Hypertension, a predominant contributor to global premature mortality and disability, resulting in 8 million deaths annually, underscores the imperative for proactive measures in disease prevention and diagnosis. The constraints inherent in traditional blood pressure (BP) monitoring instruments, characterized by inconveniences, discomfort, and limited applicability beyond clinical or home environments, accentuate the pressing need to advance and integrate continuous monitoring devices. Here, we present a noninvasive device based on photoplethysmography (PPG) signals to calculate Pulse Wave Velocity (PWV) that combines two MAX30102 sensors with IR, LED, and PD components, an es32-c3-mini-1 microprocessor with BLE capability, and a TCA9548A, which allows us to switch and read between the two MAX sensors. Initial trials on 25 participants prove the capability of our hemodynamic sensor(s) as a reliable BP measurement product and its feasibility and practical usability in precise BP control and personalized diagnosis schemes development. In addition to BP monitoring, the device can make pulse wave velocity a more beneficial tool in physical assessments.