AnyWAN™ SoC GRX550 Series for Broadband Home Gateways and Routers

**PRODUCTS**
- GRX550  Multicore networking processor for home gateways and routers
- WAV614  Wi-Fi 6, 4x4, 2.4GHz chip
- WAV624  Wi-Fi 6, 4x4, 5GHz chip

**BENEFITS**
- Full software and hardware turn-key solution for an AX6000 capable Multi-WAN gateway or router
- Enables cost-competitive field proven solutions for xDSL/G.fast/Fiber/LTE/ETH service providers

**FEATURES**
- NPU with four processor cores featuring six CPUs for maximum performance, flexibility, and security
- NPU subsystem with L2-cache, system-wide coherence manager, and on-chip trace unit
- NPU speeds up to 2600MHz
- Integrated security for secure code execution, boot, and access control
- Enhanced packet acceleration with a combination of hardware acceleration and flexible, programmable multilevel processing engine. The GRX550 series supports more than eight million packets per second at 0% CPU load
- Hardware accelerated, carrier-grade quality of service (QoS) solution with programmable queues, schedulers, and shapers operating both upstream and downstream to any interface on the chip
- Integrated non-blocking 7-port Gigabit Ethernet switch with wire speed switching queue-based back-pressure algorithm
- Hardware acceleration for VPN/IPsec, TLS, storage, etc.
- Support for VoIP
- Hardware-enforced security enables different operating systems to run on different cores

**APPLICATIONS**
- Wi-Fi 6 AX6000 gateways and routers
- VDSL2/35b single and bonded gateways, routers, and repeaters
- LTE gateway
- G.fast gateway
- Fiber gateways
- Smart home gateway

**Optimize Investments Across Connected Home Devices**

The AnyWAN™ SoC GRX550 series is suited for high-end home gateways and routers and provides the same peripheral interfaces to reuse existing software across a wide range of applications. It allows equipment and service providers to extend the value of their infrastructure investments and upgrade existing designs.

A multicore network processing unit (NPU) subsystem, combined with hardware acceleration and the integration of all the standard features into a single device makes the AnyWAN™ SoC GRX550 series a powerful and compact gateway-on-a-chip solution. Various architecture features improve quality of service and enable the integration of hardware-based virtualization.
MaxLinear offers kits to accelerate the development of home routers, gateways, and extenders. Optimized at the system level for easier, faster, and more cost-effective development, the kits allow original equipment manufacturers (OEM) to customize a solution for their unique requirements. The development kit for home gateways EASY550-AX6000 delivers high performance wireless connectivity for high-end 4×4 Wi-Fi 6 xDSL/ETH gateways and routers. With the integrated home Wi-Fi chipset WAV600 series, this development kit offers support for Gigabit Wi-Fi and provides the ability to connect up to 250 clients simultaneously per band with reduced latency. It also incorporates advanced Wi-Fi 6 (Gig+) technology features including 160MHz and capability for both downlink and uplink OFDMA.

The chipsets also deliver exceptional throughput for both small and large packet sizes while running at over 250,000 packets per second (PPS). In addition, wireless traffic is fully offloaded with zero CPU utilization, which frees up the CPU performance for advanced services.
AnyWAN™ SoC GRX550 Chipset

Home Wi-Fi Chipset
WAV624 802.11ax 4 x 4
5GHz (Wi-Fi 6)

Home Wi-Fi Chipset
WAV614 802.11ax 4 x 4
2.4GHz (Wi-Fi 6)

SLIC for CPE SLC220

USB 3.0/2.0

4 x 10/100/1000 BASE-T

AX6000 G.fast or DSL Gateway

AnyWAN™ SoC GRX550 Series

PCIe

Home Wi-Fi Chipset
WAV624 802.11ax 4 x 4
5GHz (Wi-Fi 6)

Home Wi-Fi Chipset
WAV614 802.11ax 4 x 4
2.4GHz (Wi-Fi 6)

Transceiver VRX619

PCIe

G.fast/ VDSL2/35b

WAN GE

USB 3.0/2.0

4 x 10/100/1000 BASE-T

AX6000 Ethernet Router

AnyWAN™ SoC GRX550 Series

PCIe

Home Wi-Fi Chipset
WAV624 802.11ax 4 x 4
5GHz (Wi-Fi 6)

Home Wi-Fi Chipset
WAV614 802.11ax 4 x 4
2.4GHz (Wi-Fi 6)

Transceiver VRX619

PCIe

G.fast/ VDSL2/35b

WAN GE

USB 3.0/2.0

4 x 10/100/1000 BASE-T

MaxLinear

Third Party
## Product Information

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<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Ordering Code</th>
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<tr>
<td>AnyWAN™ SOC GRX550</td>
<td>Multicore networking processor for home gateways and routers.</td>
<td>GRX550A3BC200</td>
<td>PG-LFBGA-413</td>
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<td>Home Wi-Fi Chipset WAV614</td>
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