SRO Technology Ramsey Flex Belt Scale Integration Solution

Adaptable, functional, and dependable belt scale integration solution.

RAMSEY

by **SRO TECHNOLOGY**

One innovative, flexible integrator, a world of belt scale weighing solutions

The SRO Technology Ramsey Flex belt scale integration solution drives weighing systems that you can depend on. Systems that will work reliably for decades, weighing materials with accuracy, every day.

Seamlessly integrating all SRO Technology bulk weighing and monitoring belt scale equipment, the Ramsey Flex integrator enables solutions that deliver value with features such as remote diagnostics, future-proof connectivity, and the ability to connect many systems through a single integrator device.

Operators will welcome the intuitive touchscreen HMI (Human Machine Interface). Maintenance teams will appreciate the enhanced diagnostics and health monitoring, and remote support capabilities.

The solution is adaptable for all operating environments. From a single belt scale to a plant weighing network. For at-line monitoring and operation, to a centralized control room or remote management. Wherever you are based. The Ramsey Flex system delivers the flexibility and scalability you need.

Introducing the Ramsey Flex solution

Being well-established in the market, Ramsey integrators are trusted by companies across the world and prized for their reliability. Designed from the ground up the Ramsey Flex system offers all the performance and functionality required for industrial belt scale operation, control, and proactive maintenance.

Incorporate single or quad digitizers, for a robust signal and the opportunity for individual load cell monitoring.

All the elements of the Ramsey Flex integrator are off-the-shelf, easing specification and de-risking procurement. But, in combination with our comprehensive belt scale range they allow you to create unique, customized solutions.

Our global network of technical experts have the knowledge and experience to guide you from specification, through commissioning to efficient day-to-day operation.

Choose between three versions of the Ramsey Flex integrator:

Panel mount with touchscreen HMI
for centralized operation from a control room

Field mount with touchscreen HMI
for at-line interaction

Blind without HMI
for a cost-efficient set-up for remote access or harsh environments

At a glance

- Large, capacitive touch screen HMI offering simple, intuitive interaction. Easy access to information and the facility to switch rapidly between functions.

- Compatible with most types of belt scale, for new build or retrofit.

- Multiple options for cost-efficiency:

  – Use a low-cost blind integrator – in field or control room - where HMI is not required

  – Share any of the integrators across two belt scales.

- Flexible Industry 4.0 connectivity. Communicates with most information management architectures, including MODBUS and PROFIBUS, via centralized control room or remote access.

- Multi-language display. Simplify training and use, with many languages available in total, including Arabic, Brazilian Portuguese and Simplified Chinese.

- Designed for longevity – robust stainless-steel construction and advanced health monitoring including options for individual load cell monitoring and multi-cell balancing.

- Accessible via networked PC, mobile device or tablet.

Combine the adaptability of the Ramsey Flex solution with our versatile range of trusted belt scales to optimize your weighing accuracy and performance

Establish an optimal weighing system for your bulk material handling requirements

Ramsey Flex Solution: How does it work?

Ramsey Flex integrators and digitizers convert the signal from a belt scale into usable information.

Belt scales have a speed sensor and a weighing carriage with one or more load cells that deflect in response to the weight of material on the belt. The digitizer accepts signals from the speed sensor and the load cells and transmits them to the integrator. The integrator computes belt loading, material flow rate, and accumulated tonnage from these signals, providing critical information for plant management, blending operations and inventory control.

Each integrator operates with one or two digitizers i.e. one or two scales, providing digitizer power supply, communication, computation and the HMI. Outputs from the integrator are user-configurable and may be digital, analogue, or connected to a centralized control system via supported industrial protocols.

Single Digitizer

Digitizers are the optimal solution for signal transmission from the belt scale to the integrator.

Choose from the Single Channel option with connections for a speed sensor and one load cell/ load cell pair or the Quad Channel alternative which accommodates up to four load cells/load cell pairs.

Quad Digitizer

Ramsey Flex Integrator:
Locate near the scale, or up to 1000 m away, whichever is more convenient for you.

Ramsey Flex Digitizer:
Best located at the scale so the load cells are wired directly into the digitizer. Can replace the junction box in a retrofit.

Choosing the right belt scale

We are one of the world's leading suppliers of belt scales with a range that delivers exemplary reliability and versatility. Combine the Ramsey Flex integration solution with any of these belt scales to source an optimal solution, from a single supplier.
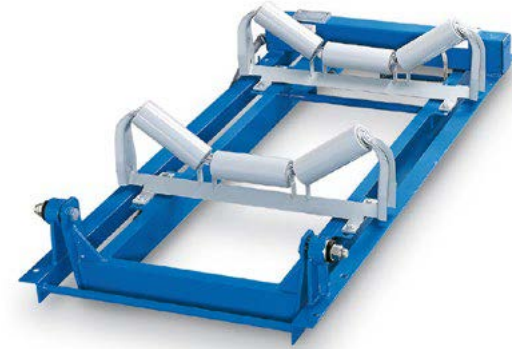
SRO Technology Ramsey IDEA belt scale
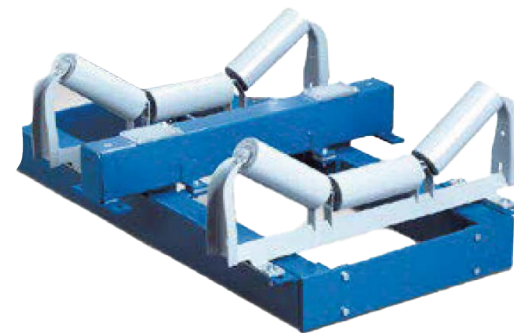A compact, cost-effective scale for low value materials/ non-critical applications. Accuracy +/-1%

SRO Technology Ramsey Series 17 belt scale
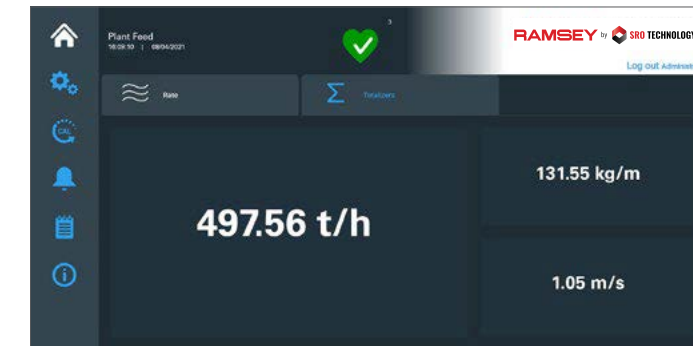A multi-idler scale for plants and processes that run at high speed or require high accuracy. Accuracy +/-0.25%

SRO Technology Ramsey Series 20 belt scale
A robust scale for general in-plant use including feed monitoring to crushers, mills, and screens. Accuracy +/-0.5%

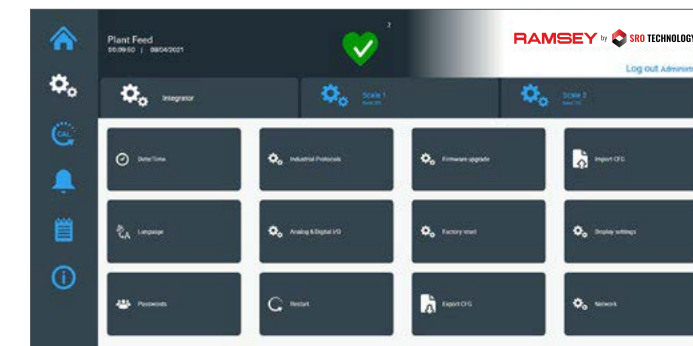**SRO Technology Ramsey Series 14 belt scale**
A top-of-the-range scale that sets the global standard for accuracy and performance for loadout, inventory monitoring and basis-of-payment applications. Accuracy +/-0.125%
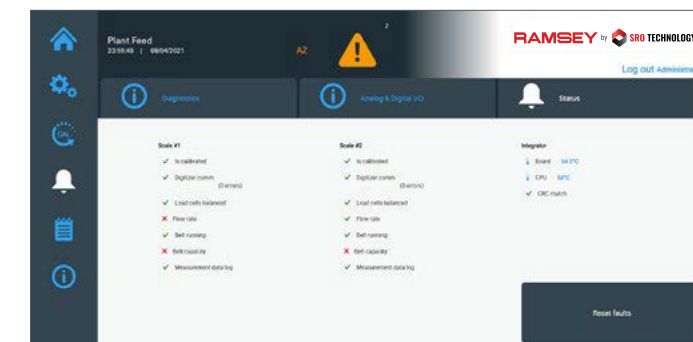
Interface

A large touchscreen, well-thought out workflows, and clean presentation makes the Ramsey Flex solution a joy to use. Vital information is presented clearly on the home page for routine checks and processes. Advanced procedures, including an array of health diagnostics, are just a couple of taps away.
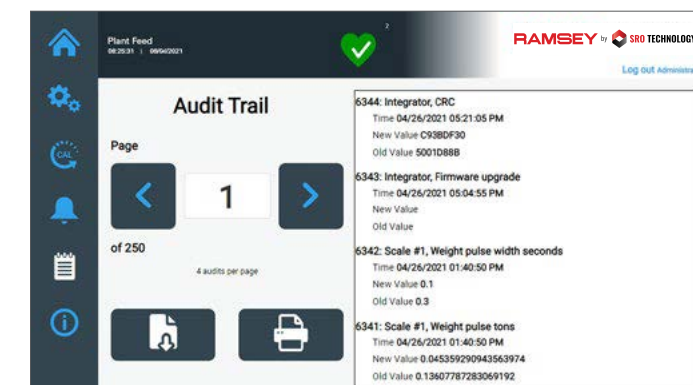
Click to zoom in the screens!

The Ramsey Flex HMI home screen is easy to read and navigate, showing live readings in your chosen units of measure. In this example it shows tonnes per hour on the main display, and on the right side it shows kg per metre and belt speed in metres per second. At the top, the scale name and a high level health status symbol are shown.

The Ramsey Flex scale configuration screen allows you to quickly and easily set up the system. The installation wizard will prompt for carriage parameters which can be entered using a scale code or manually, using one or two scales, accessing the system via the HMI or remotely. You can also set up language, load cell configuration, the number of digitizer channels, industrial protocol and more.

The Ramsey Flex status screen is a quick dashboard of the system performance for up to two scales depending on the application. Status indicators include correct communication with digitizer, if load cells are properly balanced and more. Green checks indicate proper functioning while red checks or yellow warning symbol indicate something might be out of range.

The Ramsey Flex audit trail allows you to download data from the HMI to USB at the integrator or to your local PC when accessing remotely.
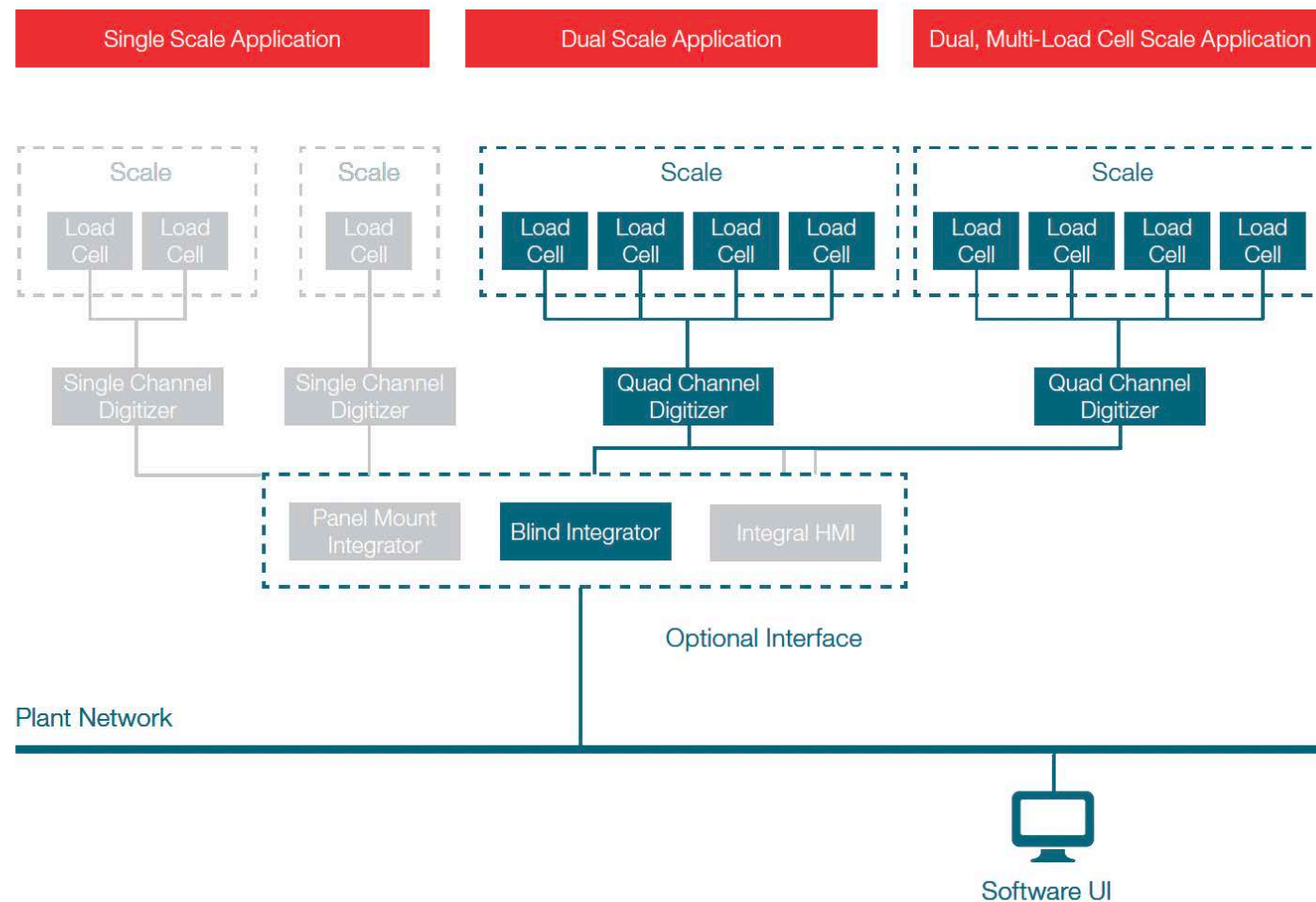
Building an optimal network

These examples show how to harness the performance and capabilities of the Ramsey Flex solution to meet specific goals for your new build project.

For retrofits and upgrades the Ramsey Flex system is just as valuable. Switch up from junction boxes to digitizers to improve signal quality and reliability.

Ramsey Flex solutions are easy to specify and readily upgrade. Upgrade your communications to allow reliable, information-rich remote monitoring, away from site.

Whatever the motivation for your belt scale project the Ramsey Flex integration solution can help to realize your goals.

Click on the Scale Application that you are interested in:

Single Scale Application

Dual Scale Application

Dual, Multi-Load Cell Scale Application

Optional Interface

Plant Network

Software UI

Dual, Multi-Load Cell Scale Application

- Two scale weighbridges with multiple load cells
- (2) Ramsey Flex Quad Digitizers
- (1) Ramsey Flex Blind Field Mount Integrator
- Monitor and control via web-based user interface through plant network

Features and Benefits:

- Independent load cell troubleshooting for all eight load cells using quad digitizers
- Cost savings using one integrator for two scales
- Monitor and control from network PC or tablet
- Selectable integrator, options include Field Mount HMI, Field Mount Blind or Panel Mount
- Each scale requires a speed sensor

More than a product: Expert support, when and where you need it

Work with engineers that speak your language

For core equipment, relevant, reliable, and responsive service is crucial.

We are a global company with knowledgeable colleagues and authorised distributors on every continent. Our size, expertise and longevity mean low risk for customers. We understand the criticality of conveying and weighing equipment and we provide premium, customized, around-the-clock support to safeguard operation. Response times are guaranteed in line with your budget.

Wherever you are based, we're local. Whether you are a project engineer or an instrument specialist we provide the technical detail you need when you need it. Whether you are preparing to invest in new plant, or looking to enhance maintenance, we have troubleshooting, and repair programs to maximize the profitability of an aging asset. From equipment specification to trouble-free daily operation.

Clarity on costs. Peace of mind. Maximum flexibility. Minimum downtime.

These are the hallmarks of our support and service, and they ensure long-term, trouble-free operation for critical equipment.

Find out more at
srotechnology.com/ramsey-flex-belt-scale

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