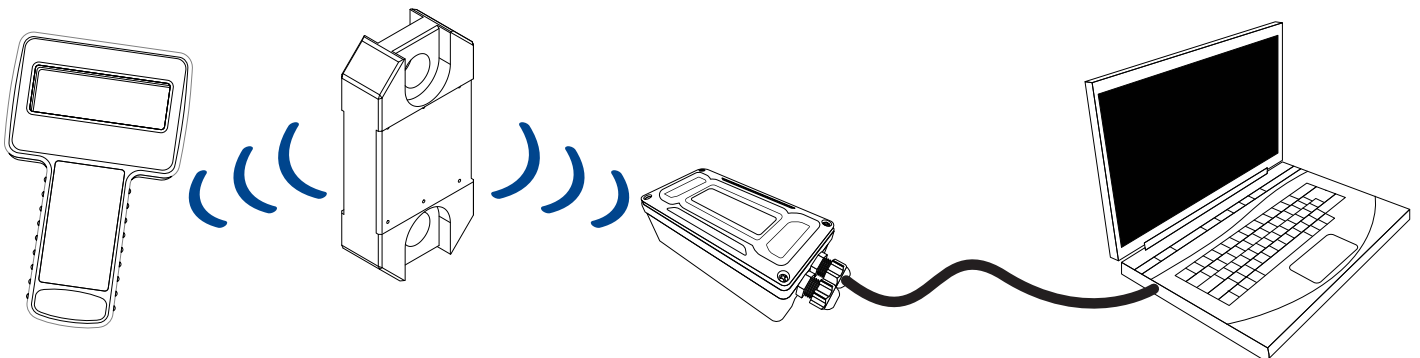
This gateway allows for the collection of data from up to 100 Straightpoint Wireless devices and provides for simple commands such as wake, sleep, and keep awake.

The license-free 2.4GHz Wireless System offers high integrity, error free communications.

The electronics are housed in a NEMA 4/IP65 environmentally sealed enclosure.

The SW-GW1 is ideal for integration to a PC, PLC, or other DAQ system accepting a simple Modbus RTU or ASCII serial communications protocol.

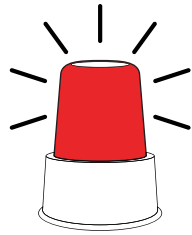
Solution



Parameter	Minimum	Typical	Maximum	Units	Notes
External supply voltage	9	12	32	Volts	
Average operational		TBD	500	mA	
Operating temperature	-40°C (-40°F)		65°C (149°F)	°C (°F)	
Storage temperature	-40°C (-40°F)		65°C (149°F)	°C (°F)	
Reverse polarity			-32	Volts	Maximum supply level
Licence		Licence exempt			
Modulation method		MS (QPSK)			
Radio type		Transceiver (2 way)			
Data type		250		K bits/sec	
Radio frequency	2.4000		2.4835	GHz	
Power		1		mw	
Range			700m / 2300ft	Metres (Feet)*	
Channels (DSSS)		16			

*Maximum range achieved in open field site at height of 9.8 feet (3 metres) above ground.

SW-OAM *Wireless overload alarm module*



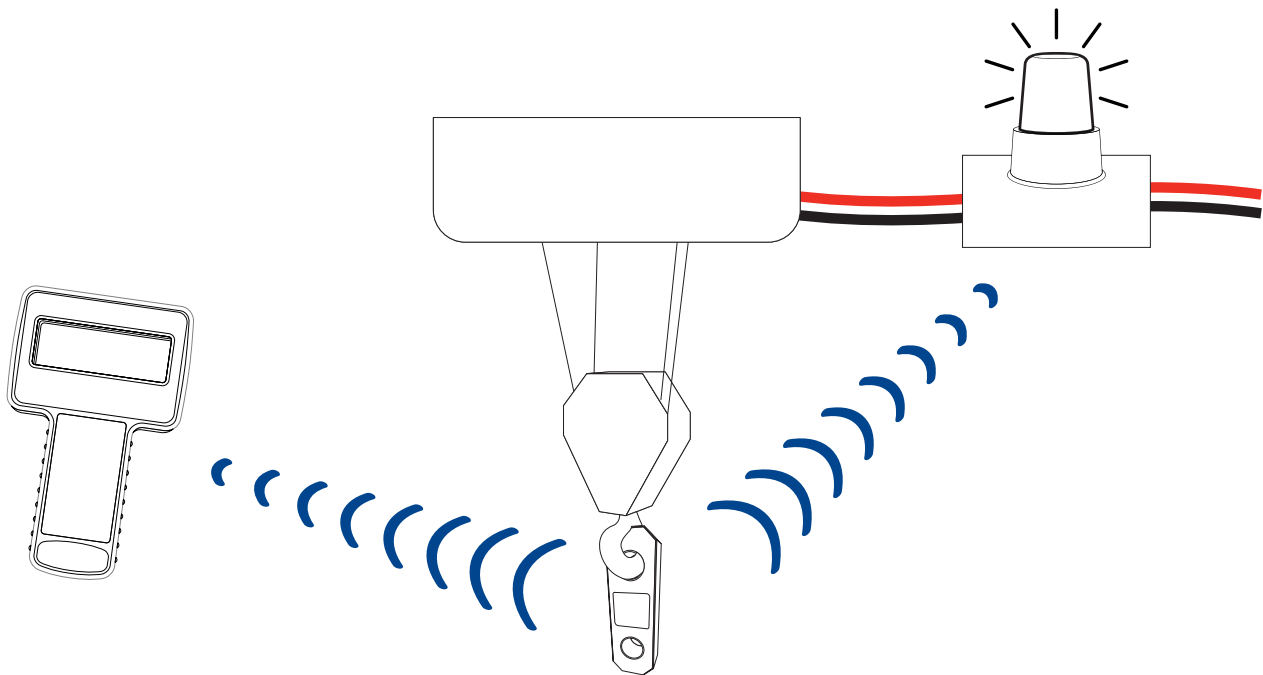
The SW-OAM is a wireless relay module featuring audio and visual warning indicators.

The unit's two set point alarms can be triggered from a single or summed group of up to eight Straightpoint wireless load cells. The SW-OAM is ideal as a wireless overload detection system.

Features and benefits:

- Spare relay contacts to allow connection to other device
- Audible and visual alarm
- Wireless connection to load cell
- Fully configurable
- Wide range for power supply input
- IP65/NEMA 4 Enclosure

Solution



Parameter	Minimum	Typical	Maximum	Units	Notes
Supply voltage range	9	12	32	Volts	
Operational current - no relays active	-	60mA		mA	At 12V supply TBC
Operational current - all relays active	-	80mA		mA	At 12V supply TBC
Operating temperature range	-10°C (14°F)	-	60°C (149°F)	°C (°F)	
Storage temperature range	-20°C (-4°F)	-	65°C (149°F)	°C (°F)	
5 amp relays	-	240V 5A			
Range	700m / 2300ft				

Proof Test plus

SP straightpoint Proof Test Plus core|rfid

Add / Select Reference Load Cell

S/N: Model: Calibration Date: Measurement: WLL:

SP straightpoint Proof Test Plus core|rfid

Search Customer

Add / Select Customer

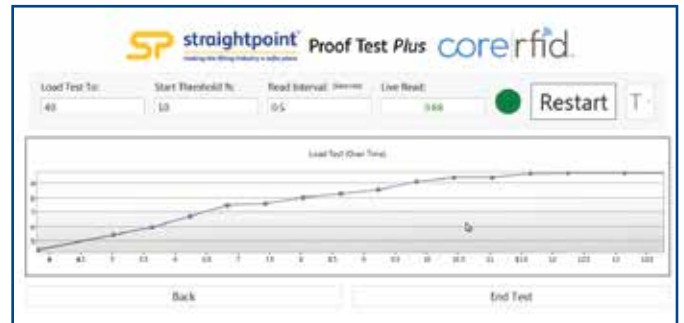
SP straightpoint Proof Test Plus core|rfid

Load Test Details

Product Desc: Serial #: WLL: Test Method:

Lishman LTM 40 A374GSH 40t Water bag

Notes:



SP straightpoint Proof Test Plus core|rfid

Is this acceptable? Max: 9.60

ACME CORPORATION

Acme Lifting
 New Street
 Block 1
 Hampshire
 UK
 PO20 8DA
 02392 470273
 www.acmelifting.com

Certificate of Load Test

Date of Test:	14 July 2016	Product Description:	Lishman LTM 40
Certification Number:	10005	Serial or Tag No:	A374GSH
Company:	Big Cranes Inc.	WLL:	40t
Address:	Unit 8-10, Express way, Camarillo, CA, 93012	Test Method:	Water bag
Tel:	805 234 3485	Load Test To:	40T
Contact:	Bob Friend	Duration of Test:	23.95 seconds
Reference Loadcell:	RP100T	Notes:	4mph north easterly wind
Serial Number:	R1034	Calibrated On:	8 August 2015
		WLL:	None

Peak Load: 9.09 T

This is to certify that the product described herein has been subjected to the load test.
 Caution: Never exceed the rated capacities.

Signed: Rob Burgess

Appointed Person: Rob Burgess ID: DA1234 LEEA Team cert 0007

Numerous load testing applications worldwide require a load cell to verify the load applied. From crane testing using water bags to pad eye testing using hydraulic tools, the need to document test procedure and results has never been greater as users of lifting equipment call for more traceability and audit trails.

A proof test is a form of stress test to demonstrate the fitness of a load-bearing structure and is nominally a non-destructive test. Such a structure is often subjected to loads above that expected in normal use, demonstrating safety and design margin.

This demand has increased such that Straightpoint now offer a new software package designed to connect to any of their wireless load cells - 'ProofTest plus'. This impressive package allows the test engineer to wirelessly, and at a safe distance, monitor a proof load test and automatically create a pass or fail certificate when testing is complete. This report in PDF format may then be printed, emailed or uploaded to the cloud, resulting in a traceable document for both test engineer and end customer.

Typical load tests using Straightpoint load cells include:

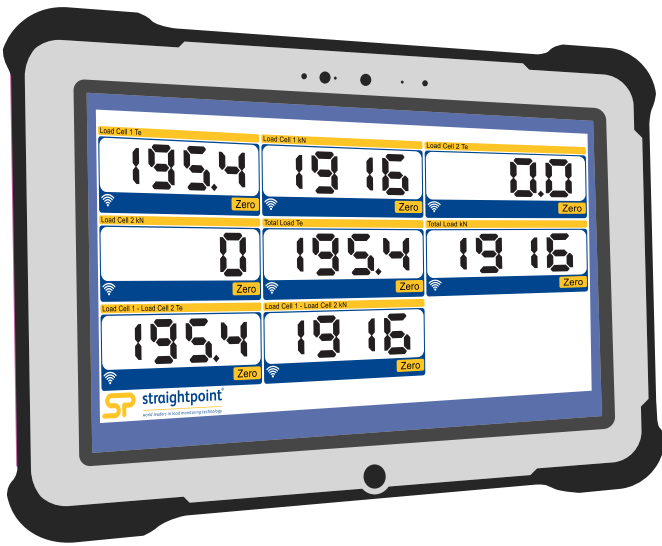
- Bollard pull tests
- Tug tests
- Crane Test (Water bags, block weights)
- Pad eye or fly point testing
- Crash barrier testing
- Lifting equipment testing - Slings, chains, wire rope, hooks
- Construction equipment testing - Shoring columns, acrow props and lintels
- Lifting and spreader beam testing
- Hydraulic cylinder load test

Features and benefits:

- 100% Wireless, no easily damaged cables
- 700m/2300ft range allows operator to stand at safe distance from test
- Log data at speeds up to 200Hz
- Connects to any Straightpoint wireless load cell
- Automatically creates digitally signed pass or fail certificate
- Real time load v time graph display
- Free entry fields to note wind speed, sea states etc.

Part Number	SW-PTP
IP rating (SW-USBBSE)	IP67 NEMA 6
Operating Temp	-20°C to 55°C -4°F to 131°F
Licence	Licence free
Frequency	2.4 GHz
Range	700 metres 2300 feet
Load Cell Inputs	1
PC Requirements	Intel i3 processor with 2GB RAM
Operating System	Windows XP, Vista, Windows 7, 8 or 10

SW-RWT *Rugged tablet*



Features and benefits:

- Light weight platform and ultra-mobility
- Hot-swappable Li-Ion Battery Pack
- Operating Environment
 - MIL-STD-810G Certified
- IP65 Rated protection from sand, dust and water
- Vivid Display in any Environment
- Windows 10 Enterprise LTSB (64-Bit)
- Standard I/O features – RS232, RJ45
- 2 USB Ports and a Micro SD slot

The SW-RWT tablet is the latest generation fully-rugged tablets. Featuring an array of integrated options, and a sleek, sophisticated design, the SW-RWT will change the way you look at tablets. With a MIL-STD-810G rating and Windows® 7 Pro, the SW-RWT can go from the boardroom to the work site without missing a beat.

Exceeding rugged standards

Refined by over a decade of real world customer feedback and experience in the rugged space, the SW-RWT is the most rugged tablet in its class.

Boasting a 5 foot drop rating, the SW-RWT's core construction features a lightweight magnesium alloy mid-frame in an ultra-portable form factor for the utmost rugged reliability.

Featuring MIL-STD-810G and IP65, the SW-RWT is engineered to protect critical lift data under the most demanding conditions.

For in the field critical lifts

Whether using the Straightpoint SW-MWLC multiple loadcell software or our ground breaking Centre of Gravity system the SW-RWT sets the standard for field mobility.

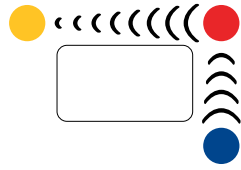
A full shift hot-swappable battery, lasting up to fourteen hours, maximizes time in the field and boosts productivity.

The brilliant outdoor viewable, multi-touch display allows seamless transition from indoor to outdoor use.

Supplied with carrying straps the SW-RWT is an ideal tablet for field applications running the Straightpoint suite of software solutions.

Size	275 mm x 171 mm x 32 mm (10.8" x 6.7" x 1.2")
Weight	1.3kg (2.9 lbs)
Processor	Intel® quad-core N2930 1.83 GHz Processor with 2.16 GHz boost.
Screen	10.1" (16:10) 1920x1200 resolution LED high-brightness MaxView™ Technology. 10 points projective capacitive touch. Ambient light sensor. Rain and glove mode.
Memory/Disk	4GB DDR3 RAM/128 GB SSD
Operating System	Windows 10 Enterprise LTSB (64-bit)
Data Security	TPM V1.2
Keyboard/Keypad	<ul style="list-style-type: none"> • Power key • Menu key • Touch Lock key • Windows Home key • 2 Programmable Hotkeys • On-screen QWERTY soft keyboard
Battery	Hot-swappable Li-Ion Battery Pack: Standard battery: 5300 mAh (39.22 Wh) Extended battery: 10600 mAh (78.44 Wh)
Connections	1 x USB 2.0 port* 1 x USB 3.0 port 1 x 9-pin serial RS-232 port* 1 x VGA* 1 x DC power port* 1 x RJ45 10/100/1000 LAN 1 x microSD Slot, SDXC 1 x Audio/Microphone *IP65 with open cover
Docking Connector	Contact Pin Type 1 x External GPS/GLONASS antenna input 1 x External GSM antenna input
Communication	Audio: Speaker / Digital Microphone / Headset jack PAN: Integrated BT v4.0 LE / v2.1 Cellular (WWAN): Sierra Wireless MC7304 / MC354 LTE HSPA+ GSM/GPRS Wireless LAN: 802.11ac a/b/g, n Dual Band 2.4/5GHz
Navigation	Integrated u-blox® NEO-M8N, GPS & GLONASS, WAAS/EGNOS/MSAS-capable
Camera	5 Megapixel Camera + LED flash
Environment	Operating: -20 °C to 60 °C (-4 °F to 140 °F) MIL-STD-810G, Method 501.5 Procedure II MIL-STD-810G, Method 502.5 Procedure II, III Storage: -40 °C to 70 °C (-40 °F to 158 °F) MIL-STD-810G, Method 501.5 Procedure I MIL-STD-810G, Method 502.5 Procedure I Drop: 26 drops from 1.22 m (4 ft) to concrete MIL-STD-810G, Method 516.6 Procedure IV Vibration: MIL-STD-810G, Method 514.6 Procedure I Sand & Dust: IP65, IEC60529 Water: IP65, IEC60529 Humidity: MIL-STD-810G, Method 507.5 Procedure II Altitude: 4572 m / 15,000 ft MIL-STD-810G, Method 500.5 Procedure I

SW-SB *Wireless signal booster*



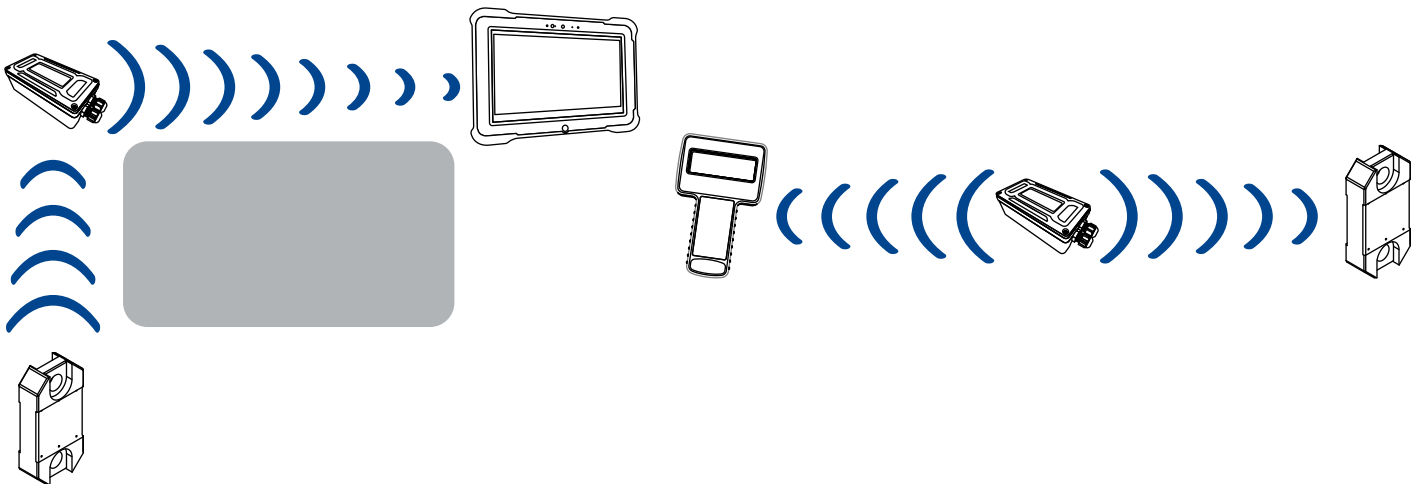
The SW-SB signal booster/repeater module is battery operated and easily pairs to any Straightpoint wireless device.

Within range, a load cell, accessories or software solutions can quickly increase coverage and extend range.

Features and benefits:

- Powered by standard 'D' cell alkaline batteries
- Long battery life
- 'Self learning' no programming required
- Double range of loadcell to manoeuvre RF around obstacles
- Wide range for power supply input
- IP65 / NEMA 4X Enclosure

Solution



Electrical	Minimum	Typical	Maximum	Units
Battery supply voltage	2.1	3.0	3.6	Vdc
External power supply voltage	5		18	Vdc

Environmental	Minimum	Typical	Maximum	Units
IP rating		IP65 / NEMA 4X		
Operating temperature	-40°C (-40°F)		+65°C (149°F)*	C
Storage temperature	-40°C (-40°F)		+65°C (149°F)	C
Humidity	0		95	% RH
Range		700m / 2300ft		

*Check operating temperature of cells intended for use.

SW-SD *Wireless scoreboard display*



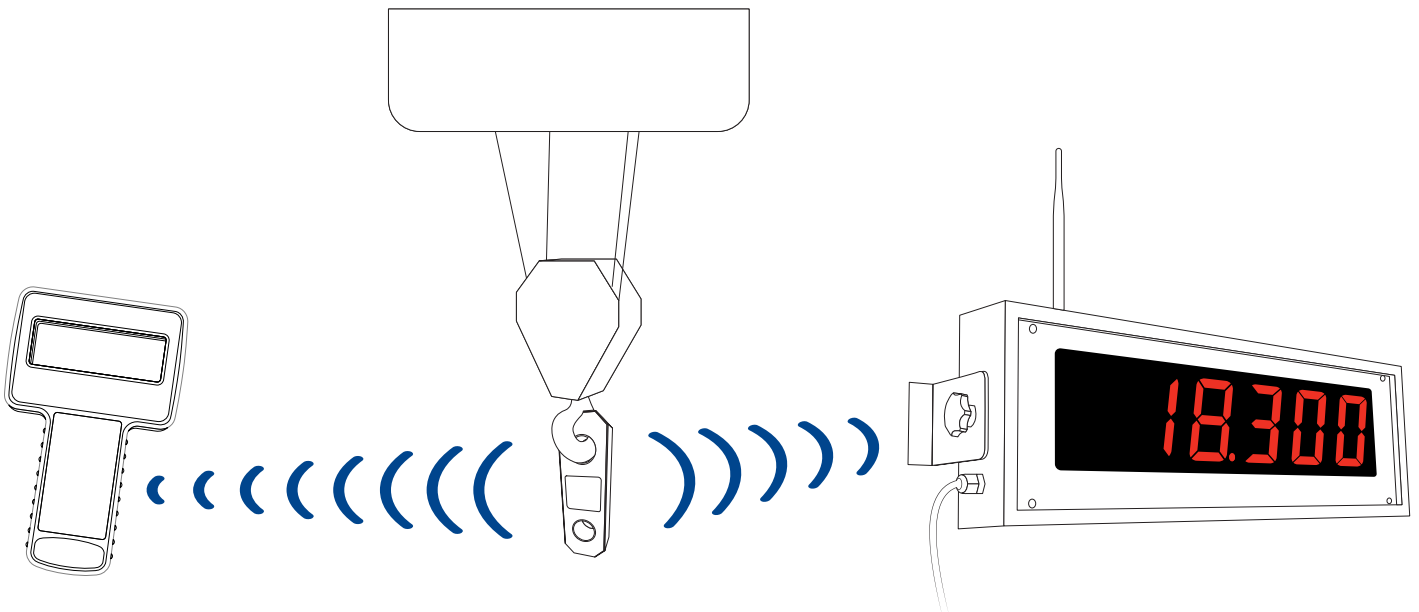
Features and benefits:

- Easy to read 100mm /4" LED display
- Rugged steel case
- Wall mount brackets supplied
- External antennae for maximum range
- Wide range for power supply input

This 100mm (4") scoreboard LED display is wireless and viewable for up to 45m/150ft.

Perfect for installation on a crane gantry, the unit operates on 110-240 VAC and displays an individual load or summed load for up to eight Straightpoint wireless devices.

Solution



Parameter	Minimum	Typical	Maximum	Units
External supply voltage range	110	240	250	Volts AC
Average operational current	-	1A	3.5A peak	mA
Operating temperature range	-20°C (-4°F)	-	65°C (149°F)	°C (°F)
Storage temperature range	-20°C (-4°F)	-	65°C (149°F)	°C (°F)
Range	700m / 2300ft			

SW-SO *Serial output ASCII string module*



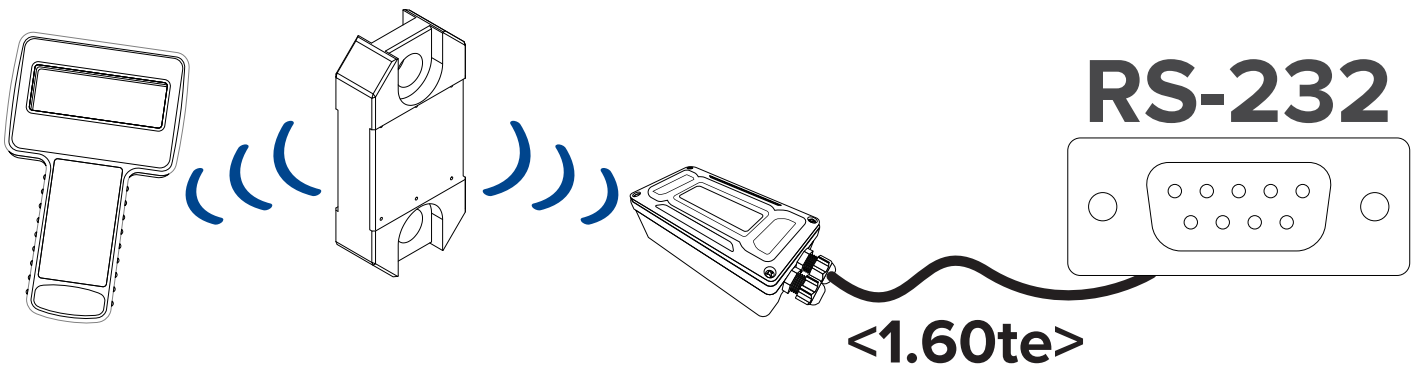
Ideal for integration to a PC, PLC or other device requiring a simple RS232 serial input.

This module allows for a user defined ASCII string which can include individual or summed data from up to eight Straightpoint wireless load cells.

Features and benefits:

- Sums up to 8 loadcells to digital output
- ASCII programmable using tokens
- RS232/RS485 output
- Fully configurable
- Wide range for power supply input
- IP65/NEMA 4 Enclosure

Solution



Parameter	Minimum	Typical	Maximum	Units	Notes
External Supply Voltage	9	12	32	Volts	
Average Operational	-	TBD	500	mA	
Operating Temperature	-40°C (-40°F)	-	65°C (149°F)	°C (°F)	
Storage Temperature	-40°C (-40°F)	-	65°C (149°F)	°C (°F)	
Reverse Polarity		-	-32	Volts	
Licence		Licence exempt			Maximum supply level
Modulation Method		MS (QPSK)			
Radio Type		Transceiver (2 way)			
Data Type		250		K bits/sec	
Radio Frequency	2.4000		2.4835	GHz	
Power		1		mw	
Range			700 (2300)	Metres (Feet)*	
Channels (DSSS)		16			

*Maximum range achieved in open field site at height of 3 metres (9.8 feet) above ground.