



Why replace your 900 MHz GE LEDR radios?

The Aprisa XE is the new leader. With configurations to match your existing LEDR installation you can upgrade performance with a straightforward change out, retaining all reusable infrastructure such as channel bank, filters, and antenna systems. The Aprisa XE incorporates additional improvements and features:

- ✓ Capacity: increasing the throughput of your existing channel
- ✓ Performance: superior RF specifications for improved link availability even in harsh conditions
- ✓ Single box flexible solution: embedded Ethernet and a full range of optional interfaces
- ✓ Ease of management: full management of local and remote terminals in addition to SNMP

CAPACITY AND PERFORMANCE

Even for your long-haul thin route needs, capacity is a key requirement. Operating from 928 to 960 MHz, the Aprisa XE can provide up to 25% more capacity than LEDR in the same channel size, up to 952 kbit/s in a 200 kHz channel with advanced 64 QAM modulation.

200 kHz channel	QPSK	16 QAM	32 QAM	64 QAM	LEDR
Capacity	312 kbit/s	632 kbit/s	792 kbit/s	952 kbit/s	768 kbit/s
Receiver sensitivity	-102 dBm	-96 dBm	-93 dBm	-90 dBm	-91 dBm
System gain	131 dB	125 dB	122 dB	119 dB	121 dB

With superior RF performance, the Aprisa XE will achieve higher link availability for the same capacity over existing paths, or provide a significant increase in capacity without any performance impact. This is the result of an extremely low noise figure RF design in addition to the system gain. Distance-engineered to achieve long paths, the Aprisa XE allows lengthy paths that were previously impossible.

SINGLE BOX SOLUTION

A key advantage is the embedded access multiplexer. The Aprisa XE supports up to eight interface cards for a maximum of 32 circuits, providing end to end transport, or aggregation to T1 for transport of all voice and data interface options. Additionally the embedded digital cross connect provides sub DSO 8 kbit/s drop insert functionality. The Aprisa XE is a unique single box solution combining a licensed radio, access multiplexer, digital cross connect, and built-in 4 port layer 2 Ethernet bridge.

EASE OF MANAGEMENT

SuperVisor is the built-in web based craft tool for easy configuration of your Aprisa radios. Accessible from any web browser, you can configure every detail of your radio and multiplexer, for both local and remote terminals, with a single application. The manageability of the Aprisa XE extends to providing a standard SNMP interface for remote network wide management and NMS integration.

4RF IN NORTH AMERICA

4RF has been active in North America for 10 years. The Aprisa XE is deployed in Federal, State and County customer networks across the United States, in a range of utility, oil and gas and public safety applications. With local technical staff and in country advanced replacements available, 4RF support and service is a key differentiator for North American customers.

Turn over to learn about the simplicity of replacing your LEDR with Aprisa XE...



The Aprisa XE is field-proven with deployments across North America from the Gulf to the Great Plains and the Rockies.

The Aprisa XE in brief:

- Licensed 900 MHz frequency band
- Built-in cross-connect and multiplexer
- Up to 952 kbit/s capacity
- 100 kHz and 200 kHz channel sizes
- QPSK to 64 QAM modulation
- Range of 120+ miles
- Industry-leading reliability
- Web server and SNMP management
- All voice, data and IP applications
- MHSB and HSD protection options
- FCC approved in both internal and external duplexer filter configurations



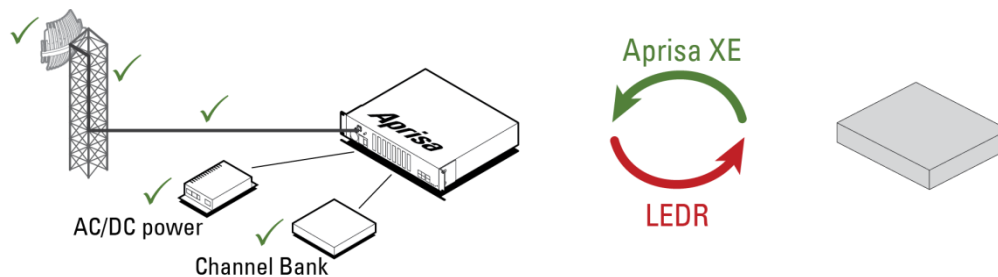
Aprisa XE path profile diagram

SIMPLICITY OF REPLACEMENT

It is simple to install an Aprisa XE in place of your LEDR radio. All feeder, antenna, power supply and other external ancillary equipment can be retained. If your existing radio has an internal duplexer filter (duplexer) then it is a simple radio change out.

For installations with serviceable external duplexers, the duplexers can be retained, with the Aprisa XE ordered without a duplexer to minimize cost. 4RF can provide replacement high performance band-pass duplexer options in a variety of splits to replace your existing duplexer, for frequency migrations and to support interference mitigation.

Retain your existing channel bank or access multiplexer with sub-rate T1 or EIA 530 interface options. Take advantage of the built-in 4 port Ethernet bridge for IP connectivity at no extra cost. Alternatively replace your existing channel bank or access multiplexer hardware with the Aprisa XE internal multiplexer with support for voice and data circuits in a single box platform.



ORDERING OPTIONS

Order your option from the range of LEDR replacement strategies available:

- Option 1 – Aprisa XE with internal duplexer (9 MHz TX/RX split)
- Option 2 – Aprisa XE with no duplexer, enabling you to retain your existing external duplexer
- Option 3 – Aprisa XE with external 4RF duplexer (3.6 MHz TX/RX split)

Add your interface to complete the configuration:

- Option A – Sub-rate fractional T1 interface card
- Option B – High Speed Serial (HSS) interface card and EIA 530 configuration cable
- Option C – Ethernet with no additional interface cards (Ethernet facility is standard)

Specify the power supply (12/24/48 VDC or 115 VAC), channel size (100 or 200 kHz) and your required operating frequencies and you are good to go!

DON'T FORGET RELIABILITY

In addition to its other features, the Aprisa XE delivers industry-leading field reliability, as testified by 4RF customers throughout the USA and beyond. Even at elevated 120 F temperatures, the built-in fans deliver cool running operation. Its rugged and robust design means that the Aprisa XE can be relied upon to go on working even in the harshest of environments.

QUESTIONS?

For engineering or sales questions, contact 4RF. Make the LEDR replacement job simple: introduce yourself to the new leader by emailing replacemyradio@4rf.com and we will get right back to you.

NOTES

All information is correct as of May 2013 and is subject to change. All third party product names and trademarks are acknowledged as property of their respective owners. GE and LEDR are trademarks and/or service marks owned by the General Electric Company. Specification taken from datasheet dated 090202-v04.

ABOUT 4RF LIMITED

Operating in more than 130 countries, 4RF Limited provides radio communications equipment for critical infrastructure applications. Customers include utilities, oil and gas companies, transport companies, telecommunications operators, international aid organisations, public safety, military and security organisations. 4RF point-to-point and point-to-multipoint products are optimized for performance in harsh climates and difficult terrain, supporting IP, legacy analogue, serial data and PDH applications.

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Aprisa XE

Embedded multiplexer interface options:

- QJET Quad E1/T1: four T1 framed or unframed channels with sub DS0 8 kbit/s drop insert
- QV24 Quad V.24 serial: four V.24 / RS-232 serial data channels
- HSS High-Speed Synchronous: single high speed serial data channel, multiple protocols supported via protocol-specific interface cable
- Q4EM Quad 4 wire E&M: four 4 wire E&M voice channels
- DFXO Dual 2 wire FXO: two foreign exchange office channels
- DFXS Dual 2 wire FXS: two foreign exchange subscriber channels



N-Type connections for your external duplexer



4RF 3.6 MHz TX/RX split duplexer



For more information please contact
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