

SRL-LLC QS1R versus microtelecom.it Perseus

Feature Comparison

Feature	QS1R	Perseus	Comments
Software supported in Windows	Yes	Yes	
Software supported in Linux	Yes	No ⁽¹⁾	
Software supported in MAC	Yes	No ⁽¹⁾	
Open source firmware, software and FPGA Verilog	Yes	No	QS1R uses the GPL license and is open source. Perseus is closed source and proprietary.
Software Development Kit (SDK) available without signing a license agreement with the manufacturer	Yes	No	microtelecom.it requires users to sign a legal agreement before being allowed access to the SDK
Software uses restrictive licensing scheme	No	Yes (via WinLicense)	WinLicense, which is used by the Perseus software, has known compatibility issues with certain Microsoft utilities
Available as an assembled PC board without enclosure	Yes	No	
Remote Operation over network/internet via supplied software.	Yes ⁽⁷⁾	No	
Able to operate multiple receivers on a single PC	Yes	No	You can only have one Perseus per PC.
External Clock input option to allow syncing of multiple receivers	Yes ⁽³⁾	No ⁽²⁾	
External Muting input to allow hardware muting of audio output	Yes ⁽⁴⁾	No ⁽²⁾	
Able to control external devices via an I/O bus	Yes ⁽⁵⁾	No ⁽²⁾	
Future expandability via expansion I/O bus	Yes ⁽⁵⁾	No ⁽²⁾	
Frequency Coverage	10 kHz to 62.5 MHz	10 kHz to 40 MHz only	QS1R cover the 6 meter band, Perseus does not.
Ability to use in under-sampling mode to receive < 62.5 MHz	Yes	No ⁽⁶⁾	Perseus is limited to 10 kHz to 40 MHz only. QS1R can be used up to 500 MHz in under-sampling mode.
Provisions to add an external pre-selector via expansion bus	Yes	No ⁽²⁾	

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Analog to Digital Convertor used	LTC2208 16 bit 130 MSPS (Cost ~\$100 ea)	LTC2206 14 bit 80 MSPS (Cost ~\$50 ea)	QS1R's more expensive ADC allows coverage to 62.5 MHz. Perseus uses slower and cheaper ADC which limits Perseus to 40 MHz.
Field Programmable Gate Array (FPGA) Used to implement DDC	Altera Cyclone III EP3C25 (Cost ~\$45 ea)	Xilinx XC3S250E (Cost ~\$15 ea)	
Number of independent receivers that can be implemented in FPGA DDC	8	1	Superior size FPGA in QS1R allows expandability
Oriented to SWL/BCL users only	No	Yes	Perseus is oriented to the SWL/BCL market, other uses are a second thought.
Oriented to the Amateur Radio users with considerations for low latency	Yes	No	In addition to SWL/BCL market, QS1R also targets the Amateur Radio market as well as many others.
Expandable to work with future transmitter	Yes	No	
Option to have the receiver customized to the end user's application.	Yes	No	SRL-LLC can supply custom versions of QS1R tailored to the customer's requirements.

¹ The Perseus software is Windows only. QS1R support Windows XP, Vista, Windows 7, 32 bit and 64 bit versions.

² The Perseus has no provisions for future expandability.

³ The QS1R has an external clock input on the front panel via a SMA connector.

⁴ The QS1R has an external mute input on the rear panel via a Mini DIN 8 connector.

⁵ The QS1R has an I2C expansion bus available on the rear panel via a Mini DIN 8 connector.

⁶ The Perseus has no provisions for under-sampling use, it cannot be used in under-sampling mode without extensive hardware modifications that will void the manufacturer's warranty.

⁷ The software for QS1R is separated into two components: A server (QS1RServer), which handles all the communications with the QS1R but has no GUI, and the GUI (SDRMAX(n)) which communicates to the server. This allows the GUI to be used remotely over your network and over the internet.