8th/9th Gen Intel® Core™ Processor
Desktop Box PC

IoT Solutions Alliance

ST102-CS

H310
Q370

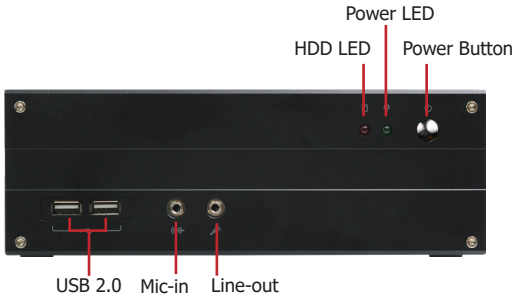


Features

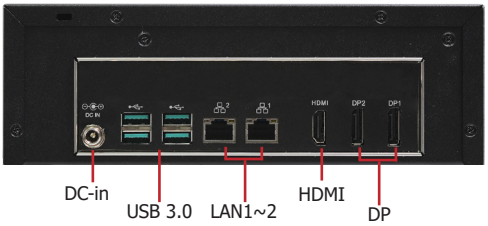
- 2DDR4 2666MHz SODIMM up to 32G
- 1x 2.5" SATA drive bay
  1x optional slim ODD bay
- 2 LAN, 6 USB



Panel

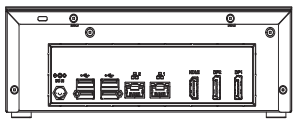


Front View

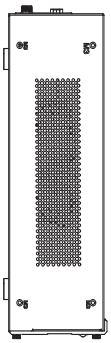


Rear View

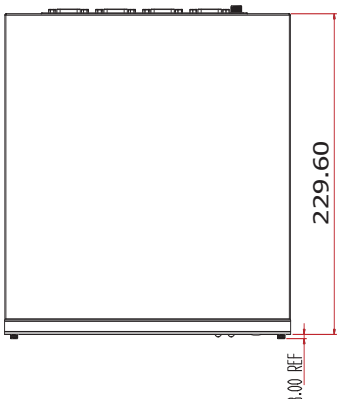
Dimensions

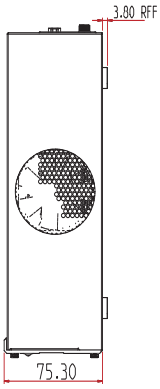


Rear View

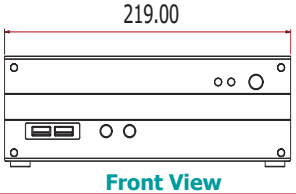


Left View





Right View



Front View

Specifications

SYSTEM	**Processor**	9th Generation Intel® Core™ Processors, LGA 1151 Socket, TDP up to 35W Intel® Core i7-9700TE Processor (Core 8; Max speed 3.8 GHz; TDP 35W) Intel® Core i5-9500TE Processor (Core 6; Max speed 3.6 GHz; TDP 35W) Intel® Core i3-9100TE Processor (Core 4; Max speed 3.2 GHz; TDP 35W) 8th Generation Intel® Core™ Processors, LGA 1151 Socket, TDP up to 35W Intel® Core™ i7-8700T Processor (Core 6; Max speed 4.0 GHz; TDP 35W) Intel® Core™ i5-8500T Processor (Core 6; Max speed 3.5 GHz; TDP 35W) Intel® Core™ i3-8100T Processor (Core 4; Max speed 3.1 GHz; TDP 35W) Intel® Celeron G4900T Processor (Core 2; Max speed 2.9 GHz; TDP 35W)
	Chipset	Intel® H310/Q370 Chipset
	Memory	Two 260-pin SODIMM up to 32GB Dual Channel DDR4 2666MHz
	BIOS	AMI SPI 128Mbit
GRAPHICS	**Controller**	Intel® UHD Graphics 630 (only Pentium G5400, Celeron G4900 support 610)
	Feature	OpenGL 4.4, DirectX 12, OpenCL 2.1 HW Decode: AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265, VP8, VP9 HW Encode: AVC/H.264, MPEG2, JPEG, HEVC/H265, VP8, VP9
	Display	1 x LVDS/eDP (eDP available upon request) LVDS: resolution up to 1920x1200 @ 60Hz 1 x HDMI eDP: resolution up to 4096x2304 @ 60Hz 2 x DP++ HDMI: resolution up to 4096x2160 @ 60Hz DP1.2: resolution up to 4096x2304 @ 60Hz
	Triple Displays	2 x DP++ & 1 x HDMI
STORAGE		1 x 2.5" SATA bay, anti-vibration
EXPENSION		1 x Full-Size mini PCIe mSATA 1 x m.2 2280 mKey (PCIe x 4/SATA) Support NV memory and Intal Optane memory 1 x m.2 2230 EKey (USB/PCIe)
AUDIO	**Audio Codec**	Realtek ALC888S-VD2-GR
ETHERNET	**Controller**	1 x Intel® I210AT PCIe (10/100/1000Mbps) 1 x Intel® I219LM PCIe with iAMT11.0 (10/100/1000Mbps)
LED	**Indicators**	1 x Power LED 1 x HDD LED
FRONT I/O	**USB**	2 x USB 2.0 (X100-USB2)
	Audio	1 x Line-out 1 x Mic-in (via cable to external interface from on board pin-header)
	Buttons	1 x Power Button
	ODD	Slim ODD (optional).
REAR I/O	**Ethernet**	2 x GbE (RJ-45)
	USB	4 x USB 3.1
	Display	2 x DP++ 1 x HDMI
	Antenna	2x antenna opening
COOLING	**Fan**	1 x System Fan 1 x CPU Fan
WATCHDOG TIMER	**Output & Interval**	System Reset, Programmable via Software from 1 to 255 Seconds
POWER	**Type**	12V
	Connector	DC Jack
OS SUPPORT		Windows 10 IoT Enterprise
MECHANISM	**Construction**	Metal chassis + Aluminum front bezel Kensington lock
	Mounting	Wall mount
	Dimensions (W x H x D)	219mm x 75.15mm x 229.7mm (without of stand holder)
	Weight	2.55 kg
ENVIRONMENT	**Operating Temperature**	-5 to 55°C
	Storage Temperature	-20 to 70°C
	Relative Humidity	Operating: 10 to 85% (non-condensing) Storage: 10% to 90% (non-condensing)
STANDARDS AND CERTIFICATIONS	**Shock**	Operating: 3G Non-operating: 5G
	Vibration	Operating: Random 5~500Hz 1G Non-operating: Sweep Sine 10~500Hz 1.5G
	Package Drop	ISTA Project 1A
	Certification	CE/FCC class B

DFI reserves the right to change the specifications at any time prior to the product's release. Changes thereafter will be based on the product's revision. Please contact your sales representative for the exact revision offered in your area. All product names mentioned are trademarks of their respective companies. © August 27, 2020 DFI Inc.

Ordering Information

Model Name	Part Number	Description
ST102-CS	750-ST1021-000G	ST102-CS: CS101-Q370 W/TPM, F/G System RoHS
	750-ST1021-100G	ST102-CS: CS101-H310 W/TPM, F/G System RoHS
	750-ST1021-200G	ST102-CS: CS101-Q370 W/TPM, slim ODD, F/G System RoHS
	750-ST1021-300G	ST102-CS: CS101-H310 W/TPM, slim ODD, F/G System RoHS

Optional Items

Optional Items	Part Number	Description
CPU	143-101805-500G	i7-9700TE, 1.8GHz to 3.8GHz, 8C8T, 12M cache, TDP 35W
	143-10220G-500G	i5-9500TE, 2.2GHz to 3.6GHz, 6C6T, 9M cache, TDP 35W
	143-10220E-500G	i3-9100TE, 2.2GHz to 3.2GHz, 4C4T, 6M cache, TDP 35W
	143-10240A-500G	i7-8700T, 2.4GHz to 4GHz, 6C12T, 12M cache, TDP 35W
	143-102104-501G	i5-8500T, 2.1GHz to 3.5GHz, 6C6T, 9M cache, TDP 35W
	143-103105-500G	i3-8100T, 3.1GHz, 4C4T, 6M cache, TDP 35W
DIMM	138-540002-106G	4GB DDR4 2666Mhz SO-DIMM 1Rx8 512Mx8 CL19 1.2V
	138-580004-102G	8GB DDR4 2666Mhz SO-DIMM 1Rx8 1Gx8 CL19 1.2V
	138-5G0163-102G	16GB DDR4 2666Mhz SO-DIMM 2Rx8 1Gx8 CL19 1.2V
SSD M.2 2280	TBD	32GB, M.2 2280 SSD, SATA3 B+M Key, MLC
	TBD	64GB, M.2 2280 SSD, SATA3 B+M Key, MLC
	638-712811-100G	128GB, M.2 2280 SSD, SATA3 B+M Key, MLC
	638-725615-100G	256GB, M.2 2280 SSD, SATA3 B+M Key, MLC
	638-712818-100G	128GB, M.2 2280 SSD, SATA3 B+M Key, 3D TLC, PE: 3K
	638-725614-100G	256GB, M.2 2280 SSD, SATA3 B+M Key, 3D TLC, PE: 3K
	TBD	512GB, M.2 2280 SSD, SATA3 B+M Key, 3D TLC, PE: 3K
	638-701T01-100G	1TB, M.2 2280 SSD, SATA3 B+M Key, 3D TLC, PE: 3K
	638-712816-110G	128GB, M.2 2280, PCIe Gen3x4, M-Key, 3D TLC, PE: 3K
	638-725608-100G	256GB, M.2 2280, PCIe Gen3x4, M-Key, 3D TLC, PE: 3K
	TBD	512GB, M.2 2280, PCIe Gen3x4, M-Key, 3D TLC, PE: 3K
	TBD	1TB, M.2 2280, PCIe Gen3x4, M-Key, 3D TLC, PE: 3K
SSD MSATA	638-703203-110G	32GB, mSATA SSD, SATA3, MLC
	638-706403-130G	64GB, mSATA SSD, SATA3, MLC
	638-712800-160G	128GB, mSATA SSD, SATA3, MLC
	638-725600-100G	256GB, mSATA SSD, SATA3, MLC
	TBD	64GB, mSATA SSD, SATA3, 3D TLC, PE: 3K
	TBD	128GB, mSATA SSD, SATA3, 3D TLC, PE: 3K
	TBD	256GB, mSATA SSD, SATA3, 3D TLC, PE: 3K
	TBD	512GB, mSATA SSD, SATA3, 3D TLC, PE: 3K
	TBD	1TB, mSATA SSD, SATA3, 3D TLC, PE: 3K

Optional Items

Optional Items	Part Number	Description
SSD 2.5"	635-600322-1A0G	32GB, 2.5" SSD, SATA3, MLC
	635-600644-100G	64GB, 2.5" SSD, SATA3, MLC
	635-601282-1E0G	128GB, 2.5" SSD, SATA3, MLC
	635-602562-121G	256GB, 2.5" SSD, SATA3, MLC
	635-605122-130G	512GB, 2.5" SSD, SATA3, MLC
	635-601286-110G	128GB, 2.5" SSD, SATA3, 3D TLC, PE: 3K
	635-602566-150G	256GB, 2.5" SSD, SATA3, 3D TLC, PE: 3K
	635-605126-140G	512GB, 2.5" SSD, SATA3, 3D TLC, PE: 3K
	635-610006-110G	1TB, 2.5" SSD, SATA3, 3D TLC, PE: 3K
HDD 2.5"	635-550092-090G	2.5" SATAIII 500GB 5400RPM 128MB BLUE
	635-500100-220G	2.5" SATAIII 1TB 5400RPM 128MB BLUE
	TBD	2.5" SATAIII 2TB 5400RPM 128MB BLUE
	TBD	2.5" SATAIII 500GB 7200RPM 64MB BLACK
	635-500111-000G	2.5" SATAIII 1TB 7200RPM 64MB BLACK
OS	921-151310-000G	Win10 IoT Ent 2019 LTSC MultiLang High End EPKEA
	921-151320-000G	Win10 IoT Ent 2019 LTSC MultiLang High End PKEA
	921-151340-000G	Win10 IoT Ent 2019 LTSC MultiLang High Value EPKEA
	921-151330-000G	Win10 IoT Ent 2019 LTSC MultiLang High Value PKEA
	642-000W10-000G	Win Pro 10 64Bit English 1pk DSP OEI DVD version 1809
Adapter AC/DC	671-110006-100G	Power Adapter AC/DC 100W 12V, inlet C14, lockable DC Jack 5.5/2.5mm, cable length 1500mm, with DFI-JP PSE
Power Cord	332-700010-201G	Power Cord US 3pin 1830mm Length
	A81-004003-000G	Power Cord EU 2pin 1830mm Length
	A81-000001-000G	Power Cord China 3pin 1830mm Length
	A81-004056-000G	Power Cord Japan 3pin 2000mm Length
Foot Stand	A31-027042-210G	ST102 support frame, AL BLACK
M.2 WIFI	761-OPS150-001G	1x intel M.2 2230 AC 3168.NGWG 802.11abgn/ac 1T1R + Bluetooth 4.2 2x MHF4 to SMA cable 200mm 2x dipole antenna 1x M2x4mm screw
	TBD	1x Intel® Wireless-AC 9260, 2230, 2x2 AC+BT, Gigabit 2x MHF4 to SMA cable 200mm 2x dipole antenna 1x M2x4mm screw

Packing List

- 1 ST102-CS system unit
- 1 CPU cooler
- 1 Quick Installation Guide

DFI reserves the right to change the specifications at any time prior to the product's release. Changes thereafter will be based on the product's revision. Please contact your sales representative for the exact revision offered in your area. All product names mentioned are trademarks of their respective companies. © August 27, 2020 DFI Inc.