atop Technologies

Pick-to-Light System

Cableless Products

- TCP/IP architecture
- Streamline the order fulfillment process
- Increase productivity dramatically
- Virtually eliminate picking error
- Strengthen management control

ABLEPick

www.atop.com.tw
www.ablepick.com

Pick-to-Light System

Cableless Products

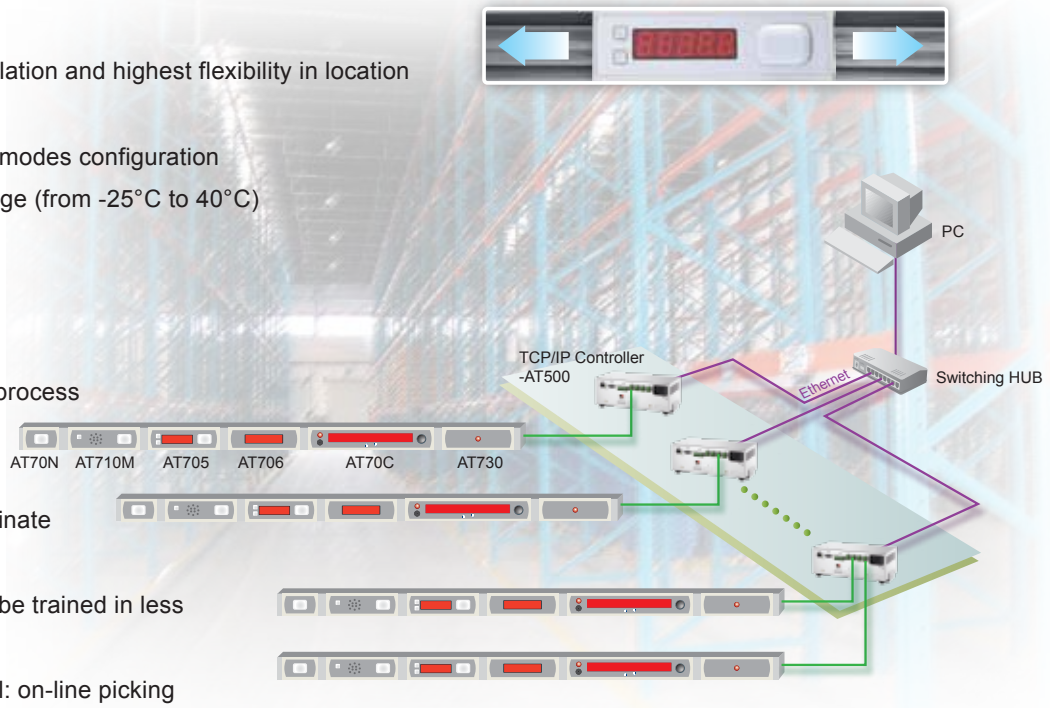
Atop has been devoted to develop Pick-to-light products for more than 20 years. Pick-to-Light System is an advanced paperless picking system providing an innovative, streamlined and cost-effective solution to simplify the order fulfillment process in warehouses or distribution centers. Atop's Pick-to-Light System uses a state-of-the-art and light-directed technology to maximize the picking productivity, speed and accuracy in different picking operation

Features

- Ethernet architecture
- Cableless design for easy installation and highest flexibility in location arrangement on shelf.
- Versatility in different operating modes configuration
- Wide operating temperature range (from -25°C to 40°C)
- Certification : EMI, CE, FCC

Benefits

- Paperless picking process
- Streamline the order fulfillment process
- Increase picking productivity dramatically
- Accuracy assured: virtually eliminate picking error, below 0.1%
- Easy to use: picker can usually be trained in less than 1/2 hour
- Strengthen management control: on-line picking data control, easy to prompt the material shortage



Picking Strategy

Pick-to-Light System

When Pick-to-Light System is applied to the order picking environment, it enables an order picker to quickly and easily find the correct location by means of lights and LED displays. Each tag represents a product in the storage location. Besides guiding the picker to the exact location, the lights also display the precise amount ordered and requires confirmation while each item is picked.

Put-to-Light System

Put-to-Light System usually applies to the batch picking environment. It functions as Pick-to-Light in reverse. Once the items for the orders are batch picked in the warehouse and brought the Put-to-Light System. The picker will scan/input an item and all the locations that need that item will illuminate. The picker will distribute the item to each location and turn off the light.

TCP/IP Controller

TCP/IP controller is a data transmission medium between a picking control PC and all the pick-to-light devices. Which is Ethernet architecture product, following TCP/IP communication protocol to communicate with the host PC.

AT500 has 4 output channels to connect to the picking devices, each channel can connect to a maximum 30 light modules. AT500 can connect to maximum 120 pcs of picking devices.

AT500 TCP/IP Controller

- A maximum of 120 light module (AT505) units can be connected
- 10/100Mbps Ethernet TCP/IP protocol
- Power requirements: 12V DC / 250mA
- Size: 250mm(L) x 130mm(W) x 100mm(H)
- Operating temperature: 0°C ~ 50°C

AT400 is a compact TCP/IP controller , which has only one output channel, connected capacity up to 30 light modules.

AT400 can be powered by two ways, one is using the standard power adapter with a specific DC jack DC 12V/5A/ 60W. The other way is powered by external power supply or battery with DC 12V via the 3-pin terminal block. AT400 can be considered to be the pick-to-light controller applied to a mobile system.

AT400 TCP/IP Controller

- Maximum connected to 30 lights
- 100 Mbps Ethernet TCP/IP protocol
- Power requirement, 12V DC / 5A
- Size: 108mm(L) x 132mm(W) x 33mm(H)
- Operating temperature: 0°C ~ 50°C

AT700 Series

With our strong engineering capability, we have been moving our Pick-to-light into the latest generation with :

- Large illuminated button with 6-color LED lights, very bright and easy to locate
- Low power consumption allows for 'green' operation
- Robust and reliable button, rated for over 20 million button presses

These superior features make Atop's pick-to-light products the prime choice in automated order fulfillment solutions.

AT705(L) 5-Digit Pick Tag

- 5-digit display
- 1 illuminated confirmation button with 6-colors (Red, Green, Orange, Blue, Pink, Cyan)
- 2 up/down function keys
- Power requirements: 12V DC / 100mA
- Size: 148mm(L) x 46mm(W) x 30mm(H)
- Operating temperature: 0°C ~ 40°C (Forzen Model: -25°C ~ 40°C)

AT705A 5-Digit Directional Pick Tag

- 5-digit display
- 1 illuminated confirmation button with 6-colors (Red, Green, Orange, Blue, Pink, Cyan)
- 2 directional illuminated arrow buttons, up arrow is red, down arrow is green
- Power requirements: 12V DC / 100mA
- Size: 200mm(L) x 46mm(W) x 30mm(H)
- Operating temperature: 0°C ~ 40°C

AT705-E 5-digit Alphanumerical Display

- 1 illuminated confirmation button with 6-color LED (Red,Green,Orange, Blue, Pink, Cyan)
- 2 up/down function keys
- Power requirements: 12V DC / 100mA
- Size: Size: 148mm(L) x 46mm(W) x 30mm(H)

AT705-RFID 5-digit, Pick Tag with RFID Confirmation

- 5-digit display
- 1 illuminated confirmation button with 6-colors (Red, Green , Orange, Blue, Pink, Cyan)
- RFID reader
- 2 up/down function keys + one function key
- Power requirements: 12V DC / 100mA
- Size: 200mm(L) x 46mm(W) x 30mm(H)

AT703(L) 3-Digit Pick Tag

- 3-digit display
- 1 illuminated confirmation button with 6-colors (Red, Green, Orange, Blue, Pink, Cyan)
- 2 up/down function keys
- Power requirements: 12V DC / 100mA
- Size: 148mm(L) x 46mm(W) x 30mm(H)

AT703A 3-Digit Directional Pick tag

- 3-digit display
- 1 illuminated confirmation button with 6-colors (Red, Green, Orange, Blue, Pink, Cyan)
- 2 directional illuminated arrow buttons, up arrow is red, down arrow is green
- Power requirements: 12V DC / 100mA
- Size: 148mm(L) x 46mm(W) x 30mm(H)

AT702(L) 2-Digit Pick Tag

- 2-digit display
- 1 illuminated confirmation button with 6-colors (Red, Green, Orange, Blue, Pink, Cyan)
- 2 up/down function keys
- Power requirements: 12V DC / 100mA
- Size: 100mm(L) x 46mm(W) x 30mm(H)

AT702V 2-Digit,Vertical & Directional Pick Tag

- Vertical pick tags
- 2-digit display, 1 illuminated confirmation button with 6-colors (Red, Green, Orange, Blue, Pink, Cyan
- 2 directional illuminated arrow buttons, right arrow is red, left arrow is green
- Power requirements: 12V DC / 100mA
- Size: 46mm(L) x 100mm(W) x 30mm(H)

AT70N(L) Economic Pick Tag

- 1 illuminated confirmation button with 6-colors (Red, Green, Orange, Blue, Pink, Cyan)
- Power requirements: 12V DC / 100mA
- Size: 74mm(L) x 46mm(W) x 30mm(H)

AT710M Melody Completion Indicator

- 1 illuminated confirmation button with 6-colors (Red, Green, Orange, Blue, Pink, Cyan)
- 12 melody songs choosing
- Power requirements: 12V DC / 100mA
- Size: 148mm(L) x 46mm(W) x 30mm(H)

AT70D LCD Display

- 192*32 LCD display, display 2 lines of 24 alphanumerical characters
- Display language: Alphanumerical/Traditional Chinese/Simplified Chinese/Japanese /Korean
- Power requirements: 12V DC / 200mA
- Size: 200mm(L) x 46mm(W) x 30mm(H)

AT70C(L) 12-Digit Alphanumerical Display

- 1 confirmation button + 2 function keys
- LED indicator + buzzer
- Power requirements: 12V DC / 250mA
- Size: 260mm(L) x 46mm(W) x 30mm(H)

AT706-24-3K 6-Digit, 2 Color Display Pick Tag

- 6-digit , 2-color 7-segment display by 2 digits with Green, 4 digits with Red
- 1 illuminated confirmation button with 6-colors (Red, Green , Orange, Blue, Pink, Cyan)
- 2 up/down function keys + 1 function key
- Power requirements: 12V DC / 100mA
- Size: 200mm(L) x 46mm(W) x 30mm(H)

AT706(L) 6-Digit Order Display

- Power requirements: 12V DC / 100mA
- Size: 148mm(L) x 46mm(W) x 30mm(H)

AT706E 6-digit Alphanumerical Display

- Power requirements: 12V DC / 100mA
- Size: Size: 148mm(L) x 46mm(W) x 30mm(H)

AT708 8-Digit Pick Tag

- 8-digit display
- 1 illuminated confirmation button with 6-colors (Red, Green, Orange, Blue, Pink, Cyan)
- 2 up/down function keys
- Power requirements: 12V DC / 100mA
- Size: 200mm(L) x 46mm(W) x 30mm(H)

AT708-E(L) 8-digit alphanumerical display

- 1 illuminated confirmation button with 6-color LED (Red,Green,Orange, Blue, Pink, Cyan)
- 2 up/down function keys
- Power requirements: 12V DC / 100mA
- Size: 200mm(L) x 46mm(W) x 30mm(H)

AT730(L) RS232 Converter

- 1 LED signal indicator
- Power requirements: DC5V/12V, Max: 200mA
- Output 12V, 200mA current on pin 1
- Size: 148mm(L) x 46mm(W) x 30mm(H)

AT712 DI/DO Interface

- 1 illuminated confirmation button with 6-colors (Red, Green , Orange, Blue, Pink, Cyan)
- 1 Digit Output with SSR output
- 1 Digit Input

AT500 Series

AT505(L) 5-Digit Pick Tag

- 5-digit display
- 1 confirmation button + 2 function keys
- 3-colored LED Indicator: Red, Green, and Orange can be selected by software
- Power requirements: 12V DC / 200mA
- Size: 148mm(L) x 46mm(W) x 30mm(H)

AT504A 4-Digit Directional Pick Tag

- 4-digit display
- 1 confirmation button + 2 function keys
- 3-colored LED Indicator: Red, Green, and Orange can be selected by software
- 2 directional arrows, up arrow is red, down arrow is green
- Power requirements: 12V DC / 200mA
- Size: 148mm(L) x 46mm(W) x 30mm(H)

AT503A 3-Digit Directional Pick Tag

- 3-digit display
- 1 confirmation button + 2 function keys
- 3-colored LED Indicator: Red, Green, and Orange can be selected by software
- 2 directional arrows, up arrow is red, down arrow is green
- Power requirements: 12V DC / 200mA
- Size: 148mm(L) x 46mm(W) x 30mm(H)

AT502 2-Digit Pick Tag

- 2-digit display
- 1 confirmation button + 2 function keys
- 3-colored LED Indicator: Red, Green, and Orange can be selected by software
- Power requirements: 12V DC / 200mA
- Size: 100mm(L) x 46mm(W) x 30mm(H)

AT503-4K 3-Digit, 4 Lightable Buttons Pick Tag

- 3-digit display
- 1 confirmation button + 2 function keys
- 4 lightable buttons: Red, Green, Yellow and Blue
- Power requirements: 12V DC / 200mA
- Size: 200mm(L) x 46mm(W) x 30mm(H)

AT502V 2-Digit, Vertical & Directional Pick Tag

- Vertical pick tags
- 2-digit display
- 1 confirmation button + 2 function keys
- 3-colored LED Indicator: Red, Green, and Orange can be selected by software
- 2 directional arrows, right arrow is red, left arrow is green
- Power requirements: 12V DC / 200mA
- Size: 46mm(L) x 148mm(W) x 30mm(H)

Operating Temperature: 0°C ~ 40°C (Forzen Model: -25°C ~ 40°C)

AT506-3W-123 6-Digit, 3 Separated Windows Pick Tag

- 6-digit, 3 separated windows display
- 1 confirmation button + 2 function keys
- 3-colored LED Indicator: Red, Green, and Orange can be selected by software
- Power requirements: 12V DC / 200mA
- Size: 200mm(L) x 46mm(W) x 30mm(H)

AT506-2W-33 6-Digit, 2 Separated Windows Pick Tag

- 6-digit, 2 separated windows display
- 1 confirmation button + 2 function keys
- 3-colored LED Indicator: Red, Green, and Orange can be selected by software
- Power requirements: 12V DC / 200mA
- Size: 200mm(L) x 46mm(W) x 30mm(H)

AT50A-3W-523 10-Digit, 3 Separated Windows Pick Tag

- 10-digit, 3 separated windows alphanumerical display
- 1 confirmation button + 2 function keys
- LED indicator + Buzzer
- Power requirements: DC12V, Max: 250mA
- Size: 260mm(L) x 46mm(W) x 30mm(H)

AT506(L) Order Display

- 6-digit order display
- Power requirements: DC12V, Max: 200mA
- Size: 148mm(L) x 46mm(W) x 30mm(H)

AT50C(L) 12-Digit Alphanumerical Display

- 12-digit alphanumerical display
- 1 confirmation button + 2 function keys
- LED indicator + Buzzer
- Power requirements: DC12V, Max: 250mA
- Size: 260mm(L) x 46mm(W) x 30mm(H)

AT510(L) Completion Indicator

- Confirmation button
- LED indicator + Buzzer
- Power requirements: DC12V, Max: 100mA
- Size: 148mm(L) x 46mm(W) x 30mm(H)

AT510M Melody Completion Indicator

- Confirmation button
- LED indicator + Speaker
- 12 eclectic melody songs
- Power requirements: C12V, Max: 100mA
- Size: 148mm(L) x 46mm(W) x 30mm(H)

AT511(L) Bay Indicator

- LED indicator
- Power requirements: DC12V, Max: 100mA
- Size: 74mm(L) x 46mm(W) x 30mm(H)

AT520 RS232 & Digital I/O Field Interface

- 4 digital inputs
- 4 digital outputs with relay module
- RS232 converter with 9-pin male connector
- 8 indicators for digital I/O status
- Power requirements: DC12V, Max: 250mA
- Size: 125mm(L) x 80mm(W) x 800mm(D)

AT530(L) RS-232 Converter

- 1 LED signal indicator
- Power requirements: DC12V, Max: 200mA
- Output 5V, 200mA current on Pin 1
- Size: 148mm(L) x 46mm(W) x 30mm(H)

AT540 Address Installation Tool

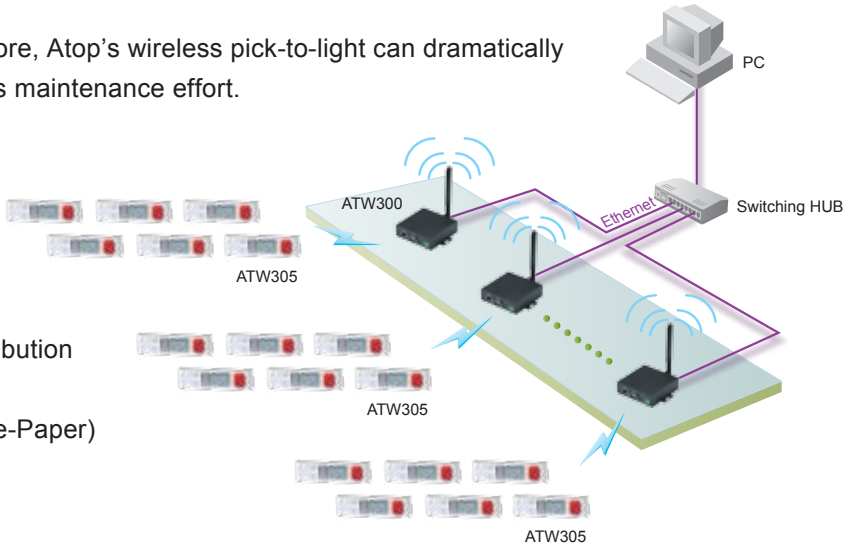
- Portable
- 13.5 V DC or 1.5V AA battery *6

Innovative Pick-to-Light System

Wireless Pick-to-Light

Atop's wireless pick-to-light allows warehouse users to expand their pick-by-light or put-by-light applications to places without rack or shelving infrastructure. Its friendly design can be attached easily and quickly anywhere in the warehouse.

With long battery life design of a month or more, Atop's wireless pick-to-light can dramatically reduce the recharging rate to eliminate user's maintenance effort.



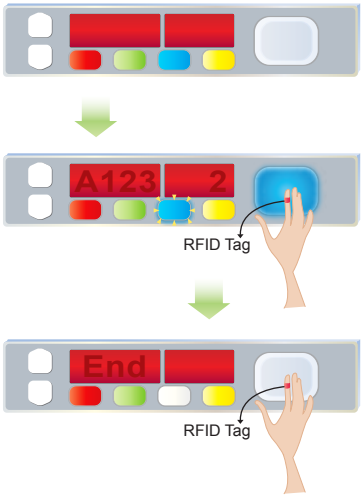
- No wires to install, No power to install in racking or shelving
  Goes ANYWHERE!
- Long battery life of 1 month or more.
- Battery low warning light.
- Attaches quickly/easily anywhere in a distribution center or factory.
- Dot-matrix Elecho Phoretic Display (EPD, e-Paper) has wide viewing angle.
- Bright illuminated button, easy to locate.
- Easy recharging.
- Employ a proprietary wireless transmission technology to have low power requirement and high transmitting rate.
- Controller provided POE (power over Ethernet) connecting function, reducing the cabling effort.
- Wide transmission coverage area of 30 meters.
- Fully compatible with Atop's other cableless pick-to-light products.

Zoneless Pick-to-Light


AT707-4K-RFID

AT707-4K-RFID increases operating productivity by allowing concurrent pickers in the same area and eliminates the requirement for zones and zone balancing management. Using multi-color LED identification lights and buttons Atop can implement zoneless picking in order fulfillment operations for pick-by-light or put-by-light work flow. This unique Light also allows tracking of each pick to a specific picker without the need for zone assignments using RFID technology.

The system determines if it is the right picker at the right location assuring complete accuracy of the pick process.



- Be able to implement less or no zone boundary in order fulfillment operation for pick-by-light or put-by-light flow.
- Allow to track each pick to a specific picker, then picker's productivity could be countable accurately.
- Confirmation by RFID technology to guarantee the accuracy.
- Multi-color LED identification increases flexibility and productivity by allowing concurrent operating in one area.
- Beep alert to inform a wrong operation has ocurred.
- Up/down illuminated arrow buttons to control two locations(Up/Down).
- More digits display can show more picking messages to eliminate using the other assistant models to save cost.
- Next picking instruction message displayed to speed up the productivity.

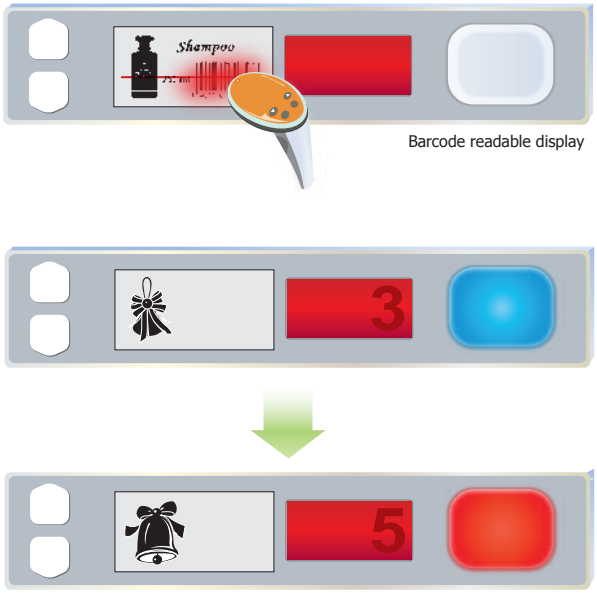
Innovative Pick-to-Light System

Pick-to-Graph

AT703-2W-EPD

AT703-2W-EPD use the Kindle-like E-PAPER display for greater productivity and accuracy in order picking. It can be used to display pictures of the pick, inner pack, complex graphics, etc. And it can be used to replace the label on the shelf. The warehouse staff can easily manage the adjusting of item's location and eliminate the effort and cost to re-print labels. Barcode shown on display can be read by a scanner.

With multiple buffers built into the device the: AT703-2W-EPD can pre-store multiple pictures/graphics inside so that one tag can control multiple locations along with the picking process. Identification and confirmation is quicker and more accurate with a picture than mere numbers!



- Dot-matrix Elecho Phoretic Display (EPD, e-Paper) has wide viewing angle.
- Low power consumption.
- Barcode readable on the displayed graph.
- Easy management for warehouse to adjust item's location, eliminating the job and cost to re-print label on shelf to identify products.
- Allow to pre-store multiple graphics to present one tag to control multiple locations features.
- Easy identification via real product graphics to assist.
- 2 up/down illuminated functional buttons.
- 2 separated display windows, first one is e-Paper display to show item information by graph, the second one is 3-digit 7-segment to display quantity.
- One 6-colors large illuminated completion button.
- Robust and reliable button, rated for over 20 million button presses.
- Fully compatible with Atop's other Cableless pick-to-light products.

Innovative Pick-to-Light System

Sensible PTL

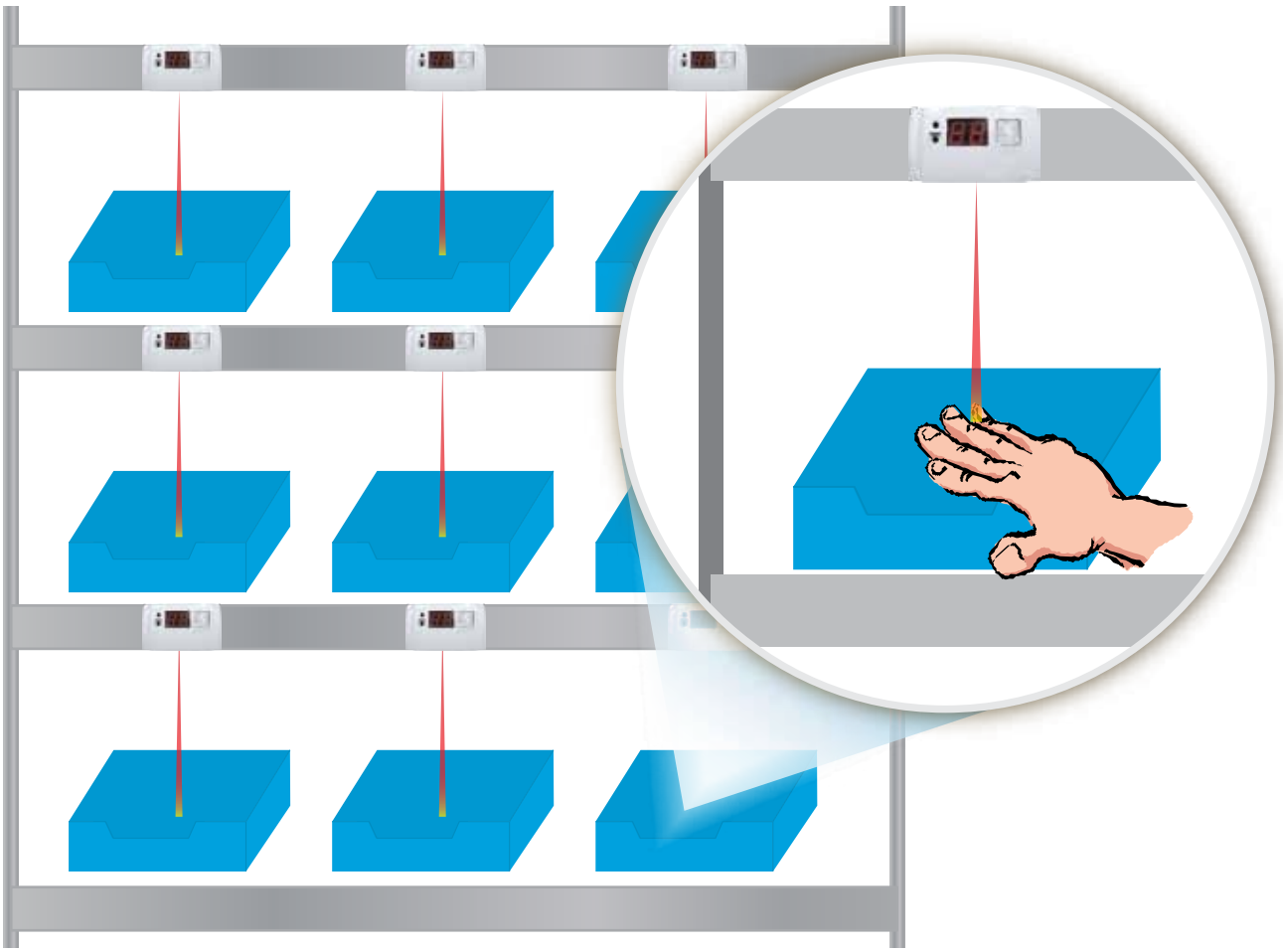
Atop's new Sensible Pick-to-Light allows the picker to work without the necessity to push the button after each pick when implementing pick-by-light operation. It includes a no-touch sensor to sense the presence of a picker's hand to confirm the pick instead of pushing a button. With this PTL sensor, a picker can work efficiently saving time on every task.

Specifications

- 2-digit 7-segment LED display
- No-touch sensor
- 1 illuminated button with 3-color LED
- 2 function keys
- Buzzer
- Sense range : < 60 cm

Features

- Automatic acknowledgement by sensor
- Wrong pick monitoring
- Visual or acoustic alert to inform when a wrong pick has occurred
- Multiple colors LED
- Easy installation
- Fully compatible with Atop's the other Pick-to-light products



Reference Customers

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DM_ABLEPick-E：v6-150515