Improve manufacturing quality and yields by ensuring that all components, sub-assemblies, and products undergo thorough inspection with the VIA SOM-9X20 Machine Vision Platform. Powered by the Qualcomm® APQ8096SG Embedded Processor, this highly-integrated package combines lightning-fast graphics, video, and compute performance with support for up to eight cameras and multiple I/O and wireless connectivity options. A choice of Android 8.0 and Linux BSPs further expands the customization options and facilitates integration into existing production management and control systems.

- Qualcomm® APQ8096SG Embedded Processor
- Optional VIA SOMDB2 multi-I/O carrier board
- Wi-Fi 802.11a/b/g/n/ac, Bluetooth 4.1, and GPS
- Support for up to eight cameras
- Android 8.0 or Linux BSP
### VIA SOM-9X20 Specifications

| **Processor** | Qualcomm® APQ8096SG Embedded Processor  
- Two high-performance Kryo cores up to 2.342GHz  
- Two low power Kryo cores up to 1.593GHz |
| **System Memory** | 4GB POP LPDDR4 RAM |
| **Storage** | 64GB UFS 2.1 Flash Memory |
| **Graphics** | Qualcomm Adreno 530 GPU  
3D graphics accelerator with 64-bit addressing 624MHz  
Graphics engine supporting OpenGL ES 3.1/GEP, GL4.4, DX11.3/4,  
OpenCL 2.0, Renderscript-Next  
Supports H.264, VP8, HEVC 8/10-bit,  
VP9 video decoding up to: 4K@60fps, 1080p@240fps, 8 x 1080p@30fps |
| **Trusted Platform Module** | TPM1.2 : ST33TPM12I2C |
| **Wireless Connectivity** | NFA324A-12H32 QCA6174A-1 Wi-Fi 802.11a/b/g/n/ac +  
BT 4.1 combo LGA module with 2 antenna connectors  
Qualcomm WGR7640 GPS/GNSS RF receiver with antenna connector |
| **HDMI** | Integrated HDMI 2.0 Transmitter |
| **Support I/O through MXM 3.0 Connector** |  
1 HDMI 2.0 port  
2 MIPI DSI 4-Lane connectors  
3 MIPI CSI 4-Lane connectors  
1 USB 3.0 OTG  
1 USB 2.0 host  
1 SDIO  
2 PCM/MI2S  
Multi-function pins for UART, I²C, SPI, GPIO  
1 JTAG  
2 PCIe 2.0 (1-Lane) |
| **Operating System** | Android 8.0, Linux kernel 3.18.44 |
| **Operating Temperature** | -20°C ~ 70°C |
| **Operating Humidity** | 0% ~ 95% (non-condensing) |
| **Form Factor** | 8.2cm x 4.5cm (3.23” x 1.77“) |