

Exhibit 3

Nurit 3010/CDPD

Point of Sale Device

Lipman USA

FCC ID: O2SNURIT3010C

Technical Descriptions and Tune-up Procedure

Ref: FCC Parts 2 paragraph 2.983(d)

TECHNICAL DESCRIPTION OF THE EQUIPMENT

Ref.: FCC Part 2 paragraph 2.983(d)

Lipman Nurit 3010 CDPD Point of Sale Device

With a

Novatel NRM-6832 Transmitter, CDPD

Tune-up Procedure at Nominal Operating Power:

Limiting Power:

The unit integrates the Novatel CDPD module that complies with part 22 under FCCID NBZNRM6832 which will not allow us to exceed the max allowable limit.

Circuitry and Devices for Determining and Stabilizing Frequency:

Frequency Stabilization:

The unit integrates the Novatel CDPD module that complies with part 22 under FCCID NBZNRM6832 which has demonstrated a stability of 1.5 PPM.

Suppression of Spurious Radiation:

Spurious and harmonic suppression is achieved by proper board layout, power distribution among ground planes and good filtering. We have demonstrated continuous compliance in our factory.

Limiting Modulation:

The unit integrates the Novatel CDPD module which complies with part 22 under FCCID NBZNRM6832 which will not allow us to alter modulation from the GMSK.

Technical Description for the Nurit 3010 Novatel CDPD Unit

Preface:

The purpose of this document is to give technical information of the POS Terminal: "NURIT- 3010" for FCC regulation. The description is based on the attached block diagram in the last page of this document.

General:

The unit is built out of three boards: The main or CPU board, the KEYBOARD and the RADIO ADAPTER board.

CPU Board:

The CPU board includes the following circuits:

MAIN power supply:

The main power supply produces +5V also called VCC for the logic circuit as well as the modem and also used to drive the display back-light LED. The power supply consists of the MC34063AD PWM controller in a configuration of a buck (step-down) regulator running in a frequency of 40KHz-50KHz. A dc in voltage of 12V to 18V is applied throughout a p-channel FET switch, which is controlled by the PWM controller. The drain of the FET is tied to a Schottky diode and the energy storage inductor. The output of the inductor is tied to voltage divider, which connected to the sense input of the PWM controller. The inductor is also tied to an output filter capacitor and a protection zener diode, then to the powered circuitry. Regulation of +5V is accomplished by variation of the duty-cycle of the switching FET upon sensing the feedback voltage. While running by the UPS batteries, the output voltage of the battery pack (7.2V nominal) is connected via Schottky diode to the input of the power-supply. The main power-supply can work in an input voltage range of 6V-20V.

PRINTER power supply:

The printer power supply produces 7.65V also called VP for the printer. The power supply consists of the MC34063AD PWM controller in a configuration of a buck (step-down) regulator running in a frequency of 40KHz-50KHz. A dc in voltage is applied throughout a p-channel FET switch, which is controlled by the PWM controller. The drain of the FET is tied to a Schottky diode and the energy storage inductor. The output of the inductor is tied to voltage divider, which connected to the sense input of the PWM controller. The inductor is also tied to an output filter capacitor, and via another FET switch to the powered circuitry. Regulation of 7.65V is accomplished by variation of the duty-cycle of the switching FET upon sensing the feedback voltage. While running by the UPS batteries, the output voltage of the battery pack (7.2V nominal) is connected via Schottky diode to the regulated output of the power-supply. The printer power-supply can work in an input voltage range of 8.5V-20V.

PIN-PAD power supply:

A 3-lead linear regulator 7809, for the pin-pad circuit regulates the pin-pad power supply to 9V (VPP). While running by the UPS batteries, the output voltage of the battery pack (7.2V nominal), is connected via Schottky diode to the regulated output of the power-supply. The pin-pad power-supply can work in an input dc-in voltage range of 12V-20V.

POWER-LOSS detection circuit:

The CPU board includes a power-loss detection circuit in order to detect electrical breaks. When the input DC voltage goes below 9V, it is detected by a comparator circuit and signals the CPU by one of the interrupt signals that a power loss occurred. Then, the last

status of the terminal is saved. Upon power-up the CPU is being signal for power recovery and the last status is restored.
While working on batteries this interrupt is disabled.

System processor:

The main system processor is a MOTOROLA MC68EC000FU with a 32 bit core, 16-bit data bus and 24-bit address bus. The processor runs with a system clock of 20MHz which is produced by the System ASIC. The processor has 7 different input interrupt sources. All memory devices and I/O devices are located within its 16Mbytes address space.

System Memory:

The unit includes 1Mbyte program flash memory which can be upgraded to 2Mbytes. The unit includes static RAM from 128Kbytes up to 2Mbytes with hardware write protected feature for sections of the memory. The RAM is backed up with an on-board 3.6V 36mAh NiMH battery.

System Real Time Clock (RTC)

The System RTC is based on the Seiko S-3510ANFJX chip running with a built in oscillator circuit of a 32Khz. The RTC is working with the main Vcc and backed-up with the same on board NiMH of the RAM. The battery is charged when the unit is turned on. The RTC has a serial I/O interface, which is connected to the system ASIC.

System ASIC:

The system ASIC has a built-in oscillator, which produces, with an external 20Mhz crystal, the system clock. The ASIC is also controlling the CPU bus timing. The ASIC also includes part of the decoding logic of the system. It produces controlling signals to the printer mechanism and to the graphic display contrast drive circuit. The ASIC has a built-in UART. It has a serial I/O and CLK port for interfacing the RTC as well as the SAM and smart card. The ASIC also includes system-reset circuit and the On/Off switch debounce circuit.

Printer:

The printer mechanism is seiko LTP-1245 - a line thermal printer mechanism, with a resolution of 384 dots/line, and with a maximum speed of 450 dot lines/second (at 7.2V). It also features Out of paper detection, Automatic paper load, and Head temperature detection. The Head temperature is evaluated using a D/A resistor network divider, controlled by the ASIC signals. The printer head and motor is fed with a 7.2V(SW_VP signal), from the printer power-supply. The printer motor control interface is built with LB1843V-a current controlled bidirectional motor driver (also fed from a 7.2V), and 74HC123-a retriggerable monostable multivibrator. The motor operation mode is determined by 4 phase state signals, which is driven by the System ASIC. The printer clock and data are serially interfaced. The serial clock for the printer is a 2.5MHz clock, which is derived from a 5MHz clock (which is also derived from the CPU clock). Each time Data byte is loaded into a shifter device and then is serially shifted to the printer, synchronized with the printer serial clock. After all data is loaded into the thermal head shift register, the head is activated by the DST (data strobe) signals ,each of them for one of the six printing area of the head. In order to protect the head from overheat due to software problem, there is a hardware watch-dog mechanism which forced every 8mSec the DST signals into logic "low" state.

SAM's (optional):

There are 2 optional accessible SAM's on the CPU: SAM3 and SAM4 (SAM0(Smart Card), SAM1 and SAM2 are located on the keyboard). Each SAM on the cpu uses a +5V(Vcc) voltage, which is regulated from the +9V(VPP). The controlling signals for the SAM's are given from the internal data bus. The clock for the SAM's working in an asynchronous mode is 5MHz clock. The signals used are: input data with data enable, output data, reset, clock with clock enable, and card detect. Data out signals from the SAM's are multiplexed to the System ASIC.

RS-232 Communication:

There are two RS-232 serial communication ports. One used as the PC port, which is a full hand-shake port. It is driven by the Zilog Z85C30 dual usynchronous/synchronous (USART) controller. The port is connected via level shifter from TTL voltage levels to RS-232C voltage levels.

The other port is used for the external PIN-PAD operation. It is driven by the System ASIC built in UART. This port is also connected to the VPP +9V power supply circuit in order to power the PIN-PAD.

Telephone Line Modem Communication:

Consists of: line port and phone port, line circuit, line hybrid circuit, 2400bps modem and one of the dual USART ports. The MODEM used is TDK 73K224L-capable of 2400bps full-duplex operation over dial-up line, and allows both synchronous and asynchronous communication. The modem complies with CCITT V.22bis and Bell 212A standards. The modem is fed from a +5V voltage (VCC), and includes a built in 11.0592MHz oscillator with an external crystal. It interfaces the line port through the line hybrid circuit, which prevents interference from the transmitted signal to the received signal. The line circuit performs the following: galvanic separation from the auxiliary phone to the system by a relay, telephone line seize and pulse dialing circuit which consist of optocoupler, power mosfet in a girator (electronic inductor) configuration and a current limit circuit. The line input is connected via diode bridge to overcome opposite line polarity connection. The AC signals are transmitted via a 600:600 line transformer. The line circuit includes a line detection circuit, which is consists of two optocouplers and a diode bridge. It also includes a telephone ring detection circuit consist of polyester capacitor resistor divider and an optocoupler.

The Radio Adapter Board:

The Radio-Adapter Board includes the following circuits: Radio power-supply, Radio interface circuit, battery fast charger and battery management circuit.

CDPD Radio power supply Module:

The power-supply produces 4V also called RADIO_PWR for the CDPD RADIO. The power supply consists of the MC34063AD PWM controller in a configuration of a buck (step-down) regulator running in a frequency of 40KHz-50KHz. A dc-in voltage is applied throughout a p-channel FET switch, which is controlled by the PWM controller. The drain

of the FET is tied to a Schottky diode and the energy storage inductor. The output of the inductor is tied to voltage divider, which connected to the sense input of the PWM controller. The inductor is also tied to an output filter capacitor, then to the powered circuitry. Regulation of 4V is accomplished by variation of the duty-cycle of the switching FET upon sensing the feedback voltage. While running by the UPS batteries, the output voltage of the battery pack (7.2V nominal) is connected via Schottky diode to the input of the power-supply. The radio power-supply can work in an input voltage range of 6V-20V. Radio power-on switch enables the radio power. Radio power-supply can be switched On/Off by the software.

CDPD Radio Interface Circuit:

The radio interface circuit consists of decoding, latches and buffer logic. It also includes a level shifter from 5V logic to 3.3V logic to interface the radio in both directions. The 3.3V is produced by a Low Drop Out regulator. The radio UART RXD/TXD signals are connected via the same level shifter, to the CPU USART at the same port as the modem.

CDPD Novatel Radio Module

The radio consists of OEM Radio Module: Expedite Wireless IP Modem manufactured by Novatel, that supports the CDPD standard. The module supports a serial interface of 3.3 Vdc with data rates up to 38,400 bits/sec. The airlink data rate is 19200 baud, supporting a full-duplex communication. The modem delivers an RF output power of 0.6W according to CDPD class 3 into a 50-ohm antenna port. The transmit frequency band is 824 MHz to 849 MHz, and the receive band is 869MHz to 894MHz. The main power supply requires 3.45 to 4.5 Vdc. The current consumption of the module is 5uA in modem-off mode, 19mA in sleep mode, 140mA in receive mode, and 450mA to 1000mA in transmit mode. The antenna connector is an MMCX connector.

Antenna

The antenna is a center fed printed circuit, blade antenna used for 806 MHz to 896 MHz CDPD terminal. The antenna consists of pigtail cable RG178 with right angle MMCX connector. Antenna gain is +2 dBi average. Polarization is linear, vertical. Pattern: Omni directional in azimuth, ± 2 dB ripple maximum. Antenna impedance is 50 Ohm nominal. The VSWR is max 2:1 in the band.

Battery Fast Charger and battery management circuit:

The battery fast charger consists of a current switch mode step down power supply which is controlled by two battery charge controllers IC: either MC33340 or BQ2002. The average fast charge current is C/2 rate (650mA). The current switch mode charger works in the following manner:

A DC input voltage of 12V to 18V is applied throughout a p-channel FET switch, the drain of the FET is tied to a Schottky diode, and the energy storage inductor. The output of the inductor is tied to a series current sense resistor network which is connected to an output filter capacitor. Regulation is accomplished by the following manner: The voltage built on the resistor network is amplified and compared to a reference voltage. When the current reaches the threshold, the FET is switched off and the inductor is discharged and then the cycle starts again (charge and discharge). The battery is also connected through a voltage divider to the charge controller.

When the battery is fully charged, the charger is going into a "Trickle Mode" either by changing the reference voltage (MC33340) or activating the charger in a different duty-cycle (BQ2002).

Motorola Fast Charge Controller MC33340 operation:

The controller senses a fully charged battery by a negative slope in its voltage ($-dv/dt$). It also stops fast charge by detection of undervoltage/overvoltage battery sense, or charge termination time by a built in timer. The controller reacts by changing the fast/trickle output for a trickle state. This output trickle state causes the reference voltage of the current switch mode circuit, mentioned above, to be changed into a smaller amplitude voltage. As a result, the charge current is reduced to a constant trickle charge current of $C/40$.

Benchmark Fast Charge Controller BQ2002 operation:

The controller senses a fully charged battery by its peak voltage detection (PVD). It also stops fast charge by detection of an over voltage battery sense, or termination charge time by a built in timer. The controller reacts by changing the operation intervals(duty-cycle), first to a TOP-OFF rate of $C/32$ and then to a TRICKLE rate of $C/64$.

Battery management circuit:

Consists of a battery low and very low voltage detection. This is done by comparing the battery voltage with two voltage levels. When the battery is below the “very low voltage”, the unit is shut down by the software. The circuit includes a power FET working as an electronic battery switch. The switch is activated by two ways: by pressing the “ON/OFF” button or by the software by asserting “power_on” signal.

Keyboard and display interface board:

Includes the following circuits:

Keyboard Matrix:Built as a 5 X 4(raw/column) matrix keyboard (total of 20 keypads). A polling method across the keyboard matrix is used for a key detection. The keyboard matrix is connected to a latch through diodes, and to a buffer through pull-up resistors. The On/Off key, which is connected in one pole to the GND, is used for controlling the battery switch.

Smart card (SAM0) SAM's interface (Optional):

There are 2 non accessible SAM's on the keyboard: SAM1 and SAM2. Each SAM uses a +5V(VCC) voltage. The signals for the SAM's are given from the external data bus. The clock for the SAM's is 4MHz clock. The signals used are: input data with data enable, output data, reset, clock with clock enable, and card detect. Output signals from the SAM's and the smart-card are multiplexed to the system ASIC. The smart card, also called SAM0, is fed from a +5V voltage, which is regulated from the +9V(VPP). The clock for the smart card is asynchronous 4MHz clock, or alternatively synchronous clock. It Has Card Insertion detection and it uses all the above mentioned signals as the SAMs.

Display:

Is a 128x64 pixels graphic display module, with a built in controller, and LED back light. It is operated from the main +5V(VCC).The display contrast can be a fix contrast using a resistor divider, or either a variable contrast that is controlled from the ASIC, via an analog circuit. The back light for the display can be a fixed back light using a fixed resistor, or either a variable back light, controlled by a data word shifted serially to the display back

light anode of the display. The clock to the shifter device is generated from an on board oscillator circuit.

Magnetic Card Reader:

Includes a 2-track card reader head, which is connected to the card reader interface. The card reader interface is built of some stages: amplifier stage, integrator and hysteresis comparator stage, buffer stage, and differentiator stage. When a card is swiped through the card reader slot, a magnetic field change on the card magnetic strip is sensed by the magnetic head and is translated into short pulses. Each pulse causes an interrupt to the processor and this way the information is analyzed. The interrupt can be masked by the software.