

Y-Quad, the Junction Box Connector for the Automotive Sector

Munich, October 2020 - Yamaichi has further developed and optimised the Volkswagen standard interface. The mass production has already started.

In general, junction boxes, which are used in automotive infotainment systems for the internal wiring and control of loudspeakers, are a common interface. Yamaichi has further developed and improved this I/O connector, which is based on a Volkswagen standard interface (Quadlock).

The technical specification defines a PCB connector with up to 52 contacts which perform various tasks in mixed configuration from Ethernet signals to power pins.

With the 90° angled version, the large number of contacts requires a PCB on the backside, which routes the electrical signals or currents. They are then soldered to the customer's circuit board. There is also a ground contact which is connected to the shielding of the customer housing.

The 180° straight version can do without the PCB and the ground, since all contacts can be soldered directly to the customer's circuit board. Both versions are soldered using the THT wave soldering method.

What improvements has Yamaichi Electronics been able to introduce in an interface component that has been established in the Volkswagen group for years?

In addition to the standard version for the wave soldering assembly method, Yamaichi also offers a reflow-compatible pin-in-paste version. The advantage for the customer is that there is no longer need to process the junction box in a separate, additional soldering process. Rather, the customer can process the Y-Quad simultaneously in the standard reflow process, resulting in savings in time and money.

Furthermore, the ground connection is possible in various positions with the Yamaichi connector. In this way, the customer can design the housing more flexibly.

The optional high-power version offers another advantage. While with the standard version a maximum current of 16A can be transmitted via the power pins, a special PCB design enables a transmission of up to 20A.

In general, the number of pins can be adjusted individually.

The production takes place in a fully automatic assembly line. The packaging is in tray or tube, depending on the customer's requirements.

About Yamaichi Electronics

Yamaichi Electronics is a market leader for Test & Burn-In sockets, connectors and connection systems. Their reliability and functional dependability are essential for the success of the overall project. Yamaichi Electronics is established on the world market as a manufacturer of high-



quality, reliable components for demanding applications in various markets and applications: semiconductor, industrial automation, automotive, data networking, measurement & testing, medical, mobile computing, embedded computing, and others.

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