

Software Update Name: BCM\_360.274\_DSPFW.09.5129

Applicable H/W Platforms: BCM1000, BCM200, BCM400

Applicable S/W Platforms: BCM 3.6

Category: LTD

Installation Recommendations: This patch is required only on those systems experiencing either T.38 interop issues, or issues with Super G3 fax over T.38.

Component & Version: DSP firmware version 37.70.40.9

Dependencies:

Required patches - None

Product Dependencies - None

Size: 2.5 MB

System Impact: time to apply approximately 20 minutes

Does patch application force reboot: yes

Limitations: None

Patch Removable: no

The following issues are addressed:

1. Tolerance to simultaneous reception of T.38 and RTP streams

In some cases the CS1K continues to send RTP Voice frames following the setup of a T.38 session. If the RTP packets are received by the T.38 gateway on BCM, then the T.38 session will fail. In this patch additional checking is added to the T.38 endpoint to filter these RTP packets out.

2. T.38 Tandemmed Sessions

On T.38 sessions which are tandemmed through Passport 6480 fax relay, NSF frames sent through the PP6480 are changed to V.21 preamble by the PP6480. This results in a preamble which exceeds the BCM's preamble timer.

The most common symptom of the preamble timer expiry is the failure to establish any fax session through T.38. In this patch the preamble timer is extended to permit the extended preamble.

### 3. Super G3 Compatibility

Super G3 (or V.34) fax is not supported over T.38, and an attempt to establish a V.34 fax session over T.38 will fail. In most cases, Super G3 will back off to use G3 fax if negotiation with another Super G3 fax machine fails. It is this back-off mechanism which is used by T.38 gateways to support Super G3 fax machines.

In the case addressed by this patch the Super G3 fax machine uses the type of answer tone presented by the answering fax machine to determine if it will use V.34 fax or one of the Group 3 fax modulations.

To prevent originating Super G3 fax machines from attempting to use V.34 fax, the answer tone (either CED or ANSam) is blocked from being passed through the speech path. In the place of the answer tone generated by the answering fax machine, the VoIP task will pass a constant 2100Hz tone (CED). This change has the effect that the originating fax machine sees only the characteristics of a Group 3 fax machine, even if it is connected to a Super Group 3 fax machine.

This patch includes the content of the following superseded patches:  
Patch #269 - BCM 3.6 Post-GA DSP Firmware Patch 4