# PICK & PLACE QUADRA DVC


This new pick and place from TWS Automation represents the seamless evolution of the extremely successful Quadra product line already present in many countries with over 1,000 working units.
While preserving most well tested key solutions of earlier models, the QUADRA *DVC* introduces a worldwide first in this field: the **Linux** operating system.
**Linux** is a professional Operating System (OS) that sets the QUADRA *DVC* apart from most competing P&P, usually based on Windows, the well known consumer-grade OS.
Contrary to Windows, **Linux,** is approved for mission critical platforms that span aviation, military and space applications.
In more mundane uses **Linux** appears as the de facto standard for Web Internet servers, where its **high reliability** is essential to the continuity of service.
Under total control of the manufacturer, **Linux** is not only a stable OS, non being subject to the Windows's endless sequel of patches and new versions, but it is also virus-free.

TWS Automation has chosen **Linux** for all its range of new products, because it is secure, fast, robust and devoid of the complexity of useless frills, but it provides all the necessary facilities, like USB and connectivity.
The use of an advanced OP has also been instrumental to the introduction of new features and an improved man-machine interface.

## NEW FEATURES' SYNOPSIS

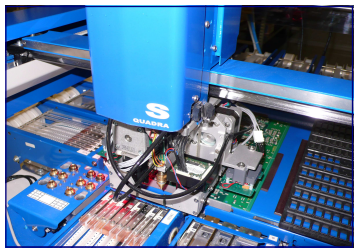
**Linux** Operating System.

**USB support.** User data (and software) can be easily and quickly saved or loaded using cheap USB Flash Memory sticks or other mass storage devices.

An innovative **Dynamic Vision Centring** (**DVC**) replaces the Laser centring apparatus with a double telecentric bi-dimensional video camera system offering increased accuracy and control of the position of even the smaller components.

**Off-line camera with improved lens system and vision algorithms** to centre larger components, BGAs and very fine-pitch ICs.

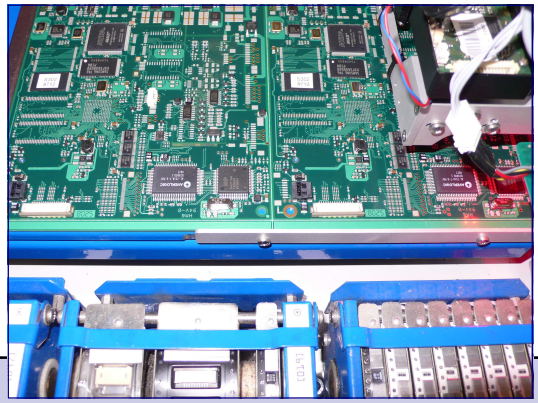
## OTHER FEATURES



**High numbers of intelligent feeders**: the feeders can handle various tapes or stick sizes. New feeders can be prepared off-line in order to reduce downtime for program changeovers. The unit can handle all the main types of components and accommodates **up to 120 feeders** in total, in tape from 8 mm to 44 mm width with 7", 13" or 15" reel diameter.

**Dispensing of adhesives and solder paste**: The optional dispenser enables easy and rapid dispensing of adhesive and solder paste. The dispenser is simple to set up and achieves over 4000 dots per hour.
An additional volumetric dispenser, not supplied by TWS Automation, could be mounted on the machine.

# Quadra DVC is Simple, Reliable and Versatile



Quadra DVC **(ref. code: UX0PPDVC)**
Quadra DVC with dispenser **(ref. code: UX0PPDVC1)**

TECHNICAL SPECIFICATION

- **Components range:** Chip, Melf, Mini-melf, cylindrical components, transistors, SOT diodes, integrated circuits, PLCC and LCCC integrated circuits, trimmers, inductors, connectors, aluminium electrolytic capacitors.
- **Components size:** from 0402 to 35 mm sq. (Up to 10mm sq. using on-board camera); max height 10.5mm; minimum lead pitch 0.5mm.
- **Placement Area:** 440 x 360 mm. For larger boards, the placement area can be extended by removing feeder magazines on one or two sides of the machine, making the maximum board size 550 x 420 mm.
- **Productivity:** 3300 components per hour. The average productivity is 2700 components per hour.
- **Placement Head:** Dual-spindle camera head with DVC system. The placement head moves along the X and Y axes. Each head is equipped with a vacuum sensor to detect component pick-up failure and to command a new pick-up cycle. Some components may be centred off-line by an external camera.
- **Axes Movement:** Controlled by encoder motors to get higher performance, granting better repeatability and higher life time.
- **Resolution:** 0.02 mm on X and Y axes 0.08° on the Theta axis rotation for head 1, 0.16° for head 2,
- **Repeatability :** ± 0.04 mm on X and Y axes ± 0.16° on Theta axis
- **Accuracy:** ± 0.10 mm on X and Y axes 0.16° on Theta axis rotation
- **Noise:** 65 dBA (average value), measured at 1 meter from the unit and 1.6 meter from the ground.
- **Power Supply:** AC 230Volt ± 10%, 50/60Hz. Power required less than 1 kW.
- **Air: :** 8 –10 bar air @ 60 Lt / min.
- **Dimensions:** 850x1000x1800 mm (Depth x Width x Height). *The machine needs at least 2 square meters area (including the unit itself) to operate correctly.
- **Weight:** 215 kg
- **Packaging:** 960x1200x1650 mm (Depth x Width x Height)
- **Gross weight:** 300 kg