

ABSTRACT

The invention provides an impedance conversion device for a vehicle-mounted gigabit Ethernet chip adaptive to a coaxial cable transmission, and relates to the technical field of Ethernet communication, the impedance conversion device comprises a first impedance loop, a cable wiring end of the first impedance loop is connected with the coaxial cable, and a chip wiring end of the first impedance loop is connected with a first signal output end of the vehicle-mounted Ethernet chip; a first chip resistor is connected between a first signal input end and the first signal output end of the vehicle-mounted Ethernet chip, and the sum of an impedance value of the first impedance loop and a resistance value of the first chip resistor is equal to an equivalent resistance value of the coaxial cable; and a second impedance loop, a cable wiring end of the second impedance loop is grounded, and a chip wiring end of the second impedance loop is connected with a second signal output end of the vehicle-mounted Ethernet chip. The vehicle-mounted Ethernet chip has the beneficial effects that the impedance conversion device is arranged between the vehicle-mounted Ethernet chip and the coaxial cable, so that the coaxial cable can also carry out gigabit Ethernet signal transmission, and the application scene of the Ethernet chip is expanded.

Fig. 2