

Product Features & Benefits

- ⊞ License free 2.4GHz telemetry.
- ⊞ Ideal for single or multiple sensor systems.
- ⊞ Transmission range up to 800 m (2,600 ft).
- ⊞ Long battery life.
- ⊞ Modular system to fit specific requirements.
- ⊞ IP67 rated enclosures.
- ⊞ Software tools included.

Applications

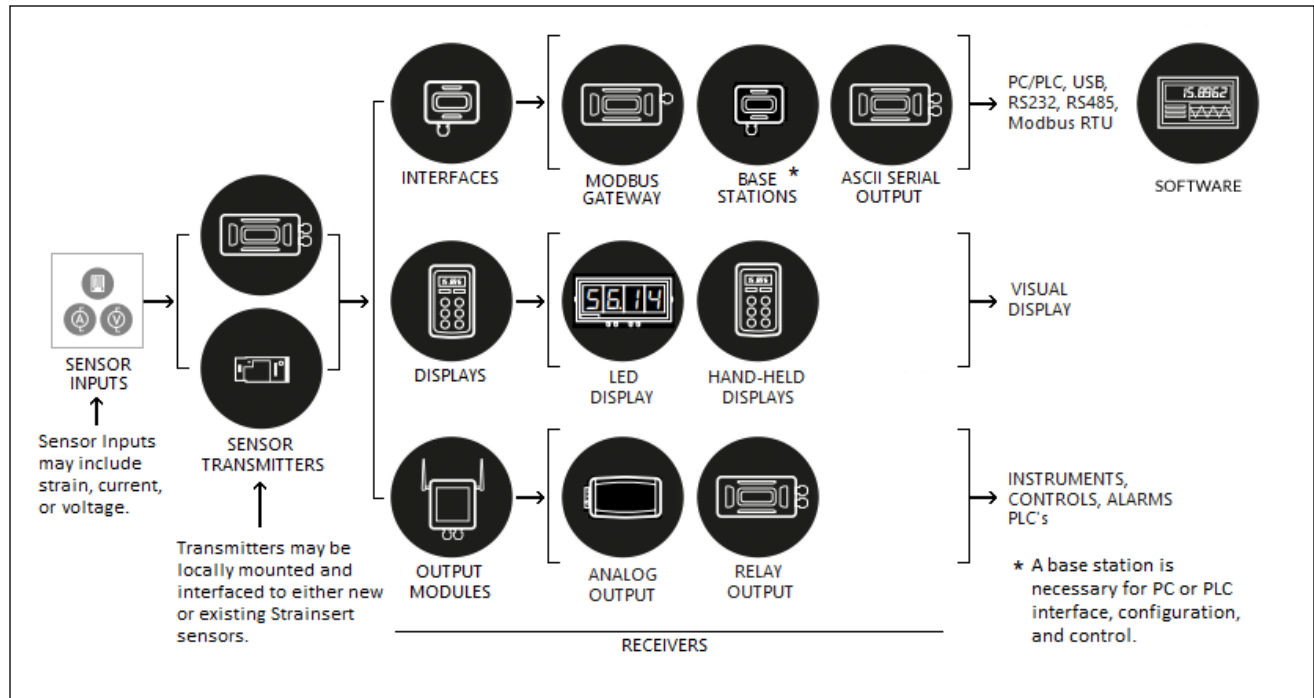
- ⊞ Aerospace
- ⊞ Industrial Weighing
- ⊞ Automotive
- ⊞ Construction
- ⊞ Energy

Description

The T24 Wireless Load Cell System product range provides high-performance wireless telemetry solutions aimed at Strainert sensor applications where wired installation may be difficult, cost prohibitive, or undesirable. The system provides long battery life along with high measurement accuracy, resolution, and stability. The system provides a means to either convert existing wired designs to wireless or for the development of new wireless system designs.

Software tools are included for quick and convenient interfacing with device configuration, calibration, datalogging, and recording.

Contact Strainert Engineering for system design assistance. Design options may include standard and/or custom components, systems integration, and software development.



General Specifications		Units
Temperature Range, Operating	-20 to 55 (-4 to 131)	°C (°F)
Temperature Range, Storage	-40 to 85 (-40 to 185)	
Humidity	0 to 95	%RH
Wireless Data transmission rate	250,000	bps
Wireless Data transmission interval	5, minimum (333 typical)	msec
RF Frequency Range	2.4000 - 2.4835	GHz
RF Transmit Power	10	mW
RF Channels (DSSS)	15	channels

T24 Wireless Transmitters

T24 Wireless Transmitter modules connect directly to a Straininsert sensor. They provide strain excitation, signal measurement, ADC conversion, and transmission of reading data to a T24 Wireless Receiver.



T24-ACMi

- Wireless range up to 800 m (2,600 ft).
- Internal batteries (2 AA Cells).
- 80 mm (3.1 in) x 62 mm (2.4 in) x 34 mm (1.3 in).
- Environmentally Rated, IP 67.



T24-ACM

- Wireless range up to 800 m (2,600 ft).
- Internal batteries (2 D Cells) or external power.
- 164 mm (6.5 in) x 84 mm (3.3 in) x 57 mm (2.2 in).
- Environmentally Rated, IP 67.

Transmitter Specifications		Units
Bridge Measurement	4-wire	
Bridge Excitation Voltage	4.5 to 5.25 (5 typical)	VDC
Bridge Resistance	85 to 5000 (350, typical)	Ohms
Bridge Sensitivity	-3 to 3 (2.5, typical)	mV/V
Stability with Temperature, Offset	1 to 4 (0.6 to 2.2)	ppm/°C (ppm/°F)
Stability with Temperature, Gain	3 to 5 (1.7 to 2.8)	
Stability with Time, Offset	80, maximum (20, typical)	ppm/F.R.
Stability with Time, Gain	30, maximum (first year)	
Non-Linearity before Linearization	25, maximum (5, typical)	ppm/F.R.
Internal Resolution	16 Million	counts / divisions
Noise Free where Sample Time < 10ms	50,000	
Noise Free where Sample Time < 50ms	65,000	
Noise Free where Sample Time < 100ms	150,000	
Noise Free where Sample Time < 1000ms	250,000	
Noise Free where Sample Time > 1000ms	400,000	
Standby/Low Power Mode	20, maximum (5, typical)	µA
Power Supply voltage	2.1 to 3.6 (3, recommended)	VDC
	5 to 18 (T24-ACM on optional external power)	
Power Supply ripple	50, maximum	mVAC PK-to-PK
Power Supply current	65, maximum (60, typical max. with 1000 Ohm Bridge)	mA
Battery Life expectancy, 2 AA cells (Low power mode. 3 Hz transmission rate. 350 Ohm Bridge.)	3 (Constantly on)	weeks
	2 (12 sessions/day at 5 minutes per session)	years
Battery Life expectancy, 2 D cells (Low power mode. 3 Hz transmission rate. 350 Ohm Bridge.)	3.5 (Constantly on)	months
	5 (12 sessions/day at 5 minutes per session)	years

T24 Wireless Base Stations

A Base Station is necessary for PC or PLC interface, configuration, and control. It facilitates automated data capture of T24 Transmitter module readings. The T24 Toolkit PC software is included with the wireless system.



T24-BSi

- Wireless range up to 800 m (2,600 ft).
- USB powered or External power, 9-32 V.
- USB, RS232, & RS485 outputs.
- 164 mm (6.5 in) x 84 mm (3.3 in) x 57 mm (2.2 in).
- Environmentally Rated, IP 67.



T24-BSue

- Wireless range up to 800 m (2,600 ft).
- USB powered.
- USB output.
- 80 mm (3.1 in) x 62 mm (2.4 in) x 34 mm (1.3 in).
- Environmentally Rated, IP 67.



T24-BSu

- Wireless range up to 500 m (1,600 ft).
- USB powered.
- USB output.
- 76 mm (3.0 in) x 35 mm (1.4 in) x 20 mm (0.8 in).
- Environmentally Rated, IP 50.



T24-BSd

- Wireless range up to 500 m (1,600 ft).
- USB powered.
- USB output.
- 58 mm (2.3 in) x 20.5 mm (0.8 in) x 11 mm (0.4 in).

T24 Wireless ASCII Serial Output



T24-SO

- Wireless range up to 800 m (2,600 ft).
- USB powered or External power, 9-32 V.
- RS232 & RS485 outputs.
- Outputs a user defined ASCII.
- Optional summing for up to 8 transmitters.
- 164 mm (6.5 in) x 84 mm (3.3 in) x 57 mm (2.2 in).
- Environmentally Rated, IP 67.

T24 Wireless Range Extender



T24-AR

- Extends wireless range up to 1,600 m (5,200 ft) or to pass signal around obstructions.
- Internal battery (2 D cells) or external power supply (5 to 18 VDC). If internal batteries are fitted when external power is applied, the batteries will be utilized if external power is lost.
- 164 mm (6.5 in) x 84 mm (3.3 in) x 57 mm (2.2 in).
- Environmentally Rated, IP 67.

T24 Wireless Modbus Gateway



T24-GW1

- Wireless range up to 800 m (2,600 ft).
- Serial data for up to 100 transmitter modules.
- Modbus RTU or ASCII protocol.
- External power, 9-32 V. Current, 100 mA (typical).
- 164 mm (6.5 in) x 84 mm (3.3 in) x 57 mm (2.2 in).
- Environmentally Rated, IP 67.

T24 Wireless Relay Output



T24-RM1

- Wireless range up to 800 m (2,600 ft).
- Accepts up to 16 inputs from T24 wireless transmitters and triggers a range of selectable output actions.
- 2 x 240 VAC, 5A relay modules for control and alarms.
- External power, 9-32 V. Current, 100 mA (typical).
- 164 mm (6.5 in) x 84 mm (3.3 in) x 57 mm (2.2 in).
- Environmentally Rated, IP 67.

T24 Wireless Receiver with Analog Output



T24-AO1i

- Wireless range up to 800 m (2,600 ft).
- Analog output of 0-10 V, 0-5 V, 4-20 mA, 0-20 mA, ± 10 V, ± 5 V. Output may be measured by an analog input instrument.
- Output updated 2,000 times per second.
- External power, 9 – 32 VDC, 100 mA (typical).
- 164 mm (6.5 in) x 84 mm (3.3 in) x 57 mm (2.2 in).
- Environmentally Rated, IP 67.

T24 Wireless Handheld Receivers

Handheld receivers provide a convenient way to connect to T24 transmitters in a rugged IP67 rated enclosure. They can automatically 'power on' and 'power off' T24 transmitters. Power is provided by 2 AA batteries that can last up to 40 hours of use. Wireless range up to 800 m (2,600 ft).



T24-HS

Wireless Portable Display for Single Wireless Transmitter

- The T24-HS provides a point to point connection to a single transmitter. Two key operation offering tare functionality.



T24-HR & HA

Wireless Portable Display for Multiple Wireless Transmitters

- The T24-HR is a roaming handheld which allows the operator to individually cycle the display between all available transmitter modules.
- The T24-HA receives up to 12 wireless transmitters and provides either a summed total from all selected transmitters or can individually cycle the display for each of the selected transmitters.



T24 Wireless Large LED Display



T24-LD1

- *Wireless range up to 800 m (2,600 ft).*
- *Large screen with four-digit, 100 mm (4") LED display.*
- *Display individual T24 transmitter values or the summed value of up to eight modules.*
- *External power, 10-30 VDC. Current, 3.5 A (typical).*
- *435 mm (17.1 in) x 195 mm (7.7 in) x 77 mm (3.0 in).*
- *Environmentally Rated, IP 65.*