

Hannaford LLC  
380 Jackson Street  
Suite 700  
St. Paul, MN 55101

### Device Operation Description

IC ID# 10100A-2690

#### Device overview

This device is a black-white, data-only, simple Kindle e-reader device with the following key device features -- 8" screen; WIFI or 3G connection; 167 DPI screen resolution; a USB port as the only external interface, 268MB internal memory, and no audio support, and no internal graphic processor or accelerator. The black-white e-ink based display is intended to provide the maximum power saving to the users. The primary advantage of this device is to allow the users to enjoy up to 3 months of content download and off-line readings per a single charge.

This device is not a tablet PC and is not a color device.

This device is capable of supporting the following --

- a) Allows the users to make a purchase from Amazon.com any of the following items -- books, newspaper, periodicals, research document and blogs.
- b) Allows the users to download the purchased items wirelessly via WIFI or 3G connections.
- c) Allows to users to read the content of the downloaded item on an off-line basis and as a stand-alone, non-connected e-reader.
- d) Allows the users to share the downloaded content with other users through USB port connected to a desktop PC. Through the PC as a medium that the borrowed content can be sent to another Kindle device.

This device is not capable of supporting or performing the following tasks --

- a) File sharing All file transfer and sharing is done exclusively via USB port via a USB cable and connection to the PC. With PC as a common storage medium that the different users can share the downloaded content (books, magazine, periodicals etc). USB wired transfer through a PC is the only method and no over-the-air file sharing is allowed.
- b) Internet browsing. The device is pre-set to go into Amazon.com only to allow and enable the users to make a purchase of the content from Amazon.com site to achieve quick download.
- c) Web surfing This device does not have any internal circuitry capability to support web surfing. It has no graphic accelerator or image processor to enable web surfing. The intent of this device is to enable a prolonged and off-line reading experience after the users have downloaded a particular reading material.
- d) Voice or audio This device has no audio circuitry built in. It has no speakers or microphone. It does not support no video streaming, VoIP, text-to-speech, audiobook playback or mp3 capabilities. This device is a simple data-only device that supports no voice/audio.

- e) Video streaming This device is a low-cost device that does not include any graphic accelerator or processor. The intent of this device is to enable a prolonged and off-line reading experience after the users have downloaded a particular reading material.
- f) Proximity sensor capability. The proximity sensor shown in the block diagram is a feature for automated testing in the factory and has no user-related function. It is used to identify the device to factory test equipment for automated testing purposes. It is specifically useful in a high-volume production ramp-up cycle at the factory.

#### WAN RF IC Chipset details

The WAN RF IC chip used in this device is an in-house design. It is a proprietary IC for use in Amazon black and white e-readers only. It is not commercially available anywhere else and is not used in any other products. The WAN IC does not support any voice, and supports only data in the following modes - HSDPA, WCDMA, EDGE, and GPRS. GSM is disabled, and not implemented, in this WAN IC chip because the device does not require it.

#### WiFi RF IC chipset details

The WiFi RF IC chipset used is Atheros 6803 (802.11 b/g/n). No voice support is enabled for this WiFi RF IC chipset used in the device. Atheros 6803 supports the following key features -

- Operates only at 2.4GHz band
- WiFi Ad-hoc, WiFi display, WiFi direct are not supported.
- All-CMOS IEEE 802.11 b/g/n single chip client.
- Single stream 802.11n provides the highest throughput and superior RF performance
- Advanced features include --
  - Full and half guard interval
  - Frame aggregation
  - STBC (space time block coding)
  - LDPC (low density parity check) encoding
- Integrated high-output Atheros Efficient Power Amp and LNA for the lowest BOM
- Supports interfaces used in embedded designs: SDIO v2.0 (4 bit or 1 bit)
- Lowest power consumption in the industry with near zero in idle/standby modes, extending host device's battery life, Ideal for low power-consuming host devices.
- Integrated on-chip processor to minimize external host-based footprint requirement and offload the processing loads on host's main processor.
- Supports multiple reference clocks with programmable input
- Designed specifically for eReaders for low power consumption and extended end-use application.

Respectfully,

  
James Grier  
President