SLink Port Protocols

SLink is not a protocol, but an intelligent port which automatically switches mode depending on what it is connected to. It can run one of 3 different protocols at one time.

It carries out Sample Rate Conversion when required to ensure the SQ always runs at 96kHz internally for all processing and mixing.

<table>
<thead>
<tr>
<th>Protocol</th>
<th>Sample Rate</th>
<th>Total Inputs</th>
<th>Total Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>dSnake (+ME)</td>
<td>48kHz</td>
<td>40</td>
<td>20 (+40 ME)</td>
</tr>
<tr>
<td>DX</td>
<td>96kHz</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>gigaACE/GX</td>
<td>96kHz</td>
<td>128</td>
<td>128</td>
</tr>
</tbody>
</table>

SLink Option Card

The SLink Option card provides an additional SLink port to any SQ console.

It has exactly the same functionality as the built-in port, but operates independently, allowing for two different protocols to be run on the same system.

With an SLink card fitted, all possible SLink connections listed in this document can therefore be run on either port, and any combination of two can be used simultaneously with one console.

DX Hub

The DX Hub features 1x gigaACE port for connection to the mixer, along with 4x DX ports for connection to DX expanders.

The mixer shows 128 inputs and 128 outputs, which are mapped as follows:

- DX Port 1 (32x32) = gigaACE/GX inputs and outputs 1-32
- DX Port 2 (32x32) = gigaACE/GX inputs and outputs 33-64
- DX Port 3 (32x32) = gigaACE/GX inputs and outputs 65-96
- DX Port 4 (32x32) = gigaACE/GX inputs and outputs 97-128

Notes:

- The SQ features 48 input processing channels. Adding connections via SLink provides access to more inputs and outputs, but does not increase the number of processing channels available.
- Multiple protocols cannot be used at the same time on a single port.
- dSnake and DX protocols support a maximum of two remote audio units per port.
  - The AR2412 and AB168 have dedicated expander ports.
  - It is not possible to connect two AR2412’s to one port (as the maximum number of dSnake inputs is 40).
  - The DX168, DX164W and DX012 should be set to ‘Cascade’ mode with the second unit connected to port B.
  - The second DX unit in cascade mode uses inputs and outputs 17-32. For example, with two DX168s connected directly, outputs 9-16 are unavailable and the outputs for the second unit are 17-24.
- The ME personal monitoring system can either be connected directly to the SLink port, to an ‘Expander’ or ‘Monitor’ port on AR2412/AB168 or to the DX2/ME port on GX4816 (with no DX expanders connected).
- Expander firmware is automatically checked and matched to the console upon connection.
- The maximum distance between each connection is 100m. This means the distance from the SLink port to the first unit can be 100m, and the distance from that unit to a second can also be 100m.
- Cat5e (or higher) STP cable should be used throughout any system.
dSnake (+ME)

Supported SLink Port Connections, SQ Firmware V1.4.0
Supported SLink Port Connections, SQ Firmware V1.4.0

**SQ**
- +AB168
- +AR2412
- +AR84
- +40 Mic/Line Inputs
- +20 Line Outputs
- +40 Monitor
- Protocol: dSnake + ME
- Sample Rate: 48kHz

**ME**
- PERSONAL MIXING SYSTEM

**Connectio**ns:
- dSnake: Cat5e or higher
- ME: Cat5e or higher

**Models:**
- SQ-5 / SQ-6 / SQ-7
dSnake (ME only)

Supported SLink Port Connections, SQ Firmware V1.4.0
Supported SLink Port Connections, SQ Firmware V1.4.0
- **Supported SLink Port Connections, SQ Firmware V1.4.0**

**SQ + DX32**
- The number of inputs/outputs depends on the 4 modules installed
- Each slot uses 8 input or 8 output channels
- Mic/Line/AES Inputs
- Line/AES Outputs
- Protocol: DX
- Sample Rate: 96kHz

**SQ + DX012**
- Sockets 4-8 are either line (4-8) or stereo AES (1-8) outputs.
- Sockets 9-12 are either line (9-12) or stereo AES (9-16) outputs.
- Mic/Line/AES Inputs
- Line Outputs
- AES St Outputs
- Protocol: DX
- Sample Rate: 96kHz

**SQ + DX168 + DX012**
- The DX168 and DX012 can be connected in any order
- Use cascade mode for the first unit in the chain
- Mic/Line Inputs
- Line Outputs
- AES St Outputs
- Protocol: DX
- Sample Rate: 96kHz
Supported SLink Port Connections, SQ Firmware V1.4.0

- **SQ + DX Hub + 3 x DX168**
  - QC: 48
  - 128
  - 128
  - 128
  - 96

  - **Protocol**: gigaACE/GX+DX
  - **Sample Rate**: 96kHz

  - **Up to 2 DX168s or DX164Ws can be connected in any order to each DX port using cascade mode**

- **SQ + DX Hub + 4 x DX168 + 4 x DX164W**
  - QC: 48
  - 128
  - 128
  - 128
  - 96

  - **Protocol**: gigaACE/GX+DX
  - **Sample Rate**: 96kHz

  - **Up to 2 DX168s or DX164Ws can be connected in any order to each DX port using cascade mode**

- **SQ + DX Hub + 6 x DX168 + 2 x DX012**
  - QC: 48
  - 128
  - 128
  - 128
  - 96

  - **Protocol**: gigaACE/GX+DX
  - **Sample Rate**: 96kHz

  - **Up to 2 DX168s or DX012s can be connected in any order to each DX port using cascade mode**
Supported SLink Port Connections, SQ Firmware V1.4.0
Supported SLink Port Connections, SQ Firmware V1.4.0
<table>
<thead>
<tr>
<th>Remote Unit/s</th>
<th>SLink mode</th>
<th>SLink Inputs</th>
<th>SLink Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR84</td>
<td>dSnake</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>AB168</td>
<td></td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>AR2412</td>
<td></td>
<td>24</td>
<td>12</td>
</tr>
<tr>
<td>AR168 + AR84</td>
<td></td>
<td>24</td>
<td>12</td>
</tr>
<tr>
<td>AR168 + AB168</td>
<td></td>
<td>32</td>
<td>16</td>
</tr>
<tr>
<td>AR2412 + AR84</td>
<td></td>
<td>32</td>
<td>16</td>
</tr>
<tr>
<td>AR2412 + AB168</td>
<td></td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>DX164W</td>
<td>dX</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>DX164W + DX164W</td>
<td></td>
<td>32</td>
<td>8</td>
</tr>
<tr>
<td>DX168</td>
<td></td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>DX168 + DX168</td>
<td></td>
<td>32</td>
<td>16</td>
</tr>
<tr>
<td>DX32 (I/O module dependant)</td>
<td></td>
<td>≤32</td>
<td>≤32</td>
</tr>
<tr>
<td>DX012 (analogue/digital dependant)</td>
<td></td>
<td>0</td>
<td>≤16</td>
</tr>
<tr>
<td>DX Hub + 3 DX168</td>
<td></td>
<td>48</td>
<td>24</td>
</tr>
<tr>
<td>DX Hub + 8 DX168</td>
<td></td>
<td>128</td>
<td>64</td>
</tr>
<tr>
<td>DX Hub + 4 DX168 + 4 DX164</td>
<td></td>
<td>128</td>
<td>48</td>
</tr>
<tr>
<td>DX Hub + 6 DX168 + 2 DX012</td>
<td></td>
<td>≤96</td>
<td>≤80</td>
</tr>
<tr>
<td>GX4816</td>
<td>gigaACE/GX</td>
<td>48</td>
<td>16</td>
</tr>
<tr>
<td>GX4816 + 1 DX168</td>
<td></td>
<td>64</td>
<td>24</td>
</tr>
<tr>
<td>GX4816 + 2 DX168 + 2 DX168</td>
<td></td>
<td>112</td>
<td>48</td>
</tr>
<tr>
<td>GX4816 + 2 DX168 + 2 DX012</td>
<td></td>
<td>≤80</td>
<td>≤64</td>
</tr>
<tr>
<td>ME system (any)</td>
<td>dSnake</td>
<td>0</td>
<td>40</td>
</tr>
<tr>
<td>Qu mixer (any)</td>
<td>dSnake</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>SQ mixer (any)</td>
<td>gigaACE/GX</td>
<td>128</td>
<td>128</td>
</tr>
<tr>
<td>Avantix (SLink or gigaACE option card)</td>
<td>gigaACE/GX</td>
<td>128</td>
<td>128</td>
</tr>
<tr>
<td>dLive (any, via gigaACE option card)</td>
<td>gigaACE/GX</td>
<td>128</td>
<td>128</td>
</tr>
</tbody>
</table>

**Total Assignable Inputs and Outputs per console (excluding USB and I/O Port)**

- **AR84**: 8 Inputs, 4 Outputs
- **AB168**: 16 Inputs, 8 Outputs
- **AR2412**: 24 Inputs, 12 Outputs
- **AB168 + AR84**: 24 Inputs, 12 Outputs
- **AB168 + AB168**: 32 Inputs, 16 Outputs
- **AR2412 + AR84**: 32 Inputs, 16 Outputs
- **AR2412 + AB168**: 40 Inputs, 20 Outputs
- **DX164W**: 16 Inputs, 4 Outputs
- **DX164W + DX164W**: 32 Inputs, 8 Outputs
- **DX168**: 16 Inputs, 8 Outputs
- **DX168 + DX168**: 32 Inputs, 16 Outputs
- **DX32 (I/O module dependant)**: ≤≤32 Inputs, ≤≤32 Outputs
- **DX012 (analogue/digital dependant)**: 0 Inputs, ≤≤16 Outputs
- **DX Hub + 3 DX168**: 48 Inputs, 24 Outputs
- **DX Hub + 8 DX168**: 128 Inputs, 64 Outputs
- **DX Hub + 4 DX168 + 4 DX164**: 128 Inputs, 48 Outputs
- **DX Hub + 6 DX168 + 2 DX012**: ≤≤96 Inputs, ≤≤80 Outputs
- **GX4816**: 48 Inputs, 16 Outputs
- **GX4816 + 1 DX168**: 64 Inputs, 24 Outputs
- **GX4816 + 2 DX168 + 2 DX168**: 112 Inputs, 48 Outputs
- **GX4816 + 2 DX168 + 2 DX012**: ≤≤80 Inputs, ≤≤64 Outputs
- **ME system (any)**: 0 Inputs, 40 Outputs
- **Qu mixer (any)**: 60 Inputs, 40 Outputs
- **SQ mixer (any)**: 128 Inputs, 128 Outputs
- **Avantix (SLink or gigaACE option card)**: 128 Inputs, 128 Outputs
- **dLive (any, via gigaACE option card)**: 128 Inputs, 128 Outputs

**Notes:**
- **SLink Port Connections, SQ Firmware V1.4.0**
- **ME system (any)** and **Qu mixer (any)** are not supported with SLink connections.