Medical Grade Platform
Point-of-Care Touch Computer

╱ Integrated Operating Room

╱ Intensive Care Unit

╱ Emergency Room

╱ Patient Data Management System
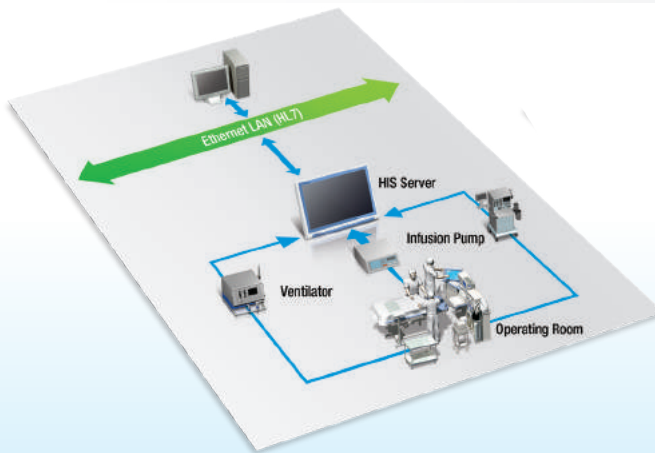
╱ HMI for Medical Equipment

ADVANTECH iHealthcare

Windows Embedded
Gold Partner

intel

IoT Solutions Alliance
Premier

Energy Verified

CE FC

EN60601-1

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Critical Care

Critical care involves the careful diagnosis and management of life threatening conditions by specially-trained healthcare professionals who use their expertise to provide care for the patient. They access highly sophisticated equipment and computer systems with real-time monitoring of vital data. Care is usually given in an intensive care unit (ICU), emergency department, surgical area or trauma center. The real-time monitoring systems play a critical role to closely tracking patient vital signs and translating patient physiological data into clinical information.
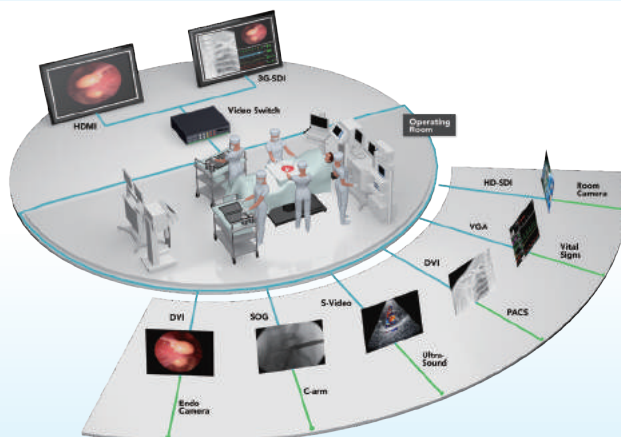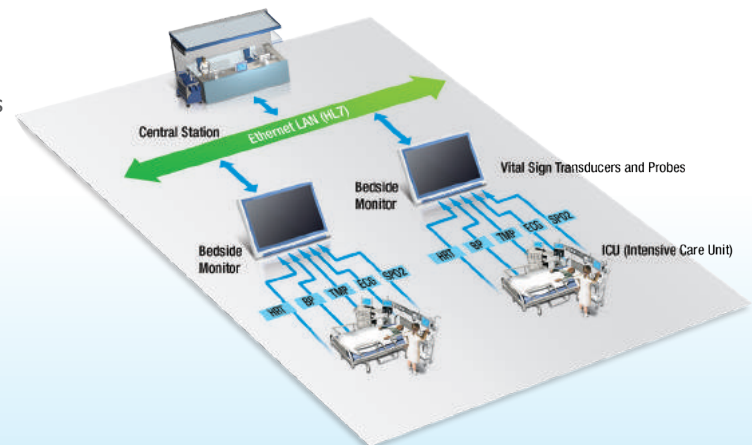
Peri-operative Information Systems in Operating Arenas

Peri-operative Information Systems support clinical and administrative decision making from pre-operative through intra- and post-operative procedures. A sample solution would be a total anesthesia information system that records and documents each phase of the procedure to produce a comprehensive patient record which is linked to existing patient monitoring equipment, anesthesia machines, and other equipment.

Clinical Information Systems in Intensive Care

A Clinical Information System integrates patient care applications and data management tools for fast, informed decision-making at the point-of-care. These systems can be found in the ICU, at patient bedside, and are accessible across a hospital network or via the web. They improve access to data and in the ICU, at patient communications; gathering, organizing and processing various information sources which can be used by hospital staff for cost management, patient outcome analysis, quality improvements and to meet regulatory compliance.

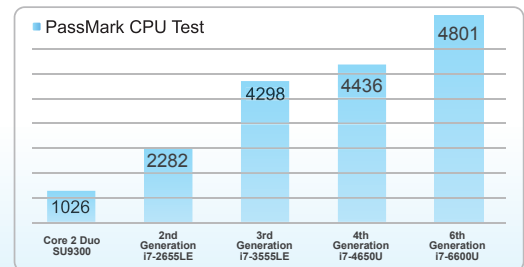## Radiological Application System in the Operating Room

A radiological application system integrates various kinds of medical imaging into one display unit, maximizing flexibility for surgeons to view any 2D/3D data of patients during surgery. Nowadays, medical imaging plays an essential role in surgery because of improved imaging quality and comprehensive imaging methodologies, making medical imaging rather more informative for surgical assessment. The radiological application system is dedicated to visualizing numerous combinations of hybrid image displays, providing a gateway where all archived pre-surgery images stand by for surgeons' timely reference.

System Performance

POC terminals are always embedded with up-to-date CPUs, ensuring high-performance computing ability and graphic power throughout the product life cycle. POC Series utilizes Intel processors which demonstrate superb performance under extra low power consumption, reinforcing the very core competence of the POCs.

PassMark CPU Test

	PassMark CPU Test
Core 2 Duo SU9300	1026
2nd Generation i7-2655LE	2282
3rd Generation i7-3555LE	4298
4th Generation i7-4650U	4436
6th Generation i7-6600U	4801

Infection Control (IP54-Rating & Fanless Design)

IP54

The entire exterior smartly encloses the system with water & dust-proof materials. This specialized structure effectively prevents critical parts of the POC from collecting any unintended material, including infectious diseases, thus keeping the POC safe throughout maintenance and usage. This feature is a vital requirement for hospital operating rooms, as well as any other site where aseptic practice is of concern.

IP54 water splash and dust resistant cover
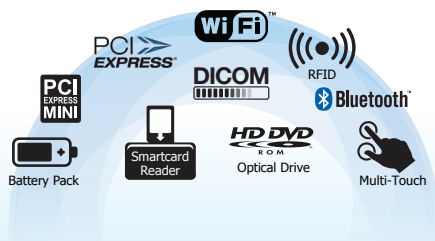
Flexibility

3 YEAR WARRANTY

Advantech spares no expense in durability testing. As a result, POC terminals have been approved using RDT to ensure a 3-year warranty. RDT (Reliability Demonstration Testing) verifications provide a strict way to achieve real product MTBF in a short time by accelerating usage (temperature cycling, thermal shock and combination test). HALT (Highly Accelerated Life Test) testing is also performed to help verify the operational limits of a system and find design and component weakness.

Stress (Increase) → Failure → Analysis → Improve

Increase Stress and start process over
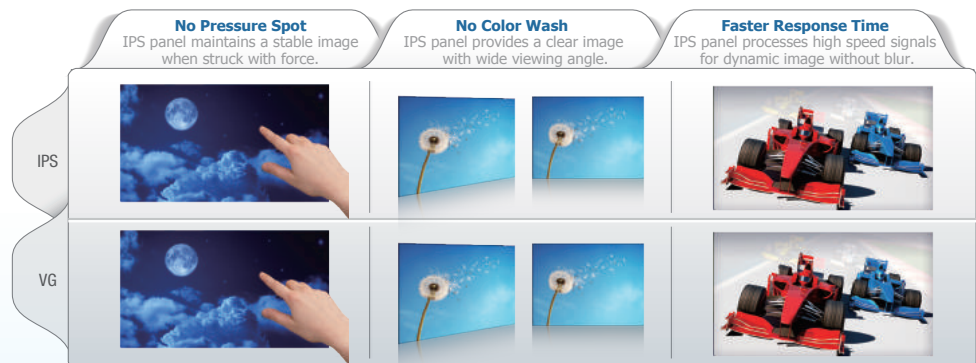
Reliability (RDT/HALT Test)

Advantech endeavors to meet the specific needs of different healthcare providers. POC terminals have been designed for flexible customization, allowing different configurations of Wi-Fi modules, smart card readers, battery packs, RFID readers, DVD drives, or Bluetooth modules. The POC-W242 is specially extended to 4 PCIe card slots to increase availability for medical-use applications. POC terminals with PCAP technology are designed to enhance light transmission, and 7H hardness rating of the glass improves durability.

Best Image Solution with IPS Technology

IPS (In-Plane Switching) technology ensures clear, vivid display images, with no color wash. IPS panels are responsive, processing high speed signals without data loss via low-resistance copper wiring. The technology eliminates image distortion while using the touchscreen. Wide-viewing-angle support presents images to viewers from any angle, without blur. And the surface is 7H hard, with a responsive 10 pt. multi-touch interface that works well—even with a gloved hand.

No Pressure Spot
IPS panel maintains a stable image when struck with force.

No Color Wash
IPS panel provides a clear image with wide viewing angle.

Faster Response Time
IPS panel processes high speed signals for dynamic image without blur.

IPS

VG

Intelligent Power Solution

Advantech hot swappable battery is a mobile power pack equipped with three how-swappable batteries that can support a range of Panel PC in the market. The provision of hot-swappable capabilities enable end users to replace the battery without turning off the device, greatly reducing system interruptions and downtime. Advantech intelligent power solution can support 6~12 operating hours which greatly support each nursing shift.

Specifications

Category	Attribute	POC-W243	POC-W213	POC-W152		POC-W102
Computing Systems	Chipset	Intel QM87	Intel QM87	Intel QM87		Intel QM87
	CPU	Intel® Core TM i7 6600U Processor (4 M Smart Cache, 3.4 GHz) Intel® Core TM i5 6300U Processor (3 M Smart Cache, 3.0 GHz) Intel® Core TM i3 6100U Processor (3 M Smart Cache , 2.3 GHz) Intel® Celeron TM Processor 3955U (2 M Smart Cache , 2.0 GHz)	Intel® Core TM i7 6600U Processor (4 M Smart Cache, 3.4 GHz) Intel® Core TM i5 6300U Processor (3 M Smart Cache, 3.0 GHz) Intel® Core TM i3 6100U Processor (3 M Smart Cache , 2.3 GHz) Intel® Celeron TM Processor 3955U (2 M Smart Cache , 2.0 GHz)	Intel® Core TM i7 4650U Processor (4 M Smart Cache, 1.7 GHz) Intel® Core TM i5 4300U Processor (4 M Smart Cache , 1.9 GHz) Intel® Baytrail J1900 Processor (2 M Smart Cache , 2.0 GHz)		Intel® Celeron® J1900 Processor (2M Cache, up to 2.42 GHz)
	Memory	Up to 32GB DDR4 1666/2133MHz SDRAM (optional)	Up to 32GB DDR4 1666/2133MHz SDRAM (optional)	Up to 16GB DDR3L 1600MHz (optional)		Up to 8GB DDR3L 1600MHz SDRAM
	Graphics	Intel HD Graphics 520/510	Intel HD Graphics 520/510	Intel HD Graphics 5000/4400		Intel HD Graphics
	Operating System	Win 7, Win 8.1 Industry Pro, Win 10 IoT	Win 7, Win 8.1 Industry Pro, Win 10 IoT	Win 7, Win 8 Embedded Standard, Win 8 Industry Pro, Win 10		Win 10
Display	Size/Display Type	23.8" wide TFT color LCD (16:9)	21.5" wide TFT color LCD (16:9)	15.6" TFT LCD (16:9)		10.1" wide TFT color LCD (16:10)
	Max. Resolution	1920 x 1080 (H x V)	1920 x 1080 (H x V)	1920 x 1080 (H x V)	1366 x 768 (H x V)	1280 x 800 (H x V)
	Max. Colors	16.7M colors (6-bits+A-FRC)	16.7M colors (RGB 8-bits)	16.7 M colors (6-bits+A-FRC)		262k colors (6-bits)
	Pixel Pitch (mm)	0.2745 x 0.2745	0.2745 x 0.2745	0.179 x 0.179	0.252 x 0.252	0.1695 x 0.1695
	Viewing Angle	178°/178°	178°/178°	160°/160°	160°/160°	170°/170°
	Luminance	250 cd/m^2	250 cd/m^2	400 cd/m^2	300 cd/m^2	300 cd/m^2
	LCD MTBF	30,000 Hours	30,000 Hours	30,000 Hours		25,000 Hours
	Contrast Ratio	1000 : 1	1000 : 1	700 : 1	500 : 1	'1300:1
Expansion Slots	PCIe	1 x PCIe (x4)	1 x PCIe (x4)	1 x PCIe (x4)		-
	Mini PCIe	2 (1 x full-size, 1 half-size)	2 (1 x full-size, 1 half-size)	2 (1 x full-size, 1 half-size)		-
	M.2	-	-	-		1 x M.2 2230 (for Wi-Fi & others) 1 x M.2 2242 (dedicated for storage) 1 x M.2 2280 (dedicated for storage) (optional)
Storage	Storage	128GB SSD (default) 1 x 2.5" SATA HDD or SSD (optional)	128GB SSD (default) 1 x 2.5" SATA HDD or SSD (optional)	1 x 2.5" SATA HDD or SSD		1 x 2.5" SATA HDD or SSD
I/O Ports	Serial Port	2 x RS-232/422/485 (isolated)	2 x RS-232/422/485 (isolated)	1 x RS-232/422/485 (isolated)		M.2 SSD 64GB MLC by default
	USB Port	2 x USB 3.0 ports (rear) 2 x USB 2.0 ports (front) 2 x USB 2.0 ports (rear)	2 x USB 3.0 ports (rear) 4 x USB 2.0 ports (rear & PCIe(x4)slot)	2 x USB 3.0 ports (rear) 3 x USB 2.0 ports (rear)		2 x RS-232 Serial Port (Isolation) 2 x USB 3.0 ports
	VGA/DVI/HDMI Port	1 x HDMI-out 1 x Displayport-out	1 x HDMI-out 1 x Displayport-out	1 x HDMI & VGA		1 x HDMI-out
	Speakers (1W)	2 x speakers (2 W) 1 x MIC-in and speaker out	2 x speakers (2 W)	2 x speakers (2 W)		2 x speakers (2 W)
	LAN	2 x Gigabit Ethernet (isolated) interfaces (RJ-45)	2 x Gigabit Ethernet (isolated) interfaces (RJ-45)	1 x Gigabit Ethernet RJ45 (Isolation)		2 x Gigabit Ethernet RJ45 (Isolation)
Cooling	Fan	Fanless	Fanless	Fanless		Fanless
Power Supply	AC / DC Model	AC/DC adapter (Sinpro Model no. HPU101-107)	AC/DC adapter (Sinpro Model no. HPU101-107)	AC/DC adapter (Sinpro Model no. HPU101-107)		AC/DC adapter (Sinpro Model no. HPU101-107)
	Input Voltage	90~260 VAC, 47~63 Hz, 1.35~0.5 A	90~260 VAC, 47~63 Hz, 1.35~0.5 A	90~260 V, 47~63 Hz,1.35~0.5 A AC		90~260 V, 47~63 Hz,1.35~0.5 A AC
	Output Voltage	'+18 VDC, 5.55 A max. (100 watts)	'+18 VDC, 5.55 A max. (100 watts)	+18 V, 5.55 A max.(100 watts)DC		+18 V, 5.55 A max.(100 watts)DC
Optional Functions	WLAN & Bluetooth	Qualcomm Atheros Dual-band (2.4/5GHz), 802.11 a/b/g/n 2Tx/2Rx WiFi & Bluetooth v4.1	Qualcomm Atheros Dual-band (2.4/5GHz), 802.11 a/b/g/n 2Tx/2Rx WiFi & Bluetooth v4.1	802.11 a/b/g/n/ac + Bluetooth 4.1		802.11 a/b/g/n/ac + Bluetooth 4.1
	Barcode Scanner	1D/2D Barcode scanner	1D/2D Barcode scanner	-		1D/2D Barcode scanner
	Smart Card Reader	Complies with ISO7816-1,2,3,T=1 and T=0 protocol	Complies with ISO7816-1,2,3,T=1 and T=0 protocol	Complies with ISO7816-1,2,3,T=1 and T=0 protocol		-
	RFID	13.56MHz, ISO-15693, ISO-14443A, ISO-14443B	6MHz, ISO-15693, ISO-14443A, ISO-14443B	Supports NFCIP-1 & NFCIP-2, ISO18092, ISO21481, ISO14443A/B, ISO15693		Supports NFCIP-1 & NFCIP-2, ISO18092, ISO21481, ISO14443A/B, ISO15693
	Battery	3S1P 1750mAH Supports min. 0.5hr backup operation	3S1P 1750mAH Supports min. 0.5hr backup operation	3S2P 5500mAH, Support at least 0.5 hr backup operation		-
	Web Cam	5M Camera, AF (Optional)	-	5M Camera, AF		5M Camera, AF
Optional Touchscreen Features	Type	Projected Capacitive 10-points (AR or AG)	Projected Capacitive 10-points (AR or AG)	P-cap Multi-touch (AR)	P-cap Multi-touch (AR) or Res TS (AG), True Flat Design	True Flat Design, Res
	Light Transmission	90%	90%	P-cap 90%	P-cap 90%; Res. TS 75%	80%
	Controller	USB interface	USB interface	USB interface		5-wire
	Durability	Over 100 million touches	Over 100 million touches	50 million touches		over 10 million touches
IP Rating	Entire System	IP54	IP54/IPX1	IP43		IPX1
	Front Panel	IP65	IP65	-		-
Certifications	CE	Yes	Yes	Yes		Yes
	FCC	Yes	Yes	Yes		Yes
	IEC 60601-1	Yes	Yes	-		-
	EN60601-1	Yes	Yes	Yes		Yes
	UL 60601-1	Yes	Yes	Yes		-
	CCC	Yes	Yes	No		-
Environment	Temperature	Operating: 0° C ~ +40° C, Storage: -20° C ~ +60° C	Operating: 0° C ~ +40° C, Storage: -20° C ~ +60° C	Operating: 0° C ~ +40° C, Storage: -20° C ~ +60° C		Operating: 0° C ~ +40° C, Storage: -20° C ~ +60° C
	Humidity	10 ~ 95% @40°C (non-condensing)	10 ~ 95% @40°C (non-condensing)	10 ~ 95% @40°C (non-condensing)		10 ~ 95% @40°C (non-condensing)
	Shock Resistance	20G peak acceleration (11ms duration)	20G peak acceleration (11ms duration)	20G peak acceleration (11ms duration)		20G peak acceleration (11ms duration)
Physical Characteristics	Dimensions (W x H x D)	583 x 386 x 69 mm (22.95" x 15.19" x 2.71")	550 x 360 x 65 mm (21.65" x 14.17" x 2.56")	405.53 x 274 x 60.82 mm (15.96" x 10.78" x 2.39")		267 x 202 x 40 mm
	Weight	7.95 kg	6.9 kg	4.65 Kg		Net 1.85kg; Gross 2.5kg
	VESA Mounting	75 x 75 mm, 100 x 100 mm	75 x 75 mm, 100 x 100 mm	75 x 75 mm, 100 x 100 mm		75 x 75 mm

* Test results by Passmark BatteryMon V2.1 with a minimum of peripherals connected

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