Healthcare Information Terminals

Enhancing Patient Satisfaction and Caregiver Productivity

- ⁄ **IP Nurse Call Applications**
- ⁄ **Nurse Station Terminals**
- ⁄ **Bedside Information Terminals**
- ⁄ **Bedhead Unit Terminals**
- ⁄ **Door-Side Terminals**
- ⁄ **Medical Equipment HMI**

ADVANTECH
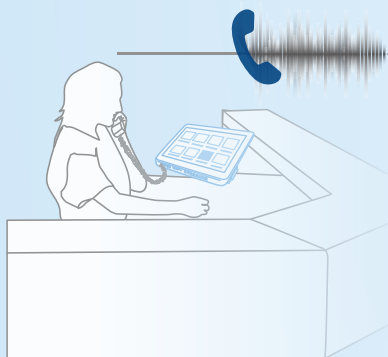
Enabling an Intelligent Planet

(intel) | IoT Solutions Alliance
Premier

DeviceOn/iService

IP-Based Nurse Call System

Real-time data access and delivery

Advantech's HIT series of healthcare information terminals are available in a wide range of sizes (7 ~ 18.5") to ensure flexible integration for diverse applications.

A 60-degree angle for easy access and convenient operation.

60°

Optimal Call Quality

The inclusion of a noise-cancellation handset and dedicated audio codec guarantee optimal sound quality for nursing assistance calls.
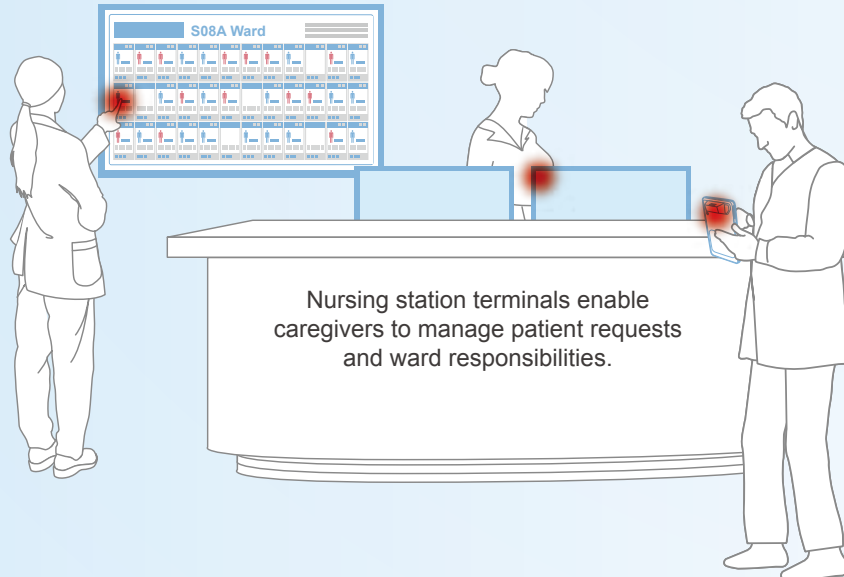
Nurse call button

ROOM 203 CALL 20:20

S08A Ward

Emergency call alerts are presented on the nursing dashboard.

Nursing station terminals enable caregivers to manage patient requests and ward responsibilities.

Nurse Station Terminals

HIT-W183
18.5"

- Access patient medical records
- Retrieve laboratory results
- Monitor patient vital signs

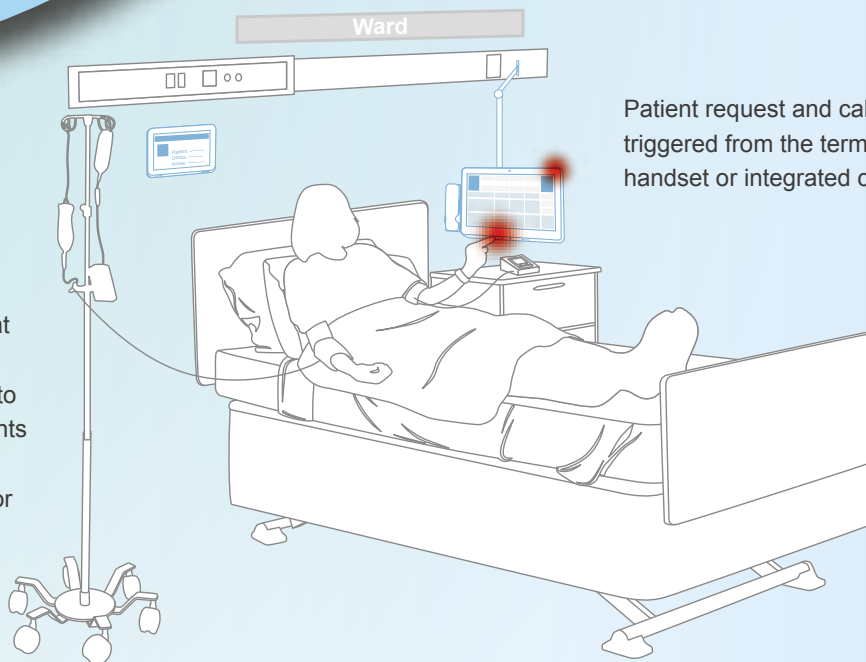## Door-Side Terminals

HIT-507
7"

- Display patient name
- Provide access control
- Manage room environment

LED indicator

Doctors can access and review patient records in real time.

Patient request and call alerts can be triggered from the terminal via the handset or integrated call button.

Ward

Overdoor lights that are visible from a distance are used to indicate alarm events and provide an instant visual aid for medical staff.

Bedhead Terminals

HIT-512/HIT-W101
11.6"/10.1"

- Connect to the nurse station
- Display treatment information
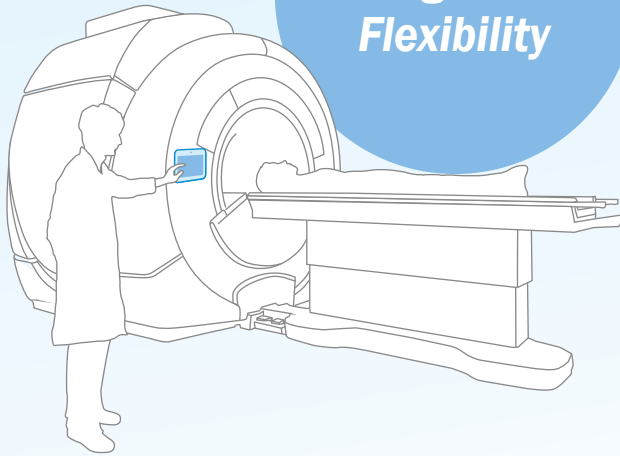- Update patient medical records

Bedside Terminals

HIT-W153
15.6"

- Send requests for nurse assistance
- Serve as patient infotainment system
- Manage room environment

Treatment
Health Education
Drug Information
Home

Medical Equipment HMI

Medical-grade terminals for rapid development

High Configuration Flexibility

Customizable I/O for Easy Deployment
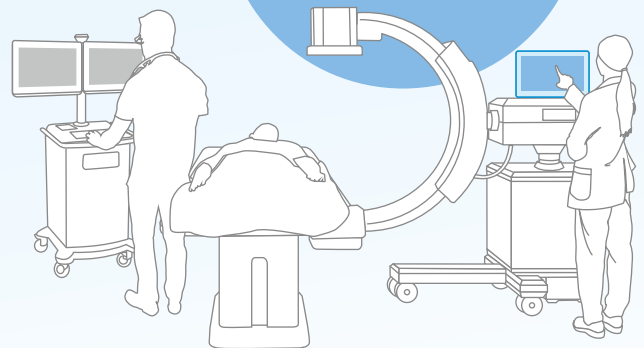
CT Scanner

HIT series terminals support two assembly configurations, panel mount and open frame installation, enabling rapid CT scanner deployment. Additionally, with support for real-time monitoring and over-the-air updates, software maintenance and upgrades can be easily performed.

C-Arm Machine

The system I/O can be installed at the underside or rear of the terminal according to the cable routing, eliminating the need to modify the design during manufacturing. Meanwhile, support for VESA mounting allows the HIT series terminals to be installed on a mobile workstation to serve as a control panel.

HIT Series

imprivata®
Enabling Healthcare. Securely.®

Single Sign-On with RFID

Medical-Grade Design

- Medical CE, FCC, EN60601-1, UL60601-1, and 60601-1-2 certified
- IP65-rated front panel
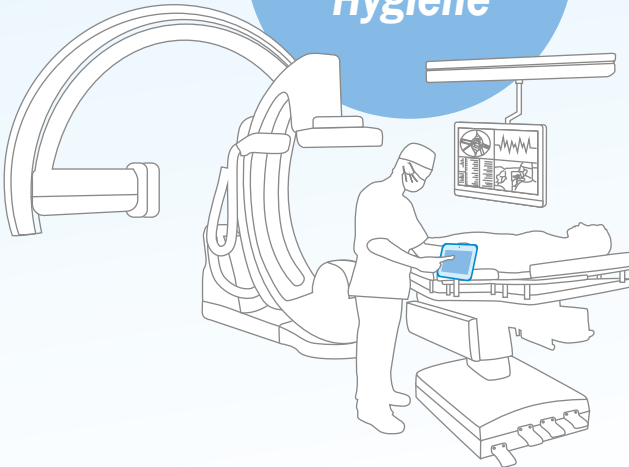- Fanless design

Touch Control

- P-CAP touch function
- Glove-tolerant sensing
- Ultra-responsive touchscreen

Compliant with UL60601-1/60601-1-2 safety standards for medical devices, Advantech's HIT series minimizes time-to-market by ensuring compliance with relevant industry regulations. Moreover, the HIT series terminals support the Windows 10 IoT (64 bit), Android 8.1, and Linux operating systems, enabling easy integration with existing systems and infrastructure.
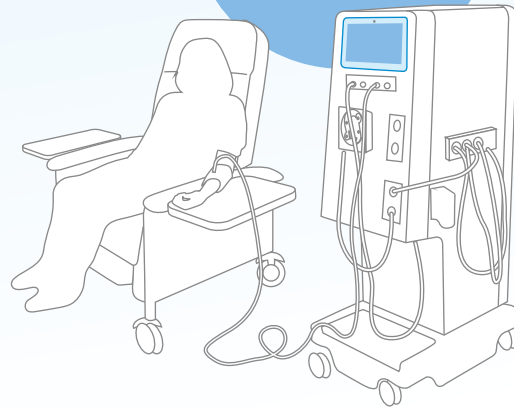
Ingress Protection for Enhanced Hygiene

PoE for Convenient Scalability

DSA Machine

The IP65-rated front panel protects against water and dust ingress and can be cleaned easily to ensure the highest levels of hygiene and infection control. Furthermore, the touchscreen features 10-point projected capacitive (P-CAP) touch control and support for gloved operation, ensuring convenient use during examination and treatment.

Hemodialysis Machine

HIT series terminals offer PoE support, which not only streamlines installation by eliminating the need for additional electrical infrastructure, but also ensures convenient connectivity. Furthermore, the scalability of PoE allows hospitals to install multiple terminals without concerns regarding power grid failures.

Optimized for Easy Maintenance and Security

- Dual isolated Ethernet ports for data security
- Real-time monitoring and OTA updates via DeviceOn/iService
- Two-year warranty guaranteed

Customizable for Specific Applications

- Wide range of optional peripherals
- Diverse assembly configurations
- Adjustable I/O installation location

Easy Integration and Deployment

- Triple OS support (Windows, Android, and Linux)
- Open APIs streamline integration
- PoE technology for easy installation

Application Stories
Flexible medical HMI for diverse usage scenarios

Advantech's HIT-W153 Adopted by RCare for iCall IP-Based Nurse Call Solution

RCare is one of the world's leading providers of advanced technologies for IP-based nurse call systems. The iCall wired nurse call system is RCare's integrated hardware-software solution for healthcare communication that connects all devices in a hospital using IP technology.

When developing iCall, RCare adopted Advantech's HIT-W153 terminals with a noise-cancelation handset to serve as nurse station terminals. Featuring a slim, fanless design and IP65 rating for protection from water and dust, HIT-W153 is suitable for medical applications because of the ease of sanitizing the device. The terminals are equipped with the iCall software to display calls received from ward/bed/corridor devices within the monitored area in real time. This solution enables nurses to respond to emergencies and requests according to the urgency and, if necessary, notify doctors and relevant staff members.

TMM Software Deploys HIT-W101LP and HIT-W183 Terminals in Hospital Wards to Optimize Operations

In 2020, TMM Software partnered with Advantech to provide intelligent computing solutions for patient wards to three French hospitals–Institut de Réadaptation d'Achères, Centre Hospitalier Alpes Léman, and Sainte-Marie. Approximately 650 of Advantech's HIT-W101LP and HIT-W183 multifunctional devices integrated with MultiMed software, an Android-based multimedia platform, were deployed in these hospital to serve as bedside infotainment terminals. With the inclusion of MultiMed software, Advantech's HIT terminals offered an innovative turnkey solution that enables patient access to entertainment, hospital information, and services, as well as staff access to medical data at patient bedsides for improved service efficiency and patient satisfaction.

Chongqing PSK-Health Builds EECP Devices Using HIT-W153 Terminals

Based in China, Chongqing PSK-Health Sci-Tech Development Co., Ltd. (PSK-Health) is a builder of innovative medical equipment. To design premium enhanced external counterpulsation (EECP) devices, PSK-Health selected Advantech's HIT-W153 terminals because of their excellent EMI suppression capabilities. Compliant with IEC 60601-1 standards for medical safety, HIT-W153 not only ensures safe operation but also minimizes time-to-market by ensuring compliance with international healthcare regulations. Furthermore, the customizable software and hardware ensures that HIT-W153 can satisfy a wide range of application requirements. Using HIT-W153 terminals, PSK-Health was able to develop an EECP device that conformed to ISO 13485, U.S. FDA, and EU CE regulations.

En Chu Kong Hospital Implements HIT-W101 and HIT-W183 as Multifunctional Devices for Ward Care Applications

As a regional teaching hospital located in New Taipei City, Taiwan, En Chu Kong Hospital is committed to using advanced technologies to enhance healthcare quality. In order to improve communication between medical staff and patients, En Chu Kong Hospital implemented Advantech's intelligent ward solution, which integrates healthcare terminals and communication software. Equipped with diverse APIs and SDKs, Advantech's HIT-W101 and HIT-W183 terminals were easily integrated into the hospital's existing systems and can function as either nursing station terminals or patient bedside terminals. Moreover, with the installation of Advantech's WISE-DeviceOn remote management software, the terminals can be automatically upgraded, maintained, and monitored remotely.

Specifications

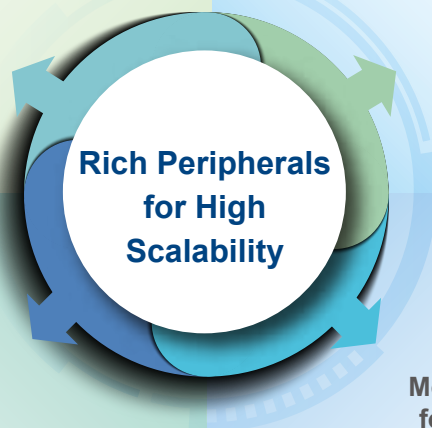|		HIT-507	HIT-W101	HIT-512	HIT-W153	HIT-W183
System	Processor	Intel® Celeron® J3455 (2M cache, up to 2.3 GHz)	Freescale Arm® iMX6 Cortex-A9 quad core (1 GHz)	Intel® Celeron® J3455 (2M cache, up to 2.3 GHz)	Intel® Pentium® N4200 (2M cache, up to 2.5 GHz)	Intel® Pentium® N4200 (2M cache, up to 2.5 GHz)
	Memory	4 GB DDR3L (up to 8 GB)	2 GB DDR3L (up to 4 GB)	4 GB DDR3L (up to 8 GB)	4 GB DDR3L (up to 8 GB)	4 GB DDR3L (up to 8 GB)
	Storage	1 x M.2 2242 SSD	1 x M.2 2242 SSD	1 x M.2 2242 SSD	1 x M.2 2242 SSD	1 x M.2 2242 SSD
	Camera	5 Megapixel	2 Megapixel	2 Megapixel	5 Megapixel	5 Megapixel
	Bus Expansion	-	-	-	1 x Mini PCIe	1 x Mini PCIe
Display	Size	7" (16:9)	10.1" (16:10)	11.6" (16:9)	15.6" (16:9)	18.5" (16:9)
	Max. Resolution	1024 x 600	1280 x 800	1366 x 768	1920 x 1080	1920 x 1080
	Brightness	400 cd/m²	400 cd/m²	250 cd/m²	500 cd/m²	350 cd/m²
	Contrast Ratio	800:1	1300:1	500:1	800:1	800:1
Touchscreen	Type	Projected capacitive	Projected capacitive	Projected capacitive	Projected capacitive	Projected capacitive
	Light Transmission	88%	88%	88%	88%	88%
	Durability	30 million touches	30 million touches	30 million touches	30 million touches	30 million touches
I/O Ports	USB	2 x USB 3.0	1 x USB 2.0 type A, 1 x mini USB 2.0	2 x USB 3.0	1 x USB 3.0 (rear), 2 x USB 2.0	1 x USB 3.0 (rear), 2 x USB 2.0
	COM	1	-	1	Yes (optional)	Yes (optional)
	HDMI	1	-	1	-	-
	Smart Card Reader	-	-	-	1 (with optional secondary reader)	1 (with optional secondary reader)
	RFID	Yes (optional)	Yes (optional)	Yes (optional)	1	1
	SD Card Reader	-	1 x Micro SD slot	-	-	-
Audio	Speaker	1 x 2W	1 x 3W	2 X 2W	2 x 3W	2 x 3W
	Internal Microphone	1 (via TRRS)	1 (via TRRS)	1 (via TRRS)	1 (via TRRS)	1 (via TRRS)
Network	LAN	1 x RJ45 (10/100/1000 Mbit) with optional PoE	1 x RJ45 (10/100/1000 Mbit) with optional PoE	1 x RJ45 (10/100/1000 Mbit) with optional PoE	2 x Isolated RJ45 (10/100/1000 Mbit), including 1 with optional PoE	2 x Isolated RJ45 (10/100/1000 Mbit)
	WLAN	802.11 a/b/g/ac, Bluetooth 4.1	802.11 a/b/g/ac, Bluetooth 4.0 (optional)	802.11 a/b/g/ac, Bluetooth 4.1	802.11 a/b/g/ac, Bluetooth 4.1	802.11 a/b/g/ac, Bluetooth 4.1
Software	Operating System	Windows 10 IoT LTSC, Android 8.1 (Linux upon request)	Android 6	Windows 10 IoT LTSC, Android 8.1 (Linux upon request)	Windows 10 IoT, Android 8.1, (Linux upon request)	Windows 10 IoT, Android 8.1, (Linux upon request)
Function Keys	Hotkey	1 x Power button	1 x Reset button	1 x Power button	6	6
Nurse Call Button	Hotkey	-	-	-	1	1
Emergency Alarm	LED Indicator	1	1	1	1	1
Mechanical	Mount Options	VESA 75 x 75	VESA 75 x 75	VESA 75 x 75	VESA 75 x 75/100 x 100	VESA 75 x 75/100 x 100
	Dimensions (W x H x D)	193.3 x 140.9 x 37 mm/ 7.61 x 5.54 x 1.45 in	247 x 189 x 22 mm/ 9.72 x 7.44 x 0.86 in	296 x 190 x 33.4 mm/ 11.65 x 7.48 x 1.31 in	400.1 x 273 x 43 mm/ 15.75 x 10.74 x 1.69 in	466.4 x 311.5 x 43 mm/ 18.36 x 12.26 x 1.69 in
	Weight	1 kg/2.2 lb	0.75 ~ 1 kg/1.65 ~ 2.2 lb	1.2 kg/2.64 lb	3.2 kg/7.05 lb	3.9 kg/8.59 lb
IP Rating	Front Panel	IP54	IP65	IP65	IP65	IP65
Certifications	EMC & Safety	CE/FCC, CB, UL ITE & Medical IEC 60601 & IEC 62368, CCC	CE/FCC, CB, UL ITE, CCC	CE/FCC, CB, UL ITE & Medical IEC 60601 & IEC 62368, CCC	CE/FCC, CB, UL ITE & Medical IEC 60601 & IEC 62368, CCC	CE/FCC, CB, UL ITE & Medical IEC 60601 & IEC 62368, CCC
Power Supply	Input Voltage	100 ~ 240VAC, 1.1 ~ 0.45A @ 47 ~ 63 Hz	100 ~ 240VAC, 1.1 ~ 0.45A @ 47 ~ 63 Hz	100 ~ 240VAC, 1.1 ~ 0.45A @ 47 ~ 63 Hz	100 ~ 240VAC, 1.1 ~ 0.45A @ 47 ~ 63 Hz	100 ~ 240VAC, 1.1 ~ 0.45A @ 47 ~ 63 Hz
	Output Voltage	ITE/medical 12V$_{DC}$, 3A	ITE 12V$_{DC}$, 3A	ITE/medical 12V$_{DC}$, 3A	ITE/medical 18 ~ 19V$_{DC}$, 3.42A	ITE/medical 18 ~ 19V$_{DC}$, 3.42A
Accessories (Optional)	Handset	Yes (via add-on module)	Yes (via add-on module)	Yes (via add-on module)	Yes (via add-on module)	Yes (via add-on module)
	Barcode Scanner	-	-	-	Yes	Yes
	TV Tuner	-	-	-	Yes (via built-in module)	Yes (via built-in module)
	MSR	-	-	-	Yes (optional)	Yes (optional)
	Arm Support	Wall mounted	Wall/ceiling mounted	Wall/ceiling mounted	Wall/ceiling mounted	Wall/ceiling mounted
	Table Stand	Yes	Yes	Yes	Yes	Yes

HIT Series Accessories

Noise-cancellation headset for clear communication

Smart card reader for fast identity verification

Rich Peripherals for High Scalability

Ergonomic stand for convenient installation

Movable arm mount for easy operation

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