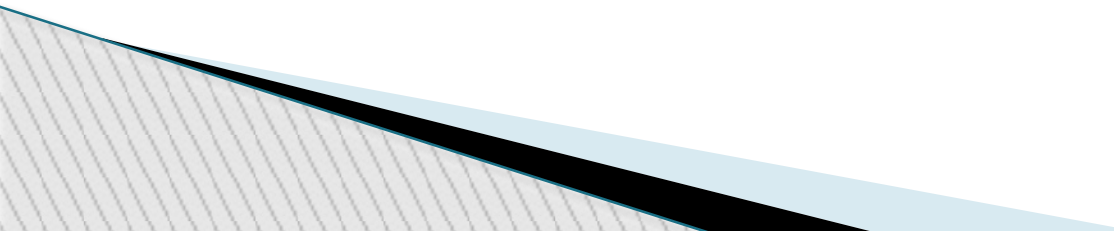


XLX202 a multi-protocol digital voice reflector



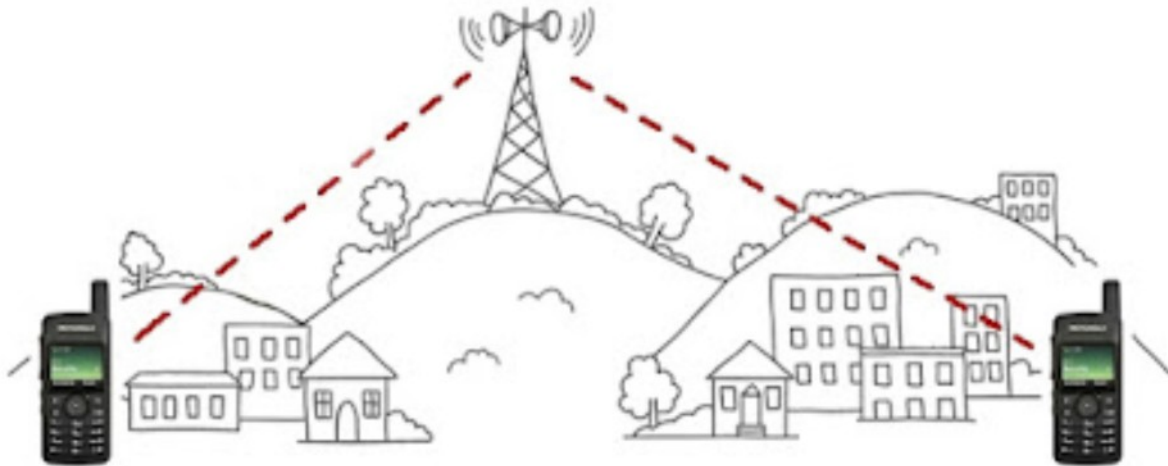
What is an Amateur Radio reflector

- An Amateur Radio reflector is an Internet-connected server that functions as a digital conference bridge, linking multiple radio repeaters, gateways, or user hotspots together simultaneously.
 - Reflectors are used primarily in digital modes like D-Star, DMR, YSF, IRLP, etc. They allow users worldwide to communicate as if they were on a single local channel.
 - A reflector acts as an “IP Repeater”, where audio from one station is sent to the server and immediately retransmitted over all connected repeaters and nodes.
 - Reflectors allow for “conference rooms”, often called modules, where different groups of users can meet.
 - Common systems include D-Star (REF, DCS, XRF and now XLX), DMR (Brandmeister, TGIF talkgroups) and IRLP (node-to-reflector).
 - Ideal for organising groups, net-checkins, or communicating with others when local repeaters are quiet.
 - Users connect to a reflector using their radio to command their local repeater or hotspot to link to a specific server.
- 

Reflectors vs. repeaters

Repeaters

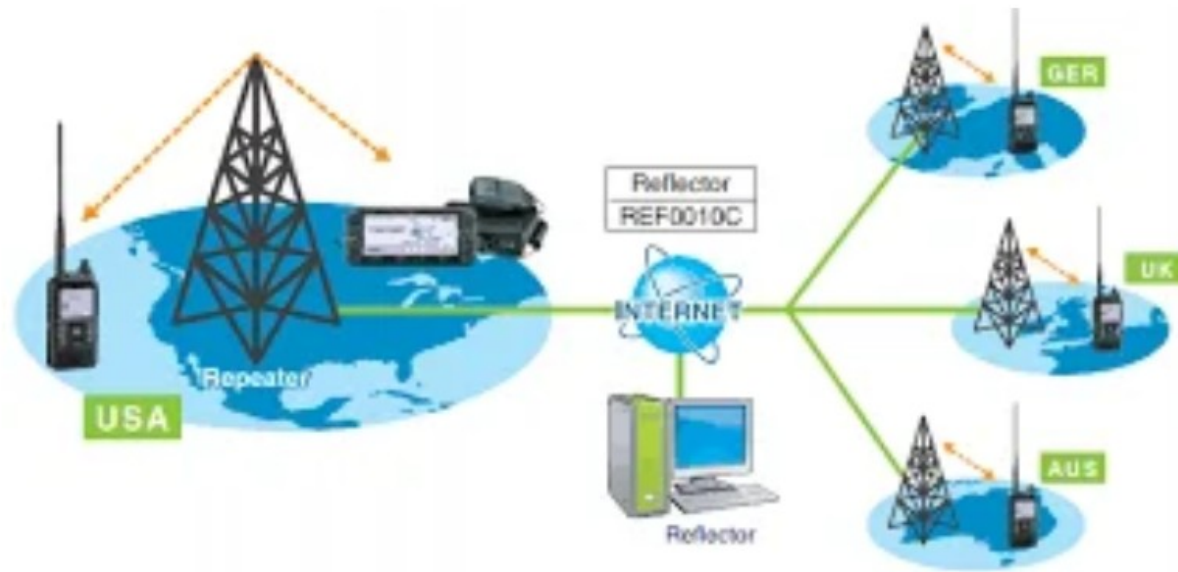
- Allows local and physically remote stations to communicate via a repeater station, ideally situated on high ground.
- A repeater immediately retransmits whatever it receives via RF.



Reflectors vs. repeaters

Reflectors

- A reflector is connected to the Internet.
- A reflector retransmits any received audio to all Internet connected stations.



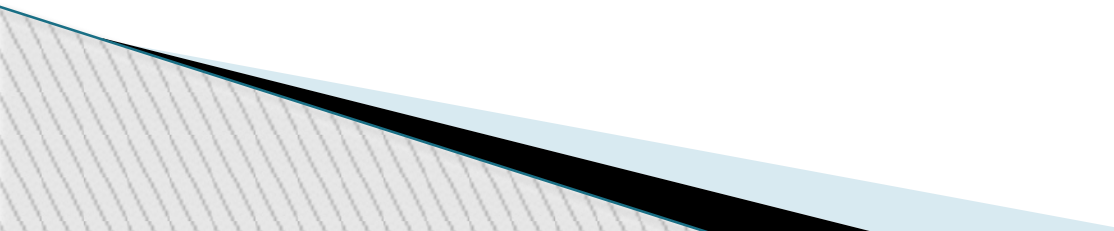
What is an XLX reflector

- An XLX reflector is an advanced, modern, stand-alone Amateur Radio reflector system that is capable of bridging different digital voice modes, including but not restricted to D-Star, DMR and Yaesu System Fusion (C4FM).
- XLX reflectors represent the next generation of Amateur Radio digital reflectors, designed as a multi-protocol, multi-mode, and multi-channel system. Developed as an open-source project, they allow for the seamless interconnection of many digital voice protocols.
- **Multiprotocol Hub:** XLX acts as a central hub (similar to a "bridge") that can translate between D-Star (REF, XRF, DCS), DMR, and YSF protocols.
- **Modules A-Z:** Similar to older reflector systems, XLX offers 26 "rooms" or modules (labeled A through Z), allowing for concurrent conversations.
- **Transcoding:** When combined with AMBE hardware (transcoding servers), XLX allows a D-STAR user to talk directly to a DMR user or a Fusion user.
- **No Trust System Required:** Unlike traditional D-Star reflectors, XLX does not require registration on the D-STAR trust system.
- **Multi-mode Functionality:** A single reflector can support all three major digital modes simultaneously.
- **Interlinking:** XLX servers can be easily linked to other XLX servers, DMR master servers (like BrandMeister), and YSF rooms.
- **Easy Setup:** It utilises a Linux-based installation that is relatively easy to deploy on servers like Ubuntu or Debian.
- **Web Dashboard:** Each XLX server provides a live dashboard (often listing active modules, connected users, and links).

Using XLX Reflectors (User Perspective)

- **D-Star:** Users link to an XLX reflector (e.g., XLX202) and a module (e.g., B) by setting their radio to "Link to Reflector" (e.g., XLX202BL).
- **DMR:** Users connect to an XLX reflector through their hotspots or repeaters by selecting the XLX master in their DMR configuration (e.g., Pi-Star) and using private calls to instruct the hotspot to connect, disconnect, switch modules etc.
- **YSF/Fusion:** Fusion radios can connect to XLX modules, usually via a YSF reflector number, such as 60202 for XLX202, enabling direct access. Built-in Wires-X functions can then allow connection, disconnection etc. The DG-ID setting can be used to switch modules.
- **VOIP software, such as the Peanut App or DroidStar:** The popular Peanut and DroidStar Android/PC apps allows for communication with XLX reflectors, often connecting through specialised modules.

Popularity and Growth

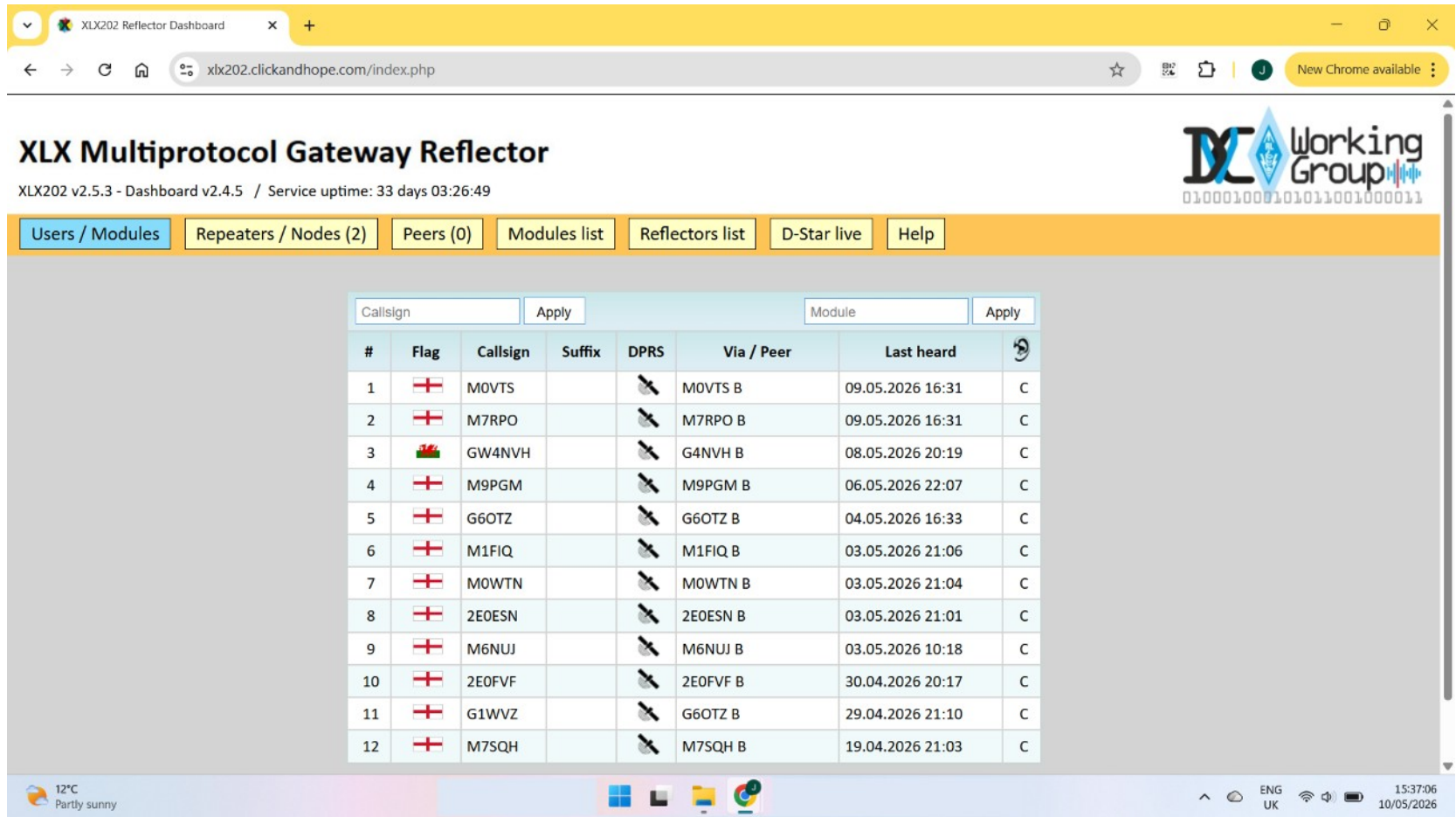
- **Open Architecture:** Because it is open source and flexible, XLX has become the preferred choice for new, independent reflector systems.
 - **Customisation:** Administrators can add specialised modules to connect with other technologies, such as AllStar or EchoLink.
 - **Cost of ownership and maintenance:** Reflectors can be setup with little or no hosting costs on cloud based computer services, using open source operating systems and applications, such as Linux and xlx.
 - **Future proof:** Due to the current popularity of XLX reflectors it should be relatively easy to add transcoding and connectivity of future digital voice modes and protocols.
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What is XLX202? and how do I connect and use it?

- **Free cloud based hardware:** Oracle Cloud Infrastructure (OCI) Free Tier. 1x AMD based VM.Standard.E2.1.Micro instance (x86, 1GB RAM) with upto 200GB of block storage and 10TB of monthly outbound data transfer, with a static public IP address.
- **Operating system installed:** Ubuntu 24.04.4 LTS.
- **Applications currently installed:** xlxid v2.5.3 (latest version as of May 2026).
- **Using DMR via a hotspot:** On the configuration page, under “DMR Configuration”, set “DMR Master” to “DMRGateway” and “Apply Changes”. Back under “DMR Configuration” change “XLX Master” to “XLX_202”. You can also specify which Module you want to initially connect to on the reflector with the “XLX Startup Module” setting. You need to have a channel setup that has the frequency of your hotspot, the ID number “6” and “Call Type” set as “Group Call”. You will then be able to transmit and receive using this channel. To change modules you can perform a private call to 64001 for module A to 64026 for module Z. You should disconnect after use by performing a private call to 64000.
- **Using YSF via a hotspot:** On the configuration page, under “Yaesu System Fusion Configuration”, set the “YSF Startup Host” to “YSF60202 – GB-XLX202C – GX3SBL Ref UK”. You then need to refer to your radios manual for how to connect to “YSF60202”, usually pressing a “Wires-X” button and then specifying or searching/selecting “YSF60202” from a list. To change modules you can change the TX DG-ID setting on your radio, use 10 for module A through to 35 for module Z. You should disconnect after use by following instructions in your radios manual. This is usually done by pressing your Wires-X button, pressing F + AMS, holding the BAND button, or similar.
- **Using D-Star via a hotspot:** Refer to your radios manual for how to connect to various reflectors and then attempt to connect to “REF202”, “XRF202” or “DCS202DL”. Once D-Star has been enabled on your hotspot, you can use the “Link Manager” to connect to “XLX0202” module “D” or any other available module of your choice.
- You can use a web browser to access and view the reflectors dashboard (<https://xlx202.clickandhope.com>).

XLX202 dashboard

























<https://xlx202.clickandhope.com>



XLX Multiprotocol Gateway Reflector
XLX202 v2.5.3 - Dashboard v2.4.5 / Service uptime: 33 days 03:26:49

Users / Modules | Repeaters / Nodes (2) | Peers (0) | Modules list | Reflectors list | D-Star live | Help

Callsign Apply | Module Apply

#	Flag	Callsign	Suffix	DPRS	Via / Peer	Last heard	
1		M0VTS			M0VTS B	09.05.2026 16:31	C
2		M7RPO			M7RPO B	09.05.2026 16:31	C
3		GW4NVH			G4NVH B	08.05.2026 20:19	C
4		M9PGM			M9PGM B	06.05.2026 22:07	C
5		G6OTZ			G6OTZ B	04.05.2026 16:33	C
6		M1FIQ			M1FIQ B	03.05.2026 21:06	C
7		M0WTN			M0WTN B	03.05.2026 21:04	C
8		2E0ESN			2E0ESN B	03.05.2026 21:01	C
9		M6NUJ			M6NUJ B	03.05.2026 10:18	C
10		2E0FVF			2E0FVF B	30.04.2026 20:17	C
11		G1WVZ			G6OTZ B	29.04.2026 21:10	C
12		M7SQH			M7SQH B	19.04.2026 21:03	C

12°C Partly sunny | 15:37:06 10/05/2026

Thank you!

Questions?

John, MOWTN

MOWTN@winlink.org

