Customer Deliverable Documentation
Revision 1.00, October 10, 2012

G.SHDSL (2GS) Release Notes

Build Series G15

The G.SHDSL (2GS) software is an embedded application software for the SmartNode™ series of VoIP Gateways and Gateway Routers that provide a G.SHDSL interface.

Supported Products

SmartNode 4600 Large Series (HW Version: 2.x)
SmartNode 4660, 4670 Series (HW Version: 4.x)
SmartNode 4830 Large Series (HW Version: 2.x)
SmartNode 4950 Series (HW Version: 5.x)
SmartNode 4960 Series (HW Version: 5.x)
SmartNode 4990 Series (HW Version: 1.x)
SmartNode 5400 Series (HW Version: 5.x)
SmartNode 5490 Series (HW Version: 1.x)

SmartWare compatibility

G.SHDSL (2GS) Release	SmartWare Release
G15	R6.T_2012-07-18 or newer; R6.3 or newer
G14	R6.T_2012-07-18 or newer; R6.3 or newer
G13	R6.T_2012-07-18 or newer; R6.3 or newer
G12	R6.T_2012-03-15 or newer; R6.2 or newer
G11	R5.T_2011-09-13 or newer; R5.9 or newer
G10	R5.T_2011-09-13 or newer; R5.9 or newer
G07	R5.T_2011-09-13 or newer; R5.9 or newer
G06	R5.T_2011-09-13 or newer; R5.9 or newer
G05	R5.T_2011-03-16 or newer; R5.8 or newer
G04	R5.T_2011-03-16 or newer; R5.8 or newer
G03	R5.T_2010-11-12 or newer; R5.7 or newer

History of Solved CTS Cases

The following list refers to open cases in the Change Tracking System 'CTS'.

This Build Series G15

12038   G.S card DSL mode auto detection wrong bit-/payloadrate displayed

Bit and payload rate of the G.S card was still displaying the old rates when the link went down. When link was coming up again the old bit/payload rates were added to the new one. This bug has been fixed and now the bit/payload rate displays 0 when the link is down. When the link is up then it displays the correct rates.

This Build Series G14

11728   G.S card DSL mode autodetection

Now it is possible to configure the SmartNode to detect the G.SHDSL line mode automatically. It is able to detect whether it is connected to a 2-wire or a 4-wire line. The feature does not detect the interleave nor the enhanced mode. The preferred mode in case a 4-wire line is detected must be configured by the user. Therefore the original service mode command behaves as a preferred service mode if this feature is enabled.

New command: port a1 set ModeDetection [true | false]

Build Series G13

11981   G.S line rate negotiation fails at high distance

G.S line rate negotiation between the SmartNode and the CO may fail at high distance under some circumstances. This can be fixed by enabling the power backoff on the G.S interface. A new command has been implemented to configure the power backoff on the G.S interface. By default this value is set to 0dB (i.e. no power backoff) but it can be reduced down to -12dB depending on the distance and the CO type.

New command: port a1 set PowerScale [0dB | -1dB | -2dB | -3dB | … | -12dB]

Build Series G12

11638   PPPoA on G.S interface

PAE bridge implemented in G.S software in order to support PPPoA connection for SmartNode.

Build Series G11

11767   G.S Interop problem with Zhone DSLAM

Backward interop issue against Orion legacy code has been fixed in the case of 4-wire auto fallback to enhanced mode.

Note: Legacy Orion CO does not support Standard mode, which means that the CPE should be configured in Enhanced mode. Moreover, the bit rate mode must be set to a fixed rate in this case (i.e. not adaptive).

Pair reversal

In 4-wire mode, the two pairs can now be reversed without affecting the link of the two pairs.

Build Series G10

11727   Lost connectivity

Powering on and powering off a SmartNode device could cause corruption of the DSL software. This leads to a complete loss of the connectivity on the DSL interface. Measures have been taken to guarantee the stability of software. With these measures taken the DSL interface has proved to be immune against this kind of corruption.

Build Series G07

11711   Improved interoperability

New DSP software improves stability and interoperability. In particular legacy Orion architectures and a new Lantiq DSLAMs are supported now.

Build Series G06

11594   Additional parameters in G.SHDSL status: SNR, Loop Attenuation, Port States

The DSL interface now also provides values for the SNR, Loop Attenuation and Port State parameters. For these values to be displayed, the SmartWare version given in the compatibility table is required.

11618   Link not coming up due to handshake incompatibility

With some specific DSLAM devices the link on the DSL interface could not be established. This fix adds backward compatibility to handshake messages from some legacy devices with an old handshake version ID.

Build Series G05

11305   Activity and Link LED

The two LEDs associated with the G.SHDSL interface had been statically turned on at power-on but did not show any specific behavior. Now the link LED is blinking while establishing the link and remains on as long as the link is up. The Activity LED now blinks depending on the amount of traffic sent over the DSL line.

Caveat - Known Limitations

The following list refers to open cases in the Change Tracking System 'CTS'

CTS11539

When switching from fixed to adaptive bit rate mode the negotiated bit rate will be equal to the last configured fixed bit rate. Rebooting the SmartNode after changing to adaptive bit rate mode will solve this problem.

Documentation

Please refer to the following online resources:

- Software Configuration Guide SmartWare Release R6.2:
  http://www.patton.com/manuals/SCG-r62.pdf

- SmartWare Configuration Library:
  http://www.patton.com/voip/confignotes.asp

How to Upgrade

If you run a SmartWare version which is not listed as compatible to the G.SDSL software you need to upgrade the SmartWare first by following points 1-3. If SmartWare is already up to date you can start upgrading the G.SHDSL firmware starting with point 4.

1. Extract <SmartWareFirmware>.zip to <tftp_root_folder>/smartware

2. You have the choice to upgrade with or without the GUI functionality.

    To upgrade SmartWare without the GUI functionality, enter the following command (telnet, console):

    ```
    copy tftp://<tftp_server_address>/smartware/b flash:
    ```

    To upgrade SmartWare with the GUI functionality, enter the following command (telnet, console):

    ```
    copy tftp://<tftp_server_address>/smartware/bw flash:
    ```

3. Reboot the SmartNode afterwards:

    ```
    reload
    ```

4. Extract G.SDSL_Firmware(G15).zip to <tftp_root_folder>/2gs

5. To upgrade to G15 enter the following command (telnet, console):

    ```
    copy tftp://<tftp_server_address>/2gs/b flash:
    ```

6. Reboot the SmartNode afterwards:

    ```
    reload
    ```

How to submit Trouble Reports

Patton makes every effort to ensure that the products achieve a supreme level of quality. However due to the wealth of functionality and complexity of the products there remains a certain number of problems, either pertaining to the Patton product or the interoperability with other vendor's products. The following set of guidelines will help us in pinpointing the problem and accordingly find a solution to cure it.

Problem Description:
Add a description of the problem. If possible and applicable, include a diagram of the network setup (with Microsoft tools).
Product Description:
When reporting a problem, always submit the product name, release and build number. Example: SmartNode 4960 *V1 R5.T Build G15* This will help us in identifying the correct software version. In the unlikely case of a suspected hardware problem also submit the serial number of the SmartNode (s) and/or interface cards.
Running Configuration:
With the Command Line Interface command 'show running-configuration' you can display the currently active configuration of the system (in a telnet and/or console session). When added to the submitted trouble report, this will help us analyze the configuration and preclude possible configuration problems.
Logs and Protocol Monitors:
Protocol traces contain a wealth of additional information, which may be very helpful in finding or at least pinpointing the problem. Various protocol monitors with different levels of detail are an integral part of SmartWare and can be started (in a telnet and/or console session) individually ('debug' command). **N.B.:** In order to correlate the protocol monitors at the different levels in SmartWare (e.g. ISDN layer3 and Session-Router monitors) run the monitors concurrently.
Network Traffic Traces:
In certain cases it may be helpful to have a trace of the traffic on the IP network in order to inspect packet contents. Please use one of the following tools (supporting trace file formats which our tools can read):   Ethereal (freeware; www.ethereal.com)
Your Coordinates:
For further enquiries please add your email address and phone number.