

SIP Voice Patient Station with touch screen



Specifications

- Speech communication from the MS-PC and/or SIP-Touch
- Speech communication with internal speech channels
- Acoustic echo cancellation
- Full Duplex speech communication over SIP (VoIP)

Technical Specifications

- Call, Presence, Assistance, Emergency and Cancellation mode
- Including an iButton-reader for care registration and nurse identification
- Communication with Healthcare software and medical file via TCP/IP
- Communication with Netrix message server via TCP/IP
- Redundant communication via an optional 2nd Netrix
- Communication with Novilog via TCP/IP
- Fully customizable display and on screen call buttons
- Screen is resistive (Can be handled with a pen, glove, etc.)
- On-board memory
- Password protected
- FTP-server present
- Web-server present
- Telnet-server present
- Automatic error reporting (24/7 supervised)
- Remote diagnostics (via browser)
- On screen LocalBus diagnostics



Description

iCall Patient Station. Linux based, Full IP address unit with interactive resistive touch-display with call, presence, emergency (Code blue), assistance and cancellation buttons, iButton-reader for nurse identification/ presence and call cancellation and full-duplex speech (VoIP). Communication with Netrix message server. Includes integrated FTP-server, reassurance & finding LED and buzzer. Is remotely and individually programmable via browser. Up to 50 LocalBus Address modules can be connected (Topology of choice!). Contains also contacts for the connection of ST (andard) devices. Power supply via Power Input, Power Injection and/or POE. Normal Open or Normal Closed. 24/7 supervised.

- Interactive handsfree 2-way communication using Full-duplex SIP-protocol
- Incl. 1 microphone and 2 speakers
- On screen Volume control and Mute-function
- Date, time and patient name indication on screen
- Time synchronization via NTP-server
- Programming via web-server, touch screen or iMaster
- LocalBus connection included for iCall 3XX-range (Max. 50 iCall LB-units)
- Connections included for integration of standard switching material (existing or iCall 4XX-range)
- 6 INput contacts (NO & NC !), 5 OUTput contacts included (integration of external alarms, devices, etc.)
- Domotica features via included contacts
- Service call (via input contact)
- Other features: Weather forecast, Automatic call generator/ Reminder mode
- Can be used as a telephone station (SIP-extension)
- Full-colour, real-time event-overview
- On screen language selection
- Exchangeable SD-card for full programing and settings (easy maintenance)
- Exchangeable CPU-board (easy maintenance)
- Back and Home key
- POE and/or 24V power supply for redundancy or power injected
- Operational LED-indicators
- Automatic screensaver (Optimal energy mode + Night mode)
- Wall mounting
- Following VDE 0834-1, VDE 0834-2 and according CE-and RoHS- standards

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iCall Touch absolute max ratings

Indigo Care					
Version	iCall_Touch V0.2				
iCall_Touch					
General Absolute Maximum Ratings !					
		min	typ	max	unit
Supply Voltage	Vcc (Local Bus)	18	24	30	V
	PoE	37		57	V
	PWR injection	37	48	57	V
Supply Current forward	I _{AVCC} @ 18V	-	240	-	mA
	I _{AVCC} @ 24V	-	180	-	mA
	I _{AVCC} @ 30V	-	150	-	mA
	I _{PWR} injection 37V	-	140	-	mA
	I _{PWR} injection 48V	-	145	-	mA
	I _{PWR} injection 57V	-	125	-	mA
	I _{AVCC} @ 24V	-	220	-	mA
Output Power Local Bus	P _{out} @ 24V	-	5,28	-	W
	Operating Temperature (ambient)	T _{amb}	0	-	70
Maximum reverse voltage	V _{AVCC} @ 18	-	40	-	V
	V _{PWR} (PWR in)	-	60	-	V
Leakage current (reverse)	I _{AVCC} @ 18	-	-	500 *	µA

* @25°C, 20mA @ 100°C

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iCall Touch electrical specifications

Mechanical properties								
Group	Symbol	Parameter		min	typ	max	unit	
Dimensions	H	height (Y)	Outer dimension housing	-	180	-	mm	
				-	7086,6	-	mm	
	W	width (X)		-	210	-	mm	
				-	8267,7	-	mm	
D	depth (Z)	-	35	-	mm			
		-	1378,0	-	mm			
Weight	M	mass	Total weight	-	707,5	-	g	
				-	27,07	-	ounce	
				-	1,69	-	pound	
Material	Housing material Reference Doc : SB 14-002 HIPS.pdf	Type of material		high impact polystyrene			-	
		yield stress	-	20	-	Mpa		
		yield strain	-	1,4	-	%		
		tensile strength	-	25	-	MPa		
		softening temperature	-	85	-	°C		
		Dielectric strength K20/P50	-	65	-	kV/mm		
		Density at 25 ° C	-	1,04	-	g/cm³		
		Colour	-	RAL9010	-	RAL		
		impact strength	-	120	-	kJ/m²		
		PCB	Type of material		FR-4, Td>=325°C, T900>=60', T288>=5', CTEz<=3.7%, Tg>=135°C			-
Electrical properties								
Group	Symbol	Parameter	State	min	typ	max	unit	
Power	Vcc (LocalBus)	Supply voltage	Local Bus PWR	18	24	30	V	
	Vcc (pwr injection)		Local Bus PWR	37	48	57	V	
	I _{tot} (LocalBus)	Current consumption	Vcc = 18V	-	200	-	mA	
			Vcc = 24V	-	150	-	mA	
			Vcc = 30V	-	125	-	mA	
			Vcc = 37V	-	130	-	mA	
			Vcc = 48V	-	140	-	mA	
	I _{tot} (pwr injection)	Current consumption	Vcc = 57V	-	120	-	mA	
			Vcc = 18V	-	3,60	-	W	
			Vcc = 24V	-	3,60	-	W	
	P _{tot} (LocalBus)	Power consumption	Vcc = 30V	-	3,75	-	W	
			Vcc = 37V	-	4,81	-	W	
			Vcc = 48V	-	6,72	-	W	
Vcc = 57V			-	6,84	-	W		
Vcc = 18V			-	3,60	-	W		
P _{tot} (pwr injection)	Power consumption	Vcc = 24V	-	3,60	-	W		
		Vcc = 30V	-	3,75	-	W		
P _{out} (LocalBus)	Output Power Local Bus (PoE PWR)	Vcc out LB 24V	0	180	200	mA		
		Pout LB 24V	0	4,32	4,8	W		
PoE	V _{poe-pd}	Voltage range (at PD)		37	48	57	V	
	V _{poe-pse}	Voltage range (at PSE)		44	48	57	V	
	R _{cable}	Maximum cable resistance		-	20	-	Ω	
	I _{max}	Maximum current		-	350	-	mA	
	P _{pd}	Power available at PD		-	12,95	-	W	
	P _{pse}	Maximum power delivered by PSE		-	15,40	-	W	
	Power classification				CLASS 0 (0,44 -> 12,95W)			
	Supported standards				802.3af Standards A (PWR over data) and B (PWR over spare)			
	Supported cabling				Cat3/Cat5/Cat5e/Cat6			
	I/O	V _{ih}	Input voltage range	logic 1	2,7	5-24	50	V
logic 0				0	-	1	V	
I _{ih}		Input current (sink)	with 5V applied	-	0,15	-	mA	
			with 24V applied	-	0,98	-	mA	
			with 30V applied	-	1,25	-	mA	
R _{ih-dc}		DC input resistance	input active	-	25	-	kΩ	
I _{oh}		Output current lim	Output active	-	50	-	mA	
V _o		Output voltage range (applied to open-collector output)		5	24	45	V	
U _{relay}		Relay switching voltage	max DC / AC peak	-	-	48	V	
I _{relay}		Relay switching current	max DC / AC peak	-	-	500	mA	
R _{relay}	Contact resistance (DC)	measured @ 10mA	-	0,2	-	Ω		
-	relay life expectancy		-	100 x 10 ⁴	-	cycles		
audio	P _o	Output Power	THD = 1%, f = 1 kHz	-	2 x 1,4	-	W	
	A _v	Closed-loop Gain		-	18	-	dB	
	THD+N	Total Harmonic Distortion + Noise	PQ = 1 W, 8 Ω, f = 1 kHz	-	0,4	-	%	
	F _s	Sample Rate (audio)		-	44,1	-	kHz	
	F _{sw}	Average Switching Frequency	Class-D stereo amplifier	-	420	-	kHz	

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General properties								
Group	Parameter	condition	min	typ	max	unit		
microprocessor	Core			ARM 926EJ-S		-		
	CPU Speed			400		MHz		
	L1 I/O Cache			16K I/O		Byte		
	On-chip SRAM			128		KByte		
	ADC			12		bit		
	I2C			yes		-		
	UART			yes		-		
SIP	SSI/I2S			yes		-		
	Supported SIP Methods			INVITE ; ACK ; BYE ; CANCEL ; OPTIONS ; REGISTER ; INFO				
	Supported SIP Codecs			G711-A ; G711-µ				
	Supported DTMF			yes		-		
	Interoperability with softphone			yes		-		
	Echo Cancellation			yes		-		
	Sample Rate			8		kHz		
7" Touch	SIP Data Format			8		Bit		
	SIP Stack			AMSIP				
	Screen size (diagonal)			7		inch		
	Display Format (resolution)			800 x 480				
	Dot Pitch			0,0635 (H) x 0,1905 (V)				
	Active Area			152,4 (H) x 91,44 (V)				
	Back Light			LED				
	Touch technology			Resistive				
	Touch Activation Force	8mm dia. silicon finger			10 ~ 100			
	Viewing Angle	Contrast Ratio	optimized viewing angle	250	400	-	-	
Viewing Angle		X + (horiz)	65	70	-	deg		
		X - (horiz)	65	70	-	deg		
		Y + (vert)		60	-	deg		
		Y - (vert)	55	60	-	deg		
Brightness	X = Y = 0° ; at 40cm	-		250	-	cd		
Thermal properties								
Group	Symbol	Parameter	refers to	min	typ	max	unit	
Thermal	T _{amb}	Operating temperature	ambient	0	25	70	°C	
		flamability rating	plastic	32	77	158	°F	
Timing specifications								
Group	Symbol	Parameter	condition	min	typ	max	unit	
	T _{boot}	Boot time		-	65	-	s	
	T _{screen}	Time screen comes up at boot		-	7	-	s	
	T _{screen_resp}	Screen optical response time		-	10	-	ms	
	T _{react}	Reaction time resistive touch		-	5,4	-	µs	
Regulations								
Parameter	condition	Compliance						
EMC		not yet						
ESD		not yet						
FCC		not yet						