

The PRM2141X development kit (DVK) is a cutting-edge solution designed for industrial and telecommunications markets that require high-speed wireless connectivity. The kit is built around the 60GHz wireless technology, which offers incredibly fast and reliable data transmission rates of up to 2.5Gbit/s, making it an ideal choice for use cases such as wireless backhaul, video streaming, and other bandwidth-intensive applications.

Another key feature of the PRM2141X DVK is 3-D beamforming antenna and its ability to connect up to 32 stations via a wireless access point (AP). This makes it an ideal choice for use cases that require multiple devices to connect to a single network, such as in an industrial automation system or smart city applications.

PRM2141X development kit from 8devices allows easy evaluation of technology and development of products based on 60GHz millimeter wave radios from Peraso connected via USB3, ideal for short-range, multi-gigabit data transmission.

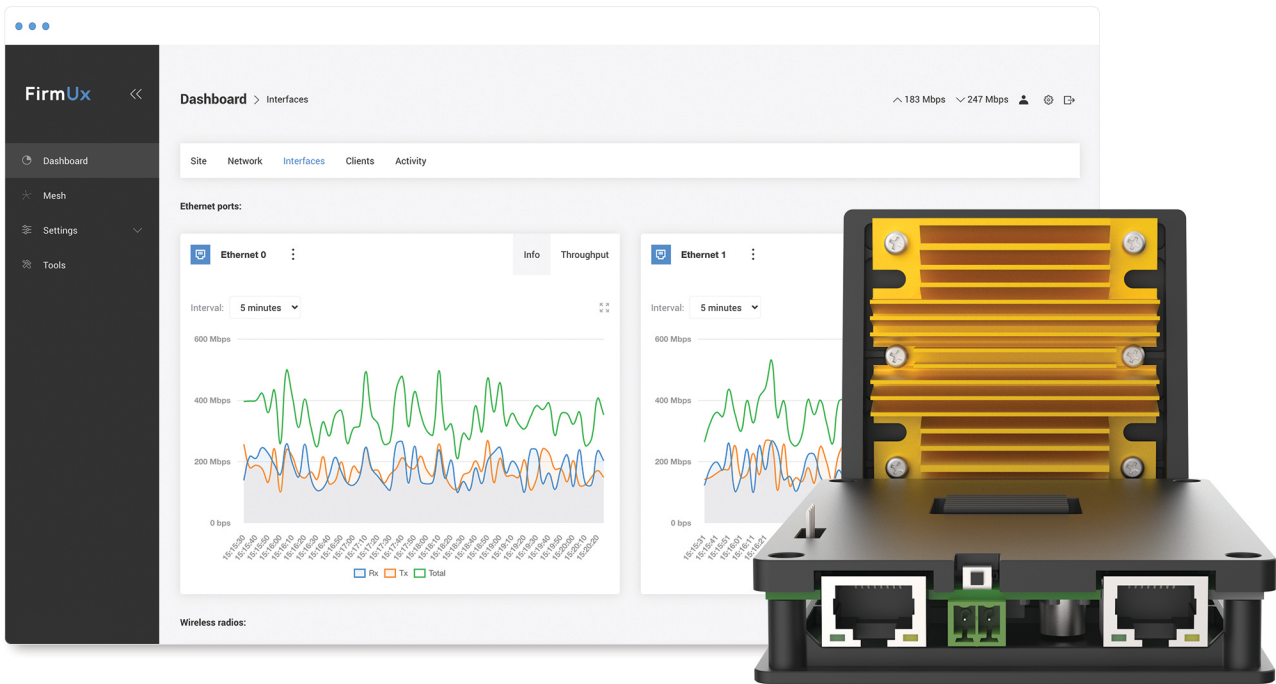
The PRM2141X DVK comes with a Firmux-based software development kit (SDK) to facilitate the development process. This SDK provides developers with a robust set of tools and APIs for creating customized software applications that can leverage the full capabilities of the PRM2141X chip. The SDK is easy to use and comes with comprehensive documentation, making it an excellent choice for developers of all levels of expertise.

Specifications

HARDWARE		
CPU	Quad-core ARM A55 with hardware acceleration	
Memory	512MB RAM, 128MB Flash with dual-boot support	
Radio	Peraso PRM2141X 60 GHz WiGig module (802.11ad) with Baseband, RF, and antenna	
Serial	UART, 115200N1	
I/O ports	1 x 2.5Gbps (Nbase-T) Eth with PoE in (48 V) 1 x 1Gbps (Nbase-T) Eth with PoE out (48 V) 1 x DC Power In/Out (Out requires power provided to the device over PoE) (48 V)	
Wireless	Frequency range	57-71 GHz
	Supported channel sizes	2 and 1 GHz
	EIRP	38dBm
	Sensitivity	-72dBm @ MCS1 -64dBm @ MCS9
	Antenna	16-element. V-pol Gain 16dBi Elevation and azimuth +/-45deg beam steering
Power consumption	18W max	
Kit includes	2 x PRM2141 DVK units 2 x PoE power supply adapters 4 x Ethernet cables 2 x UART to USB adapters with cables	

SOFTWARE	
Boot loader	Dual Boot
Control interface	SSH, Web UI
Features	<ul style="list-style-type: none"> Access Point mode Station mode 1-6 channels, 2 GHz width 1-12 half channels (1GHz width)* Web UI Telnet access (disabled by default) SSH access NTP Device Discovery via LLDP/CDP/MNDP IPv4/IPv6 ready Device Configuration backup Debugging/Troubleshooting gathering tool. Dual boot (two firmware banks: active/backup) Firmware Upgrade Advanced Radio level statistics TX power control PTMP scenario support Detailed wireless statistics per station*

*Upcoming software release



The PRM2141X development kit includes a software development kit (SDK) with a board support package (BSP) and Firmux startup and configuration system. The BSP provides low-level hardware drivers and other necessary components for running the hardware, while the Firmux startup and configuration system extends the OpenWrt system with additional customizations.

The SDK is based on the OpenWrt build system, which allows users to easily add custom packages and compile them into a firmware upgrade image. This will enable developers to customize the system to meet their specific requirements.

The PRM2141X evaluation kit is available for purchase from 8devices. For support, troubleshooting, and licensing of the SDK, contact us: at support@8devices.com.