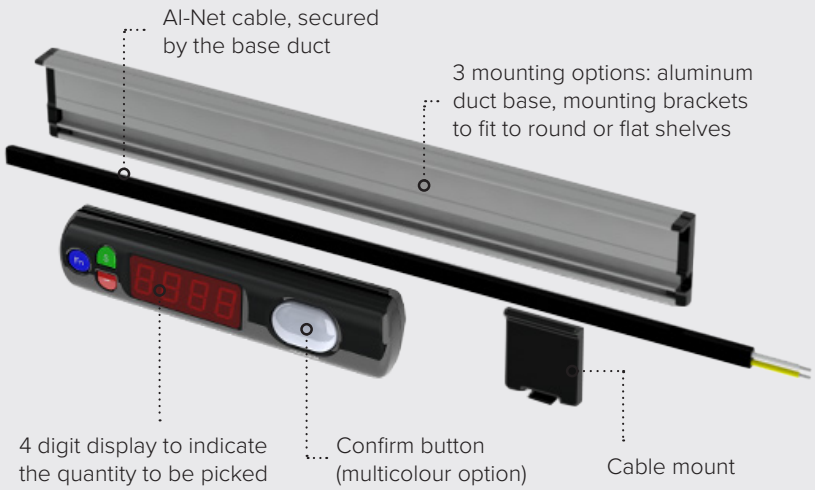
PICK–TO–LIGHT

Light–directed picking technology

Pick-to-Light is a system where operators are prompted by light illumination to pick the appropriate parts for an assembly process. It aids rapid and precise selection of parts in dynamic pick situations and is commonly used within warehouses and is increasingly being used on production assembly lines for the purpose of “kitting”.



FEATURES

Easy to mount and reconfigure

Ergonomic and robust light modules

Integration with guided assembly systems and assembly jigs

Scalable and flexible

BENEFITS

Increased productivity
Reduced learning curve

Improved assembly quality
Error reduction

Easy mounting
Flexibility and speed

APPLICATIONS

Kitting stations

Sub-assembly stations

Production lines

Pick-to-Light allows for integration with guided assembly systems and assembly jigs to help improve production efficiency through a system of visual and intuitive work, **ensuring the quality and accuracy of assembly operations**.

The system helps to **reduce material handling and processing times** and provides full flexibility to adapt to constant changes in production systems.

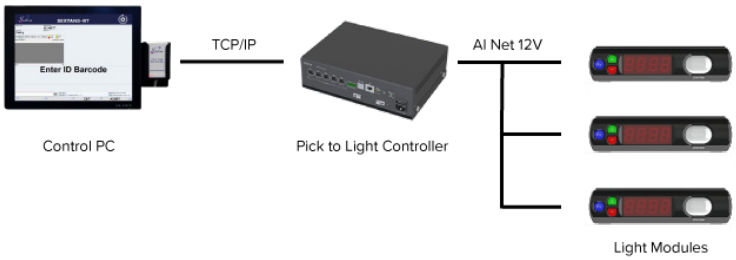
ARCHITECTURE

The pick-to-light system uses a Sextans PC to communicate with the pick-to-light controller using a TCP protocol via an Ethernet connection.

Two versions of the pick to light controller are available:

- A basic unit is capable of controlling up to 50 modules
- Larger controllers are also available that can control up to 250 modules over 5 runs of AI-Net; via RS485 connected junction boxes a total of 7999 modules can be controlled from a single Ethernet connection

AI-Net provides both power and communications to the modules in runs of twin core flat form cable held within a unique aluminium extrusion that also locates the pick to light modules.



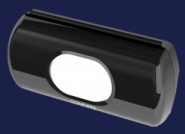
Each light module is assigned a unique address via the issue of an address assignment command whilst the confirm button on the target module is being held. This quick and simple mechanism allows for **rapid reconfiguration** and/or module swap-out should there be the need.

The confirmation button on the modules is available in a seven colour option. This opens up a variety of additional process quality improvements by using different light colour assignments.

MODULES

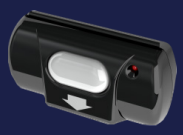
Non-Digit

This is the simplest module used where there will only ever be one part picked per cycle.



Non-Digit + Sensor

As above but also including sensor (within 15cm)



Digit

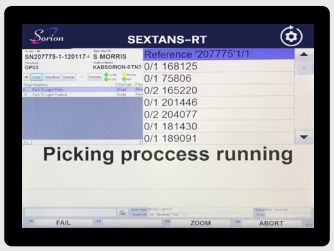
Buzzer
4 digit display

Digit + Sensor

Buzzer
Sensor
4 digit display

PROCESS

Sorion's **Sextans software controls the process cycle** which usually commences by scanning a Key ID barcode. A build variant is then derived and the correct picking sequence is delivered via the light modules.



A barcode scanner can also be used to confirm / record the validity of the picked parts via part number / serial number scan.

Once all parts have been picked and the process is complete (or if the process has been aborted) the **outcome of each process is logged via Sextans** which generates results against a Key ID within Sorion's Orion™ database which can be viewed via a web browser.

SOFTWARE

Driven by Sorion's pick-to-light control engine, the system interfaces with the core Sextans-RT software, allowing easy configuration.

This enables full integration with a guided assembly system, with assembly jigs and fixtures and web-based Orion traceability and reporting.

Sorion's software informs and records the part reference, which bin the part is in, the quantities that need picking for each build variant and a part description.

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