



SmarTerminal™

***Leader in Mobile
& RFID Technology***

www.smarterminal.com





FROM CEO & PRESIDENT:

SmarTerminal is proud to present the following and future products, designed to meet and exceed your expectations. It is our intention for our products to help your organization meet its information, data capture and mobility goals.

Our history at SmarTerminal is built on quality, design and passion, this is reflected in our products which we present to you.

We are committed to you, our product and building a partnership that will enhance productivity with your organization. We are SmarTerminal will support your mobility needs and we are with you every step of the way.

Thank you,

CEO (USA & INTERNATIONAL) **SK LIM**
SMARTERMINAL COMPUTERS, INC

CEO **MJ KIM**
SAMMI INFORMATION SYSTEMS CO., LTD

***Ti*TAN T8**

Rugged Tablet PC for Mobile Computing



TiTAN T8 the latest in the family of Mobile Computers from SmarTerminal delivering military grade computing to your workforce at an attractive price. Designed and tested at MIL-STD-810F and IP 65 standards for durability and environmental conditions, the TiTAN T8 can be customized to meet your organizations needs.

[SmartStation Series]

Industrial Computers



SmartStation series of Industrial Computers are designed for the harshest of environments with its Aluminum casing. Its different sizes and the flexibility to be customized allows the SmarStations to be installed from the factory floor to onboard vehicles.

SS10/SS12/SS15 Fixed & Vehicle Mount Computer

DISPLAY

SS10: 10.4" TFT Touch screen display, 300NIT
SS12: 12.1" TFT Touch screen display, 500NIT
SS15: 15.0" TFT Touch screen display, 250NIT

ENVIRONMENT

Storage Temperature: -20° to 60°C (-4° to 140°F)
Humidity: 5% to 95% RH Non-condensing
Vibration and Shock protection: MIL-STD-810F
Operating Temperature:
 · Standard: -20° to 50°C (-4° to 122°F) - Solid State
 0° to 50°C (32° to 122°F) - Rotating
 · Extreme Operating Temperature:
 -30° to 50°C (-22° to 122°F) - Solid State Drive (With heated display option)
Environmental Protection: Sealed to IP54

MEMORY AND STORAGE

· DDR2 1GB RAM standard, expendable to 2GB

MICROPROCESSOR

· Intel® Atom, N270 1.6GHz Processor

OPERATING SYSTEM

· Windows XP Professional
 · Windows XP Embedded
 · Windows 7 Professional
 · Windows 7 Ultimate

NETWORK

· Cisco® Compatible 802.11 a/b/g/n radio with industry standard wireless security protocols
 · Gigabit Ethernet

HARD DRIVE OPTIONS

· SATA 160G Hard Disk or higher
 · Solid State Drive

INTERFACES

· (2) Standard Serial Ports - DB9 / (1) Additional Serial Port option
 · (2) USB Host ports ver 2.0
 · (1) PS/2 Keyboard & Mouse Port
 · Audio 3.5mm stereo jack / Microphone In
 · Soft shutdown On / Off Switch (with Brightness control)
 · (1) Locking Power Input
 · (1) 4 x Digital Input / 4 x Digital Output

DIMENSIONS

SS10:	· Depth of 7.7cm (3 in.)	· Width : 25.8cm (10.1 in.)
	· Height : 22.1cm (8.7 in.)	· Weight : 2.4kg (5.3 lbs.)
SS12:	· Depth of 9.7cm (3.8 in.)	· Width : 30.6cm (12 in.)
	· Height : 26.7cm (10.5 in.)	· Weight : 3.5kg (7.7 lbs.)
SS15:	· Depth of 10.4cm (4.1 in.)	· Width : 38.4cm (15.1 in.)
	· Height : 33.3cm (13.1 in.)	· Weight : 5kg (11 lbs.)

POWER

· AC/DC Converter input 110/220V AC (60 watts)
 · External DC/DC Converter input 12-60V DC (70 watts)

SmartStation 10



SmartStation 12



SmartStation 15



SS10CE Designed for Fixed & Vehicle Mount System

DISPLAY

· 10.4" TFT Touch Screen Display, XGA 1024 × 768, 300 NIT

ENVIRONMENT

Storage Temperature: -20° to 60°C (-4° to 140°F)
Operating Temperature: 0° to 50°C (32° to 122°F)
Humidity: 5 % to 95 % RH Non-condensing
Vibration and Shock protection: MIL-STD-810F
Environmental Protection: Sealed to IP54

MEMORY AND STORAGE

· 128MB DDR SDRAM, 128MB NAND FLASH
 · External Storage: SD & Micro SD (MAX 8GB)

MICROPROCESSOR

· Samsung S3C6410 667MHz

OPERATING SYSTEM

· Windows CE 6.0

NETWORKS

· 802.11 a/b/g/n radio with industry standard wireless
 · Ethernet 10 Base 100T on-board
 · GPS : 9600bps (Option)
 · GPRS/GSM/EDGE (Option)

INTERFACES

· (2) Standard Serial Ports - DB9 / (1) Extension - DB15
 · (2) USB Host ports ver 1.1, USB Client ports ver 2.0
 · Audio 3.5mm speaker Jack, Mic Jack
 · EDK switch (standard)
 · (1) Locking Power Input
 · (1) 4 x Digital Input / 2 x Digital Output - DB9

DIMENSIONS

· Length: 5.6cm (2.2 in.)	· Width: 25.8cm (10.1 in.)
· Height: 22.1cm (8.7 in.)	· Weight: 1.9kg (4.2 lbs.)

POWER

· AC/DC Converter input 110/220V AC (60 watts)
 · External DC/DC Converter input 12-60V DC (70 watts)

Stainless SmartStation

Stainless Steel Industrial Computer



Stainless Steel SmartStation is the latest unit designed by SmarTerminal for the healthcare, chemical, and food industry. Its unique design allows it to be water resistant and flexible for multitude of functions and powered by the Intel Atom Processor. Stainless Station units are available for the healthcare industry with a 15" display under the SmartMed Brand.

❖ Stainless Steel for Fixed Mount Computer

▶ DISPLAY

SSS15 : Flush-Mount resistive touch panel 15.0", 250NIT

▶ ENVIRONMENT

Storage Temperature : -20° to 60°C (-4° to 140°F)

Humidity : 5 % to 95 % RH Non-condensing

Operating Temperature :

- Standard : -20° to 50°C (-4° to 122°F) - Solid State
0° to 50°C (32° to 122°F) - Rotating

· Extreme Operating Temperature:

- -30° to 50°C (-22° to 122°F) - Solid State Drive (With heated display option)

Environmental Protection : Sealed to IP67

▶ MEMORY AND STORAGE

- DDR2 1GB RAM standard, expendable to 2GB

▶ MICROPROCESSOR

- Intel® Atom, N270 1.6GHz Processor

▶ OPERATING SYSTEM

- Windows XP Professional
- Windows XP Embedded
- Windows 7 Professional
- Windows 7 Ultimate

▶ NETWORK CHARACTERISTICS

- 802.11 a/b/g/n radio with industry standard wireless
- Gigabit Ethernet

▶ INTERFACES

- (2) Standard Serial Ports - DB9 / IP67 Sealed Connectors
- (2) USB Host ports ver 2.0 / IP67 Sealed Connectors
- (1) Locking Power Input / IP67 Sealed Connectors
- Soft shutdown On / Off Switch (with Brightness control)

▶ DIMENSIONS

- Depth: 7.3cm (3.0 in.)
- Width: 42.2cm (10.1 in.)
- Height: 37.9cm (8.7 in.)
- Weight: 6.0Kg (13.2 lbs.)

▶ DIMENSIONS

- AC/DC Converter input 110/220V AC (60 watts)
- External DC/DC Converter input 12-60 DC (70 watts)



[SmartNL-RF1000]

Fix mount RFID Reader



SmartNL-RF1000 is a low cost UHF RFID Reader from SmarTerminal. Its simple design allows organizations to deploy the unit in office and commercial environment as a fix mount unit.

RF1000 Fixed RFID Reader

AIR INTERFACE PROTOCOLS

EPC global UHF Gen 2, ISO 18000-6C, EPC Class 1

FREQUENCY RANGE

US : 902MHz ~ 928MHz

EU : 865.6MHz ~ 867.6MHz

CERTIFICATIONS

FCC, CE

COMMUNICATIONS INTERFACE

RS232, Ethernet 100Mbps (RJ45 Connector)

ENVIRONMENT

Operating Temperature : -20℃ to 50℃ (-4°F to 122°F)

Storage Temperature : -30℃ to 75℃ (-22°F to 167°F)

Humidity : 10% to 90%(non-condensing)

DIMENSIONS

· Length : 107mm (4.2 in.)

· Height : 31mm (1.2 in.)

· Width : 98mm (3.8 in.)

· Weight : 476g (1.04 lbs)

USER INTERFACE

· Antenna : 1-4, Ethernet, RS-232

· Indicator : 3 LED

POWER

· AC/DC Converter input 110/220V AC (25 watts)



I/O part-Power Jack / Ethernet / Serial



4 Antenna connection

[RF Antenna]

SmartNL-AT1/AT2 Antenna

PERFORMANCE CHARACTERISTICS

Operation Frequency: 902MHz~928MHz

CENTRAL FREQUENCY

SmartNL-AT1 : 915MHz (L), 919MHz (C)

SmartNL-AT2 : 915MHz (L), 918.5MHz (C)

POLARIZATION: LINEAR, RHCP

Voltage standing wave ratio : 1.3:1 max. Ratio

ENVIRONMENTAL PROTECTION

IP65 Sealed

BEAM WIDTH

SmartNL-AT1 : 70 degree typical (L)/ (C)

SmartNL-AT2 : 70 degree typical (L), 65 degree typical (C)

TYPICAL GAIN

SmartNL-AT1 : 8.0dBiL (L)/ 5.3dBiL (C)

SmartNL-AT2 : 8.0dBiL (L)/ 6.0dBiL (C)

DIMENSIONS

SmartNL-AT1 : · Length: 200mm (7.9 in.)

· Thickness: 30mm (1.1 in.)

· Width: 200mm (7.9 in.)

· Weight: 600g (1.1 lbs.)

SmartNL-AT2: · Length: 260mm (10.2 in.)

· Thickness: 40mm (1.2 in.)

· Width: 260mm (10.2 in.)

· Weight: 800g (1.3 lbs.)



SmartNL-AT1



SmartNL-AT2

[SmartNL-RF2000]

RFID Reader



SmartNL-RF2000 is the latest in the RFID family of Readers from SmarTerminal. Its rugged design allows the unit to be deployed in harshest and high vibration environment as a fix mount and mobile unit. Successfully deployed on factory floors, forklifts and trucks the SmartNL RF-2000 delivers tag information back to your office.

RF2000 Fixed & Vehicle Mount RFID Reader

AIR INTERFACE PROTOCOLS

EPC global UHF Gen 2, ISO 18000-6C, EPC Class 1

FREQUENCY RANGE

US : 902MHz ~ 928MHz

EU : 865.6MHz ~ 867.6MHz

CERTIFICATIONS

FCC, ETSI

COMMUNICATIONS INTERFACE

RS232, GPIO, Ethernet 100Mbps (RJ45 Connector) / IP67 Sealed Connectors

ENVIRONMENT

Operating Temperature : -20℃ to 50℃ (-4°F to 122°F)

Storage Temperature : -30℃ to 75℃ (-22°F to 167°F)

Humidity : 10% to 90%(non-condensing)

Environmental Protection : Sealed to IP65

Vibration and Shock protection : MIL-STD-810F

DIMENSIONS

· Length : 223mm (48.8 in.)

· Width : 192mm (7.56 in.)

· Height : 68mm (2.67 in.)

· Weight: 1.57kg (3.5 lbs)

USER INTERFACE

· Indicator : 8 LED (NETWORK, DATA, ERROR, POWER, ANTENNA 1-4)

POWER

· AC/DC Converter input 110/220V AC (25 watts)

· External DC/DC Converter input 12-60 DC (15 watts)

Accessories



AC/DC Adapter



DC/DC Converter



Serial Cable



Ethernet Cable

RF Antenna



SmartNL RFID Reader

USB UHF/HF Reader



Simplicity is the KEY to the SmartNL USB RFID reader. Just plug it in and you are up and running reading TAGS.

RFID USB TYPE READER

SUPPORTED PROTOCOL

- SmartNL-LF100 : HD, HID (Human Interface Device)
- SmartNL-HF100/200/400 : 14443A/ 14443B/ 15693 , HID (Human Interface Device)
- SmartNL-RF300 : ISO 18000-6 Type-B/C, EPC Gen2, Class 1

FREQUENCY

- SmartNL-LF100 : 125KHz
- SmartNL-HF100/200/400 : 13.56MHz
- SmartNL-RF300 : 910MHz-914MHz

POWER CONSUMPTION

- SmartNL-LF100 : 30mA DC5V
- SmartNL-HF100/200/400 : 50mA DC5V
- SmartNL-RF300 : 500mA below DC5V

DIMENSIONS

- Length : 53mm (2 in.)
- Width : 85mm (3.3 in.)
- Depth : 17mm (0.6 in.)
- Weight : 20g (0.04 lbs.)

Smart-P7000

Industrial PDA with Printer



Smart-P7000 Specification Highlights

- ▶ **DISPLAY**
 - 3.5" TFT touch screen display, QVGA 240 × 320
- ▶ **MEMORY**
 - 256MB RAM/ 256MB Flash
- ▶ **MICROPROCESSOR**
 - Marvel PXA320 624~806MHz
- ▶ **OPERATING SYSTEM**
 - Microsoft® WinCE 5.0
- ▶ **WIRELESS**
 - 802.11 a/b/g, CDMA (3G, 2000-1X)
- ▶ **BARCODE SCANNING**
 - 1D Laser, 2D Imager
- ▶ **RFID MODULE**
 - UHF EPC Gen2, ISO 18000-6C
- ▶ **CARD READER**
 - MSR: ISO7811, 7812 (Dual track)
 - Contact: ISO7816 (EMV L1 & L2)
 - Contactless: ISO15693, Mifare, ISO14443 A/B
- ▶ **BATTERY**
 - Main Battery 3.7V, 4400mAh
 - Big Battery 8,800mAh (Option)
- ▶ **CAMERA & GPS**
 - 3M Pixel, UBLOC
- ▶ **PHYSICAL CHARACTERISTICS**
 - Length : 221mm (8.7 in.)
 - Width : 72.9mm (2.87 in.)
 - Height : 43mm (1.69 in.)
- ▶ **POWER**
 - AC/DC Converter input 110/220V AC



SmartAT-870

Rugged Handheld Terminal

Solution for Your Mobile Workforce

SmartAT-870 provides an organization with the ability to combine multiple functions into one simple rugged, cost effective solution.

From reading barcodes to RFID tags with cellular and wireless connectivity, SmartAT-870 transfers data from the field to your back office.

The SmartAT-870's modular design allows for custom configuration allowing you to design the unit to meet your needs.





RFID (HF/UHF) reader Module with Gun Handle

Rugged yet small

SmartAT-870

DISPLAY

3.5" TFT touch screen display, QVGA 240 × 320

ENVIRONMENT

Storage Temperature : -30° to 60°C (-22° to 140°F) -without Battery
Humidity : 5 % to 95 % RH Non-condensing
Operating Temperature : -20° to 50°C (-4° to 122°F)

MEMORY AND STORAGE

· 128MB SDRAM/ 256MB Flash ROM

MICROPROCESSOR

· Marvel PXA270 520MHz

OPERATING SYSTEM

· Microsoft® WinCE 5.0

NETWORK CHARACTERISTICS

· 802.11 b/g, Bluetooth (class 2), GPS, GPRS/GSM/EDGE

SLOTS

· 1 Micro SD slot, 1 slim slot

INTERFACES

· Alphanumeric keyboard, 2 scanner buttons
· Hands Free Speaker, Microphone/ Receiver/ Headset Port
· USB 1.1 Host & Client, RS232 interface (Connector Option), DC Jack

BARCODE SCANNING

· 1D Laser or 2D Imager

RFID MODULE

· HF (13.56MHz) : Tag support (ISO 14443A/B, 15693, MIFARE)
· UHF (900MHz/ US, EU) : Tag support (EPC C1G2, ISO 18000-6C)

BATTERY

· Main Battery 3,000mAh / Backup Battery 100mA
· Big Battery 4,400mAh
· Gun Handle 4,400mAh

DIMENSION

· Length : 146mm (5.75 in.) · Width : 74mm (2.9 in.)
· Height : 26mm (1 in.)
· Weight : 270g~330g (0.6 ~0.73 lbs.) - Depending on option

POWER

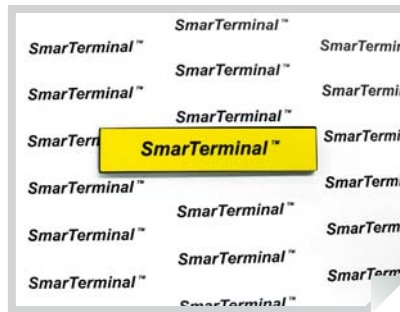
· AC/DC Converter input 110/220V AC

SmartTag Series

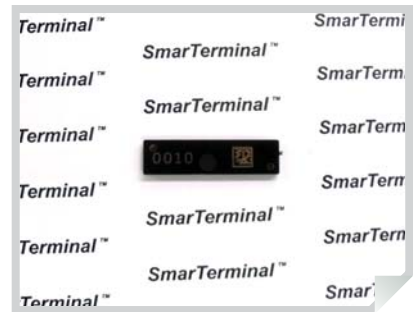
RFID Metal Tags



SmartTag Fastener



SmartTag General



SmartTag Smallest

RFID Metal Tags

DIMENSIONS

SmartTag Smallest: Length : 38mm, Width : 10mm, Thickness : 3mm,
Hole diameter: 2mm

SmartTag General: Length : 75mm, Width : 16mm, Thickness : 3.2mm,
Hole diameter : 4mm

SmartTag Fastener: Length : 148mm, Width : 18.2mm, Thickness :
3.2mm, Hole diameter: 5.5mm

READ RANGE (ON METAL)

SmartTag Smallest: Fix mount Reader : 2.5m, Handheld Reader : 1.0m

SmartTag General: Fix mount Reader : 4.0m, Handheld Reader : 1.5m

SmartTag Fastener: Fix mount Reader : 7.0m, Handheld Reader : 2.5m

MEMORY

- EPC : 96bits
- Use r: 512bits
- Unique TID : 64bits,
- Password : 32bits
- Kill : 32bits

ENVIRONMENT

- Humidity chamber test (85 °C/95% RH Test) : 168 hours' chamber test at 85 °C degree/ 95% relative humidity
- High temperature test (200 °C Test) : 6 hours' chamber test at 200 °C degree
- Thermal cycling test (-45 °C ⇌ 85 °C Test) : Total 500 cycles with each cycle 90 minutes from -45 °C degree to 85 °C degree
- High temperature oil test (200 °C Oil Test) : Soaked 6 hours at 200 °C degree boiling oil

※Passes if difference between pre-chamber and post-chamber tag's resonant center frequency is below 5MHz

INGRESSION AND MECHANICAL SHOCK

Ingression: IP68 : Soaked 1.5 meter water depth for 24 hours

Vibration: IEC60068-2-6/64 :

- Vibrates tags with various frequency and gravity Iron ball free fall: 1 kilogram iron ball
- 1 Kg iron ball free fall from 1.5 meters' height on tags for 50 times at different angles

Drop & topple: IEC60068-2-31 : Drop tags from 1.0 meters' height at different angles

ATTACHMENT METHODS

1. Double side coated backing adhesive (Suggestions)

- < 200C degree: 3M468MP (or 3M9472LE)
- > 200C degree: SYT-130DL
- Harsh environment: 3M VHB 4913

2. Fast curing glues (Suggestions)

- Double components (24 hours curable): LOCTITE 331 + LOCTITE 7387
- Single component (Instantly curable): ALTECO

“ THANK YOU ”



PRODUCTS



TITAN T8



SMARTSTATION SERIES



STAINLESS SMARTSTATION



SMARTNL-RF1000



SMARTNL-RF2000



SMARTNL RFID READER



SMART-P7000



SMARTAT-870

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