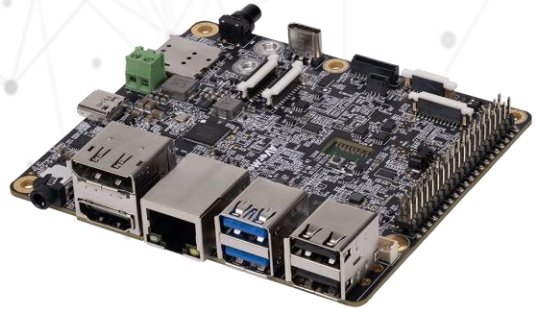# QL601 [Preliminary]

Qualcomm® Dragonwing™ QCS6490 Processor

**For Smart City, Smart Retail and AMRs Applications
Compatible with Raspberry Pi 5 for IO expansion**

Overview

AVerMedia's QL601 support powerful Qualcomm® Dragonwing™ QCS6490 processor. This efficient chip opens new worlds of embedded IoT applications with full analytic capabilities.

QL601 is designed to deliver premium-tier features and networking. It offers robust computing capabilities while maintaining energy efficiency, making it ideal for both industrial and commercial use cases.

AVerMedia supports businesses of all sizes and offers customizable BSP services with Qualcomm TEE , flexible MoQ, Qualcomm® Linux and AVerMedia SDK.

Enterprise-Leading Features

- Applies to Qualcomm® QCS6490 processor
- 2 x 4 Lane MIPI CSI-2 Camera Input
- 1 x 4 Lane MIPI DSI-2
- 1 x HDMI output 3840 x 2160 at 60Hz
- 2 x USB 3.0 Type-A & 2 x USB 2.0 Type-A
- 1 x GbE RJ-45
- 1 x M.2 B Key for 4G & 5G
- 40-pin Expansion Header
- Operating temperature: -10°C ~ 60°C
- Dimension: 98.4mm x 88.5mm x 26.5mm

The AVerMedia Advantage

Video Processing Technology

Flexibility & Reliability

Dedicated After-Sales Support

AVerMedia understands that each business has a unique set of requirements that requires professional expertise and support. With AVerMedia, you are guaranteed to work with a proven global leader in video processing technology (200+ video capturing & streaming patents) with decades of experience processing multiple video signals for countless award-winning products.

A global leader that supports businesses of all sizes with comprehensive customization services (i.e., HW/PCB/BSP/etc.), flexible MoQ while ensuring a high-quality design and stable product. And for projects requiring additional security, we can provide customizable encryption hardware to support your privacy needs.

By partnering with us, our support-driven team offers prompt after-sales support and live support so that your company stays focused on what matters most, customer acquisition.

Specifications

Model	QL601 Single Board Computer
Platform /Computing Power	Qualcomm® Dragonwing™ QCS6490 / 12.5TOPS
Memory and Storage	LPDDR4 x 8GB + UFS2.2 128GB
Networking	1 x GbE RJ-45 802.11ax Wi-Fi 6E and Bluetooth 5.2 1 x M.2 Key B for LTE/5G; Micro SIM slot
Display Output	1 x HDMI output 3840 x 2160 at 60Hz 1 x DP output 1920 x 1080 at 60Hz 1 x 4 Lane MIPI-DSI
Audio	1 x MIC.in / Line Out (disable on Windows 11 IoT)
USB	2 x USB 2.0 Type A (shared) 2 x USB 3.0 Type-A (shared with M.2 Key B) 1 x USB Type-C (BSP Flash)
Camera Support	2 x 4-lane MIPI-CSI, 22pin FPC 0.5mm pitch (disable on Windows 11 IoT) USB Camera
Expansion Header	40-pin Headers : 2 x 3.3V DC power, 2 x 5V DC power, 2 x UART, 2 x SPI, 1 x PWM, 8 x GPIO, 2 x I2C
Other I/O	1 x PCIe 2.0 RTC wafer, Fan wafer, UART wafer, PoE HAT wafer
Storage	microSD card slot
Input Power	3.5mm Screw Terminal: 9V~20V Optional 12V/5A Adapter
Power Cord	US/JP/EU/UK/TW/AU/CN (optional)
Temperature	Operating temperature -10°C ~60°C
Buttons	Power/Reset
PCBA/Electronics Mechanical Info	L: 98.4mm x W: 88.5mm x H: 26.5mm Weight: 84.2g
Operating System	Qualcomm Linux 1.3 / Ubuntu20.04 / Windows IOT/ Android 13
SDK/API	AVerMedia SDK/API
Certifications	CE, FCC, KC
Package	1x QL601 DC IN jack cable screws

AVerMedia Linked in You Tube

RoHS 2 COMPLIANT

*All specifications are subject to change without prior notice.

Security

Function	Description
Qualcomm TEE	Ensures secure memory, content protection, trusted application execution, and power-efficient security management.

Expansion Board List

Part Number	Expansion Board	Description
TBD	PCIe to GbE Ethernet Board	Support one more GbE-RJ45 port
TBD	PCIe To M.2 M key Adapter	Support extra SSD expansion
51D1310001AG	AVerMedia POE Board (PSE)	Support both power and data over a single Ethernet cable

Ordering Information

Model	Processor	Memory	USB	Display	Network	Power Input	Size	Operating Temperature
QL601	Dragonwing QCS6490	8GB	2 x USB 2.0 2 x USB 3.0	1xHDMI 2.0 2xMIPI-CSI 1xDP Full HD	1xGbE RJ45	9V-20V	98.4x88.5 x26.5 mm	-10~60°C

*All specifications are subject to change without prior notice.