



SD-8686 Fedora FC6-SYSKT Driver and
Firmware
Release Note
V 9.70.3.p24-26409.P45-GPL (V9 release)

Release Note

March 11, 2007

Driver version: 26409.p45-GPL

- **First two digits:**
 - 24 → Works for Linux kernel 2.4
 - 26 → Works for Linux kernel 2.6
- **Last three digits:**
 - Actual driver version

Firmware version: 9.70.3.p24

- Following is an explanation of each digit in the versioning scheme designed for the firmware:
 - **Major Revision (first number from the left):** Tracks the main FW version.
 - **Minor Revision (second number from the left):** Tracks the chip family, firmware branch, custom projects. etc.
 - **Release Number (third number from the left):** this number tracks the incremental changes in the consequent firmware releases given to QA or customers.
 - **Patch Number (forth number from the left):** Customers may want to receive a firmware build based on a previous release plus specific bug fixes, or patches. It is not unusual for customers to request this when they are close to production. The patch number starts at zero (no patch), and increments as we release subsequent builds with more bug fixes.

Optimized Register Settings: Version 2.1

Host Platform : Laptop running Fedora Core FC6 Linux (kernel 2.6) with Sysconnect SDIO host board

Tested HW:

- SOC/RF chipset: 88W8686 B2

Systems Software Modules:

- SD8686 Driver
 - Binary .ko file
 - Source files
 - Binary requires kernel with WE17 support

Test Tools:

- Aironet AiroPeek Wireless Sniffer
- iperf for the Linux builds and apple© builds.
- Lightpoint IQNxN Spectrum meter tools.



Software Features:

- 802.11 b/g
- Infrastructure & Ad-Hoc Mode
- IEEE Power Save Mode
- WEP Encryption (64 bit/128 bit) for Infrastructure network mode
- WEP Encryption (64 bit/128 bit) for Ad-hoc network (IBSS) mode
- WPA-PSK TKIP Security
- WPA2
- Transmit Power Control
- Subscribe Events
- Deep Sleep
- BT-Coexistence
- Host Sleep
- 802.11d
- WMM
- UAPSD
- Ad-Hoc Power Save
- Inactivity Timeout
- Enhanced Background Scan (Idle, Infra and Infra PS modes)
- CCX v2/v3/v4 ASD
- Proprietary Power Save
- Hostcmd generic API
- Power Regrouping Config (with API)
- ARP/IP Filtering in Host Sleep mode
- Enhanced Subscribe Events
- IBSS (Ad-hoc network) coalescing
- Private command to get SNR and rate RxPD
- Private command and API to get first TxRate
- Private command to set beacon interval in ad-hoc mode
- Support up to 10 SSIDs in Background Scan
- Implemented SDIO GPIO Interrupt Config function
- Keep Alive tx (Auto-Tx)
- Enhanced Host Sleep
- LED control
- WPS (Infra, AdHoc)
- Re-association enhancement(make before break)
- SNAP header control
- g-mode protection in AdHoc mode
- 886 support

New Features and Enhancements:

Bug fixes:

- Firmware** (since 9.70.3.p23)
- Enhance link lost detection to reset the link loss counter when Tx or Rx unicast data frames are successfully exchanged with the associated BSSID

- Missing SSIDs in scan table for hidden-SSID APs when issuing a broadcast + specific SSID scan in a single SCAN command
- Implement code to use DPDT for FE ant diversity control
- Arpfilter + Hsconfig (unicast) does not work
 - Support for wildcard EthType has been added for ARP filtering
 - The usage is indicated in the below entry

```
arpfilter={
  TlvType:2=0x0115
  TlvLength:2={
    AddrType:2=3      # multicast
    EthType:2=0xffff # wildcard: 0xffff
    Ipv4Addr:4=0xffffffff # not used
    AddrType:2=1      # broadcast
    EthType:2=0x0608  # ARP: 0x0806
    Ipv4Addr:4=0x5800a8c0 # 192.168.0.88
  }
}
```

- UUT advertises the incorrect basic rates in its beacons after joining an IBSS network whose basic rates does not include any OFDM rates.

Driver (since 26409.p44)

- Default power for Japan region is too high
- UUT freezes while running scan + assoc + keepalive + HS stress test
 - Issue host commands with the non-wait option set to prevent the system from hanging when it is busy
- Adhoc network is created on an incorrect channel when dot11d is used

Known issues:

None.

Note:

- V9 driver does not work with V8 firmware.
- WPS application version 2.00 should be used.
- Supports EEPROM structure Rev 0xC
- 802.11d features in firmware are disabled at power on.
- Please refer to the **README file** for updated usage manuals on iwpriv and wlanconfig