

IPC BUILDING BLOCKS – KIT SOLUTIONS

Designed by
Fujitsu



SMARTCASE™

S series => standard industrial applications

I series => industrial applications with demand for IP5x class

2020 Q1

AGENDA



01

PRODUCT OVERVIEW

02

SPECIFICATIONS

03

WHY CHOOSE OUR
PRODUCTS?

SMARTCASE™



S500

S520

S700

S710

S720

- ▶ [D3544-S](#) mSTX
- ▶ **Intel® Gemini Lake (3 SKUs)**
- ▶ 8V – 24V DC in
- ▶ 36 x 146.9 x 164 mm (0.87!)
- ▶ Front Connectivity (Audio, 2x USB3.1 gen1)
- ▶ Option for USB3.1 gen1 Type C
- ▶ Option for COM
- ▶ Option for WiFi (M.2 Intel 9260 – antennas integrated into front bezel)
- ▶ Stands, VESA & Wall mount

- ▶ [D3654-B](#) and [D3664-B](#) mSTX
- ▶ **Intel® 8th gen Core™ LGA1151**
- ▶ 19V DC in
- ▶ 36 x 146.9 x 164 mm (0.87!)
- ▶ 2,5" drive bay for HDD/SSD
- ▶ Front Connectivity (Audio, 2x USB3.1, USB Type C)
- ▶ Option for WiFi (M.2 Intel 9260 – antennas integrated into front bezel)
- ▶ Stands, VESA & Wall mount

- ▶ [D3543-S](#) mITX
- ▶ **Intel® Gemini Lake (3 SKUs)**
- ▶ 8V – 36V DC in
- ▶ 52 x 250 x 191 mm (2.48!)
- ▶ 2,5" drive bay for HDD/SSD with cooler
- ▶ Low profile PCIe x4 via optional riser card
- ▶ Option for internal 65W PSU
- ▶ Option for discrete graphics cards AMD Radeon R7
- ▶ Wall mount, stands

- ▶ [D3313-S](#) mITX
- ▶ **AMD G-Series SoC (4 SKUs)**
- ▶ 12V / 19V – 24V DC in
- ▶ 52 x 250 x 191 mm (2.48!)
- ▶ 2,5" drive bay for HDD/SSD with cooler
- ▶ Low profile PCIe x4 via optional riser card
- ▶ Option for internal 65W PSU
- ▶ Option for discrete graphics cards AMD Radeon R7
- ▶ Wall mount, stands

- ▶ [D3433-S](#) and [D3434-S](#) mITX
- ▶ **Intel® 6th/7th gen Core™**
- ▶ Mini-ITX [D3633-S](#) and [D3634-S](#)
- ▶ **Intel® 8th/9th gen Core™ LGA1151**
- ▶ 12V DC in, lockable
- ▶ 52 x 250 x 191 mm (2.48!)
- ▶ 2,5" drive bay for HDD/SSD with cooler
- ▶ Low profile PCIe x4 via optional riser card
- ▶ Option for internal 65W PSU
- ▶ Option for discrete graphics cards AMD Radeon R7
- ▶ Wall mount, stands

SMARTCASE™ I SERIES (IP5X)



I720

- ▶ Mini-ITX [D3433-S](#) and [D3434-S](#)
Intel® 6th/7th gen Core™ LGA1151
- ▶ Mini-ITX [D3633-S](#) and [D3634-S](#)
Intel® 8th gen Core™ LGA1151
- ▶ Internal 65W PSU
- ▶ 244 x 92.5 x 299.3 mm (w/h/d)
- ▶ 2,5" drive bay for SSD with cooler
- ▶ Additional configurable 4x COM (RS232/RS422/RS485) via D3450 COM extension card
- ▶ Intrusion switch
- ▶ Kensington lock
- ▶ Wall mount

IP50 class

AGENDA



01

PRODUCT OVERVIEW

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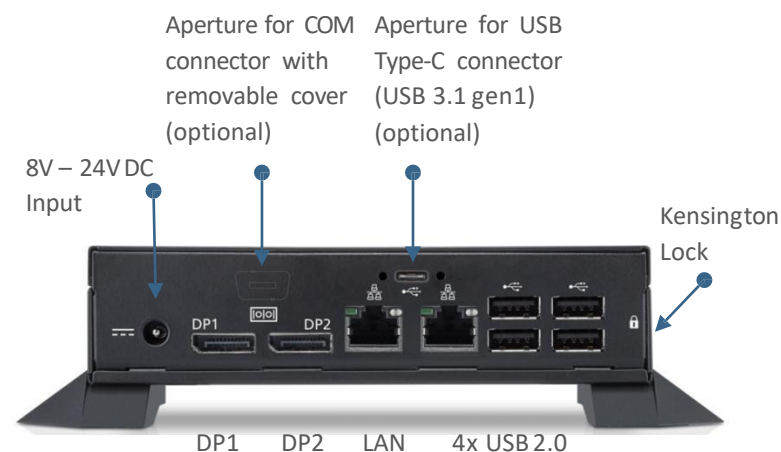
WHY CHOOSE OUR
PRODUCTS?

SMARTCASE™ S500 DESIGNED FOR INTEL [D3544-S](#) MINI-STX

Front connectivity



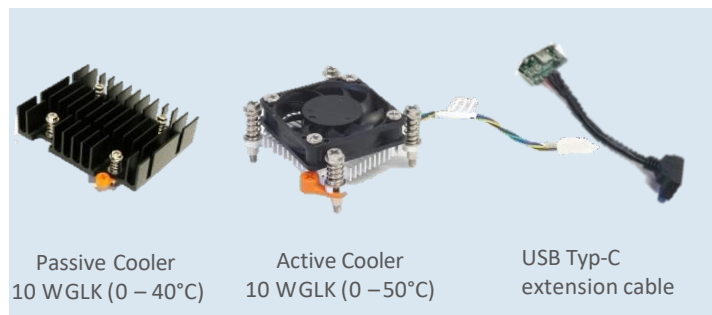
Rear connectivity



Approvals and Certifications

- ▶ Motherboard D3544-Sx certified for MS Windows 10
- ▶ System unit approved for enhanced temperature range
- ▶ System unit approved according following EMC regulations:
 - ▶ CE Class B
 - ▶ Industrial Immunity (EN 61000-6-2)
 - ▶ FCC Class B (verified)

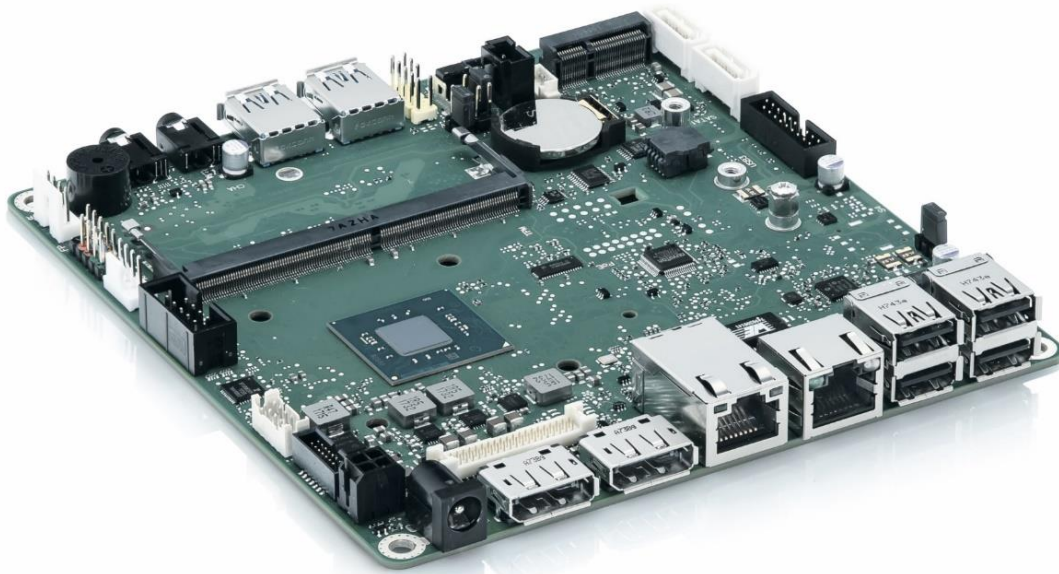
Cooling solutions



Additional optional accessories



SMARTCASE™ S500 – MOTHERBOARD D3544-S MINI-STX

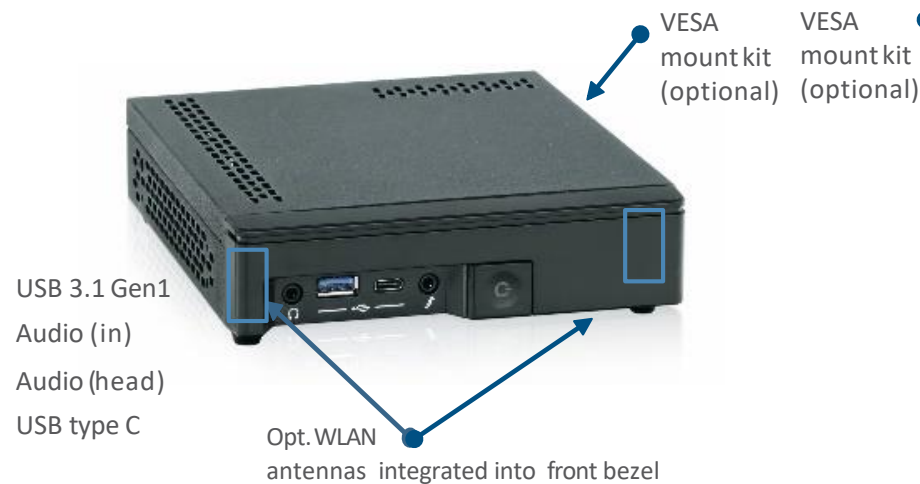


Highlights

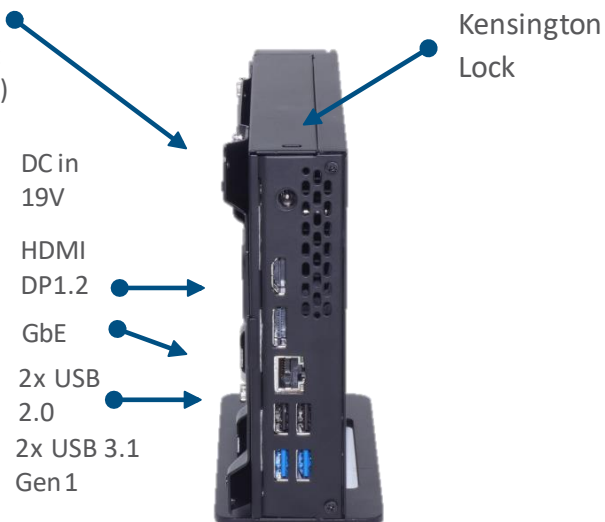
- ▶ Intel® Gemini Lake SoC with Mini-STX
- ▶ BGA SoC with max. 10W TDP
- ▶ S1: Intel® Celeron® Processor J4005(DC) @ 2.7/2.6 GHz
- ▶ S2: Intel® Celeron® Processor J4105(QC) @ 2.5/2.4 GHz
- ▶ S3: Intel® Pentium® Silver Processor J5005(QC) @ 2.8/2.7 GHz
- ▶ Dual Channel DDR4 2400 SO-DIMM (one socket), max. 16GB
- ▶ 1x Intel® GbE LAN, 1x RTL GbE LAN
- ▶ Intel® HD Graphics (DX12, integrated in processor)
- ▶ Up to three independent Displays
- ▶ 2x Display Port 1.2, eDP & 24Bit Dualchannel LVDS
- ▶ 2x COM Port (1x ext., 1x int.), TPM V2.0
- ▶ 5x USB 2.0, 2x USB 3.1, 2x SATA 6Gb/s
- ▶ M.2 SSD 2242/2260/2280 socket; M.2 2230 WLAN/BT socket
- ▶ 8 – 24 V DCin

SMARTCASE™ S520 DESIGNED FOR INTEL D3654-B MINI-STX

Front connectivity



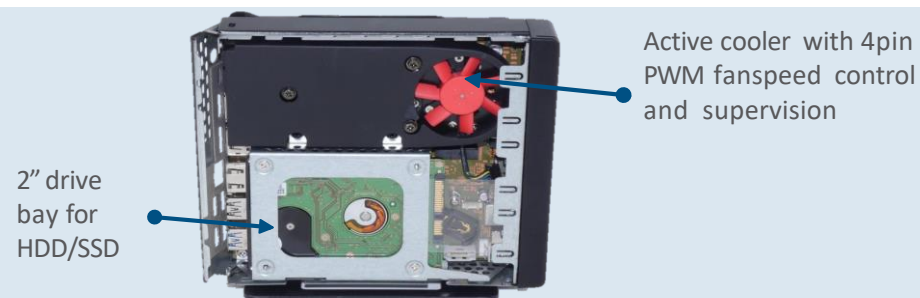
Rear connectivity



Approvals and Certifications

- ▶ Motherboard D3654-Sx certified for MS Windows 10 (RS3)
- ▶ System unit approved for enhanced temperature range
- ▶ System unit approved according following EMC regulations:
 - ▶ CE Class B
 - ▶ FCC Class B (verified)

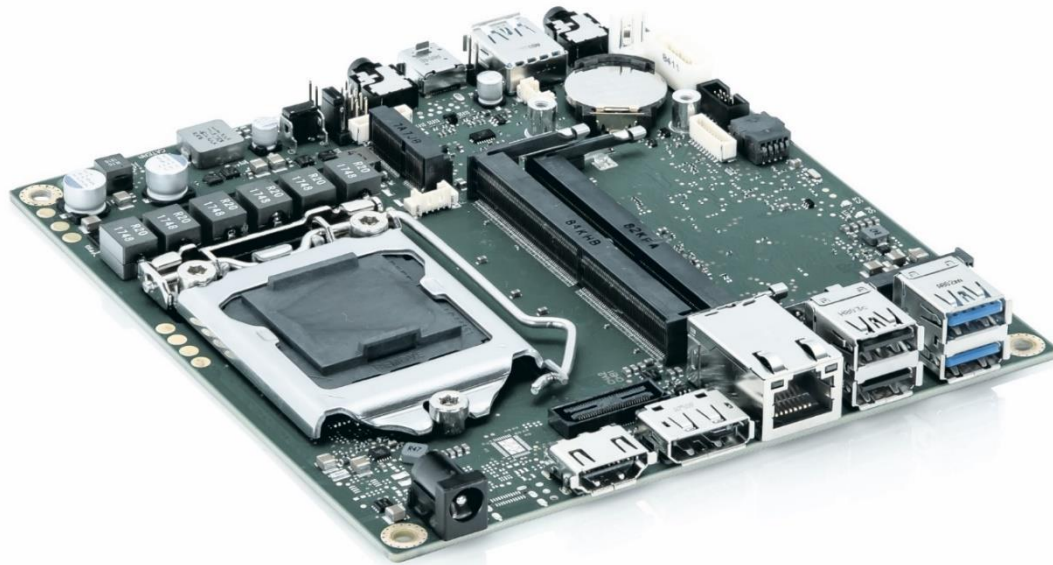
Cooling Solutions



Additional optional accessories



SMARTCASE™ S520 – MOTHERBOARD D3654-B MINI-STX



Highlights

- ▶ Intel® H310 Express Chipset
- ▶ LGA1151 SoC with max. 65W TDP
- ▶ Intel® Core™ i7/i5/i3 8th Gen processor series
- ▶ Intel® Core™ Pentium®/Celeron® processor series
- ▶ Dual Channel DDR4 2666 SO-DIMM (two sockets), max. 32GB
- ▶ DP V1.2, HDMI 1.4
- ▶ Support for M.2 SSD and M.2 WLAN/Bluetooth

SMARTCASE™ S700 DESIGNED FOR INTEL MINI-ITX D3543-S

Front connectivity



Rear connectivity



Approvals and Certifications

- ▶ Motherboard D3543-Sx certified for MS Windows 10
- ▶ System unit approved for enhanced temperature range
- ▶ System unit approved according following EMC regulations:
 - ▶ CE Class B & Industrial Immunity (EN 61000-6-2)
 - ▶ FCC Class B (verified)

Cooling solutions



Passive Cooler
10 WGLK (0 - 40°C)



Active Cooler
10 WGLK (0 - 50°C)

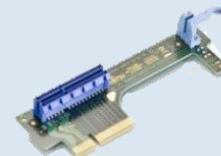
Additional optional accessories



Internal 65W PSU



USB Type-C
extension cable



Risercard PCIe x4



AC Adapter 65W

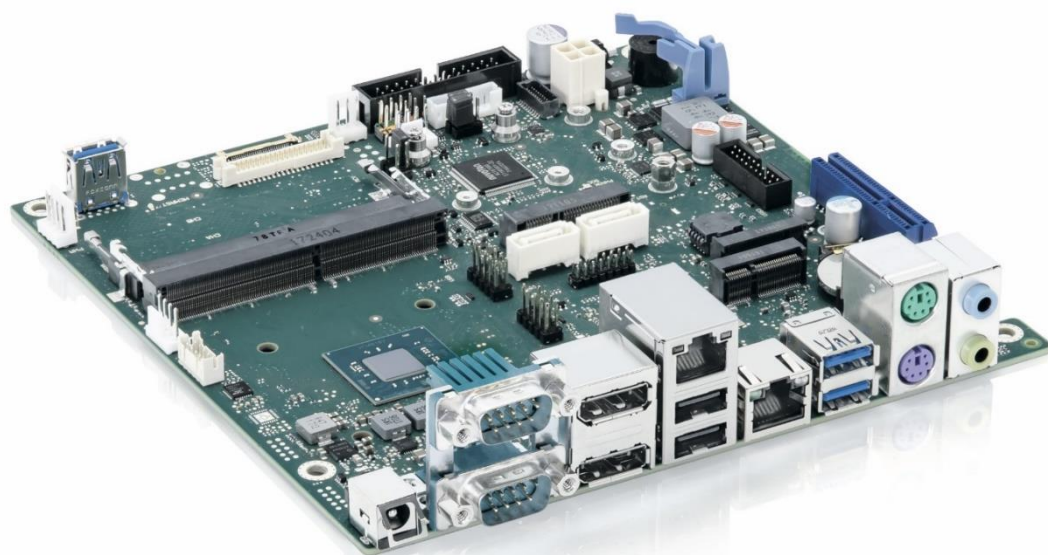


DC in locker



Wallmount kit
(included to chassis)

SMARTCASE™ S700 – MOTHERBOARD D3543-S MINI-ITX



IoT Solutions
Alliance

Highlights

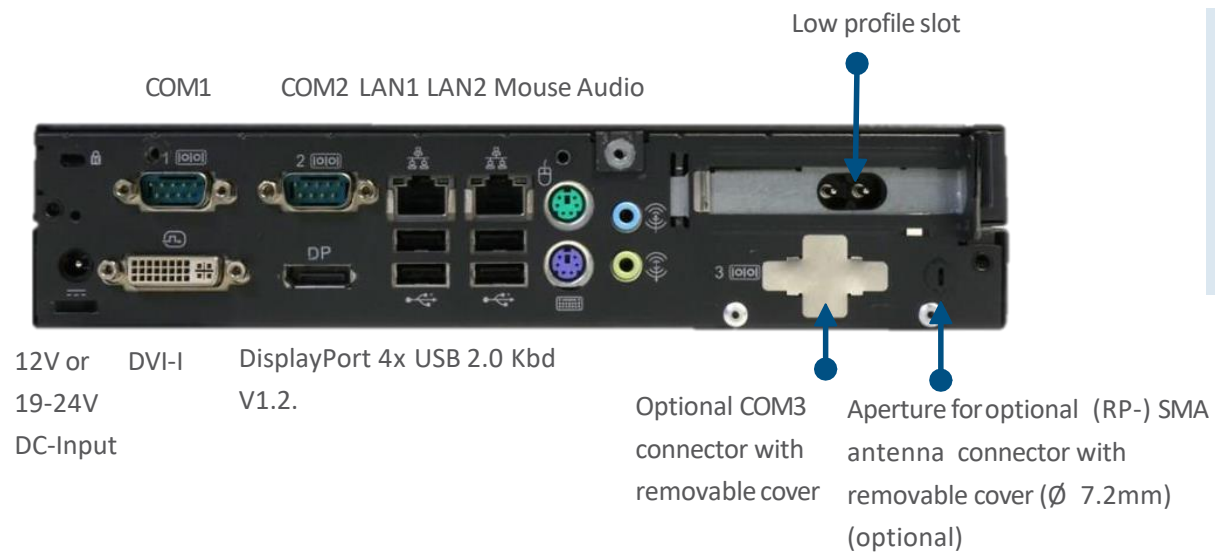
- ▶ Intel® Next Gen SoC with Mini-ITX
- ▶ BGA SoC with max. 10W TDP
- ▶ S1: Intel® Celeron® Processor J4005(DC) @ 2.7/2.6 GHz
- ▶ S2: Intel® Celeron® Processor J4105(QC) @ 2.5/2.4 GHz
- ▶ S3: Intel® Pentium® Silver Processor J5005(QC) @ 2.8/2.7 GHz
- ▶ Dual Channel DDR4 2400 SO-DIMM (two sockets), max. 24GB
- ▶ Intel® HD Graphics (DX12, integrated in processor)
- ▶ Up to three independent Displays
- ▶ 2x Display Port 1.2, eDP & 24Bit Dualchannel LVDS
- ▶ 1x Intel® GbE LAN, 1x RTL GbE LAN; Mini-PCIe socket , TPM V2.0
- ▶ 4x COM Port (2x ext., 2x int. one with RS422/485), LPT header, PS/2 for Keyboard/Mouse
- ▶ 4x USB 2.0, 2x USB 3.0, 2x USB 3.1, 1x USB 2.0 Stick, 2x SATA 6Gb/s
- ▶ M.2 (Key E) for 2230 WLAN; M.2 (Key B) for Storage 2242, 2260, 2280
- ▶ 8 – 36 V DC in

SMARTCASE™ S710 DESIGNED FOR AMD MINI-ITX D3313-S

Front connectivity



Rear connectivity

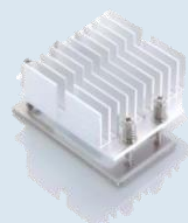


Approvals and Certifications

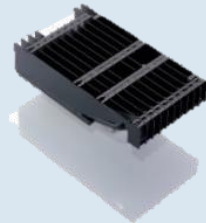
- ▶ Motherboard D3313-S certified for MS Windows 7 & Windows 8.1
- ▶ System unit approved according CE EMC regulations
- ▶ System unit approved for enhanced temperature range



Cooling solutions



Passive Cooler



Passive Heatpipe

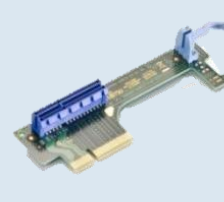


Active Cooler

Additional optional accessories



Internal 65W PSU



Risercard PCIe x4



M.2 WLAN Risercard for m-PCIe

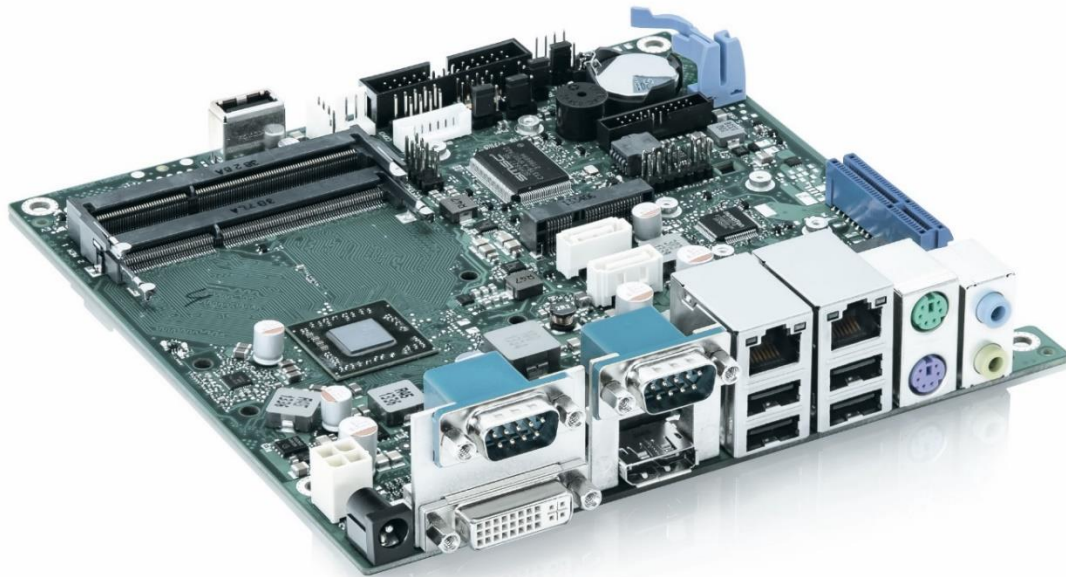


AC Adapter 65W



DC in locker (optional)

SMARTCASE™ S710 – MOTHERBOARD D3313-S MINI-ITX



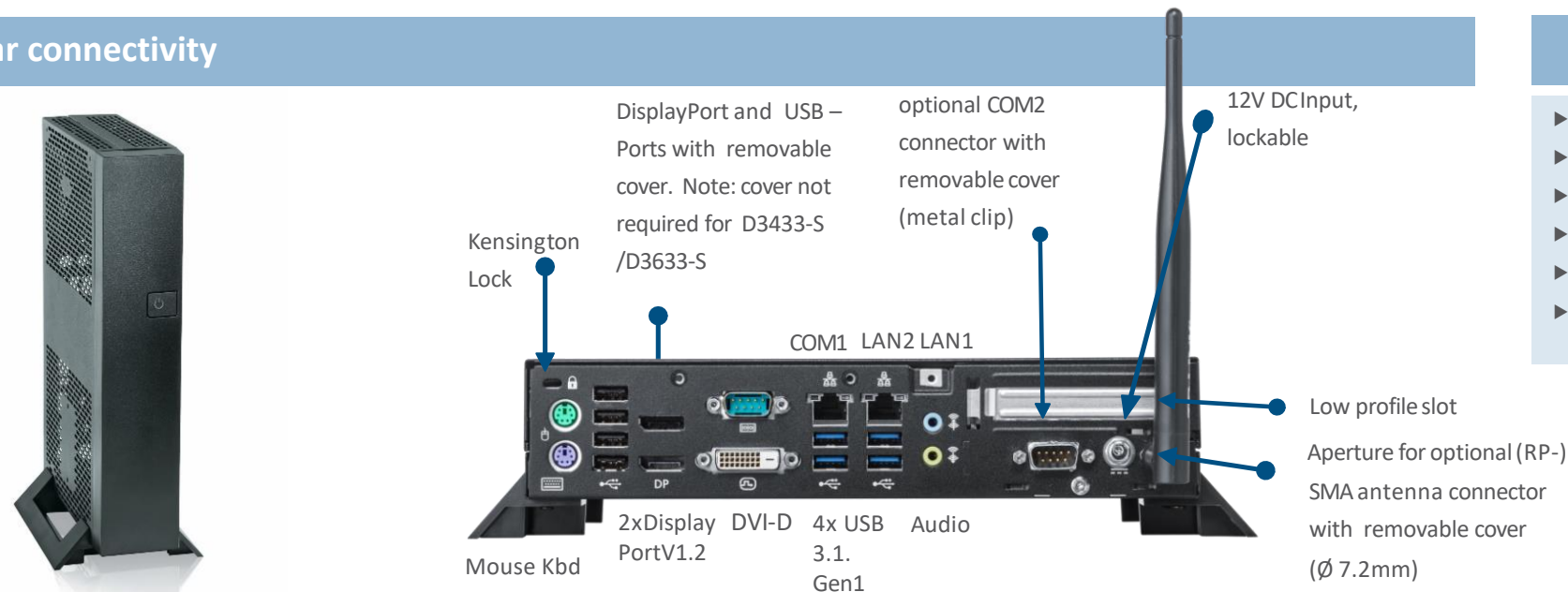
Highlights

- ▶ Mini-ITX for Industrial Applications
- ▶ AMD embedded G-Series SoC „eKabini“ & “Steppe Eagle”
- ▶ S1: AMD Embedded GX-210HA & AMD Radeon™ HD 8210E
- ▶ S4: AMD Embedded GX-222GC SOC & AMD Radeon™ R5E
- ▶ S6: AMD Embedded GX-424CC SOC & AMD Radeon™ R5E
- ▶ 24/7 support & extended temperature range
- ▶ 16GB DDR3 1600 SDRAM
- ▶ Integrated graphics (DX11) DVI, DP, LVDS



SMARTCASE™ S720 DESIGNED FOR INTEL [D343X-S](#) AND [D363X-S](#) MINI-ITX

Rear connectivity



Approvals and Certifications

- ▶ Motherboards D343x-S certified for Windows 7, 8.1, 10
- ▶ Motherboards D363x-S certified for Windows 10
- ▶ System approved according CE EMC regulations
- ▶ System approved according FCC/B EMC regulations
- ▶ System approved for enhanced temperature range
- ▶ Motherboard approved according cTÜVus (IEC62368-1)

Cooling solutions



1U active heatsink
(up to 35W TDP)

Additional optional accessories



Internal 65W PSU



Risercard PCIe x4



COM Cable w/o
bracket



Mini PCIe to M.2.
Adapter



Serial Port Cable
"ATX Slot bracket"

Wallmount kit
(included to chassis)



D3434-S



D3433-S



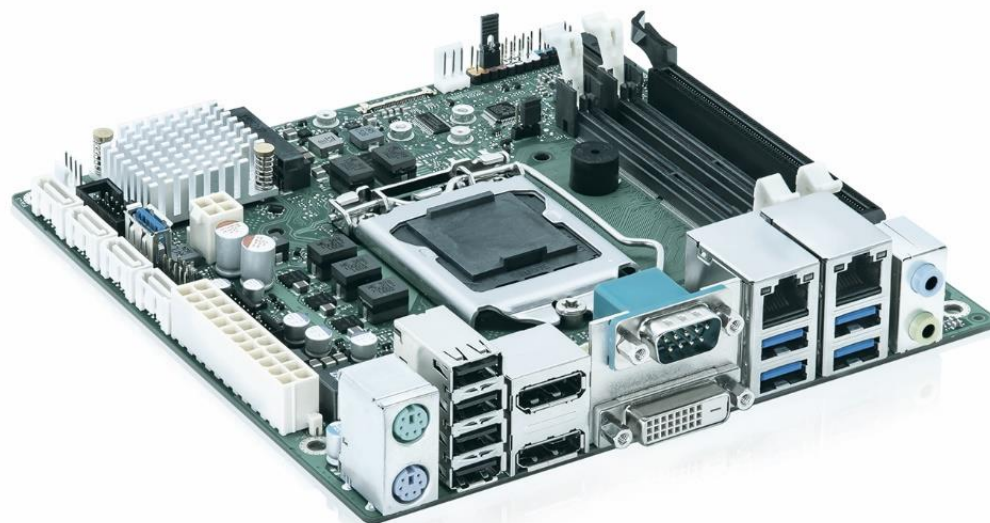
D3634-S



D3633-S



SMARTCASE™ S720 – MOTHERBOARD D3433-S MINI-ITX

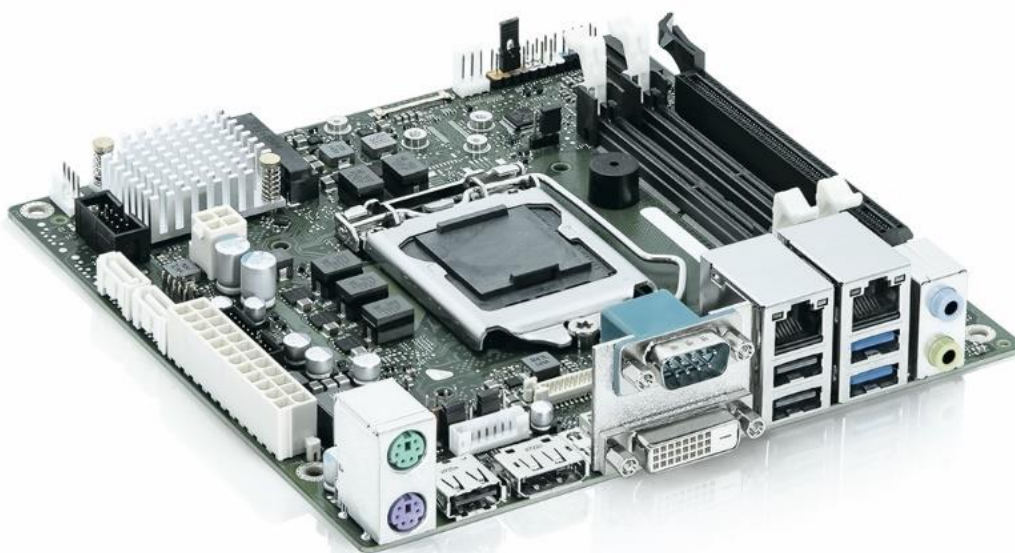


Highlights

- ▶ Intel® Q170 Mini-ITX
- ▶ Supporting Intel iAMT9 11.0 / vPro 2015 (CPU support required)
- ▶ LGA1151 supports Intel® 6th & 7th Generation Core™ i7 / i5 / i3 Processors
- ▶ max. 65W TDP
- ▶ 32GB Dual Channel DDR4 2400 SO-DIMM; Non-ECC
- ▶ 2x Intel GbE LAN (incl. Teaming Support)
- ▶ Intel® HD Graphics (integrated in processor e.g. HD510/530)
- ▶ DVI-I, Dual DisplayPort V1.2, eDP and Dual Channel LVDS support 1x PCI Express x16 (Gen. 3) and 1x Mini-PCI Express onboard Infineon TPM V2.0; 8 Bit GPIO Port & multichannel Audio
- ▶ BIOS-POST/-Boot & OS - HW Watchdog
- ▶ USB 2.0/3.0 and USB socket (stick/dongle USB3.0) onboard m-SATA socket (SATA III) socket support (for Embedded OS) and onboard support for M.2 SSD

SMARTCASE™ S720 – MOTHERBOARD D3434-S MINI-ITX

Highlights

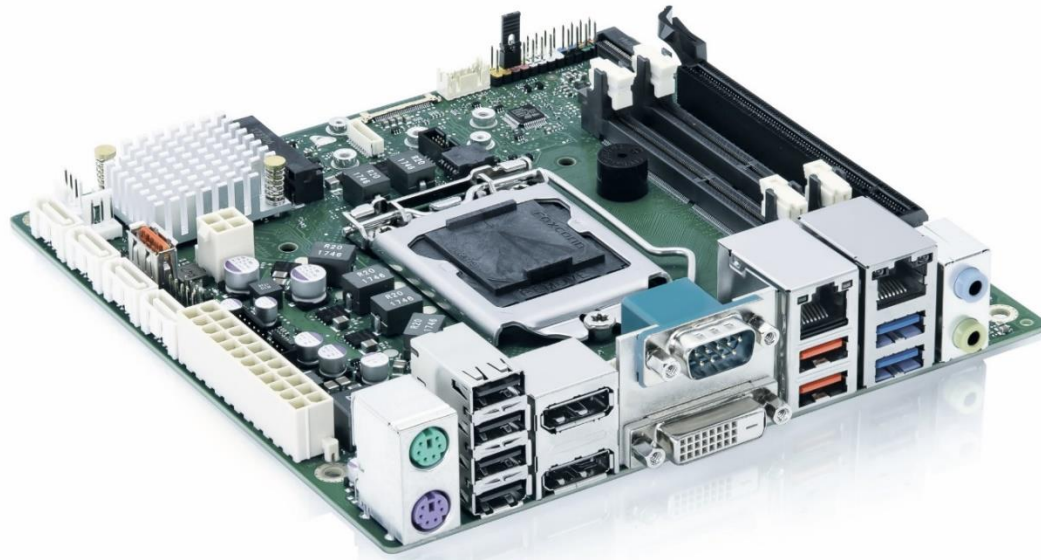


- ▶ Intel® H110 Mini-ITX
- ▶ LGA1151 supports Intel® 6th & 7th Generation Core™ i7 / i5 / i3 Processors
- ▶ max. 65W TDP
- ▶ Dual Channel DDR4 2400 SDRAM (SO-UDIMM), max. 32 GB; Non-ECC
- ▶ Intel® HD Graphics (integrated in processor e.g. HD510/530) 24Bit Dual Channel LVDS, eDP, 1x DP1.2, DVI-D
- ▶ PCI Express x16 (Gen. 3) and Mini-PCI Express
- ▶ 2x Intel GbE LAN (incl. Teaming Support)
- ▶ Dual Power Supply (ATX-compliant & 12 V only) Intel integrated TPM V2.0
- ▶ 8 Bit GPIO Port & multichannel Audio BIOS-POST/-Boot & OS - HW Watchdog
- ▶ 2 x USB 3.0, 3 x USB 2.0, 2 x SATA 6Gb/s,



SMARTCASE™ S720 – MOTHERBOARD D3633-S MINI-ITX

Highlights



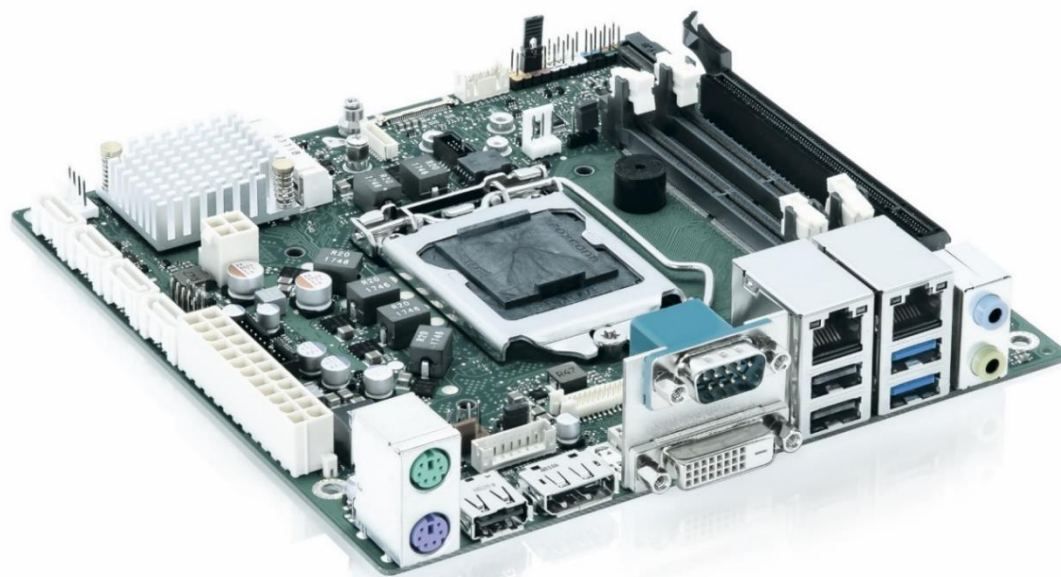
IoT Solutions
Alliance

- ▶ Intel® Q370 Mini-ITX
- ▶ Supporting Intel AMT 12.0 / vPro
- ▶ LGA1151
- ▶ Powerful with Intel® 8th/9th Generation Core™ i7/ i5 / i3 Processors
- ▶ max. 95W TDP
- ▶ Dual Channel DDR4-2666, 2 SO-DIMM, max. 32GB
- ▶ PCI Express x16 (Gen.3)
- ▶ 2x Intel® GbE LAN (incl. Teaming)
- ▶ Intel® HD Graphics (DX12)
- ▶ 1x DVI-D, 2x DP V1.2
- ▶ Intel® High Definition 5.1 Audio; Infineon 2.0
- ▶ 8 Bit GPIO; second COM port, HW watchdog
- ▶ 6x USB 2.0, 4x USB 3.0, 2x USB 3.1, 4x SATA 6G/s
- ▶ M.2 2280 PCIe, mPCIe (half / full size)

SMARTCASE™ S720 – MOTHERBOARD D3634-S MINI-ITX

Highlights

- ▶ Intel® H310 Mini-ITX
- ▶ LGA1151
- ▶ Powerful with Intel® 8th/9th Generation Core™ i7/ i5 / i3 Processors
- ▶ max. 95W TDP
- ▶ Dual Channel DDR4-2666, 2 SO-DIMM, max. 32GB
- ▶ PCI Express x16 (Gen.3)
- ▶ 2x Intel® GbE LAN (incl. Teaming)
- ▶ Intel® HD Graphics (DX12)
- ▶ 1x DVI-D, 1x DP V1.2
- ▶ Intel® High Definition 5.1 Audio; Infineon iTPM 2.0
- ▶ 8 Bit GPIO; second COM port, HW watchdog
- ▶ 5x USB 2.0, 4x USB 3.0, 4x SATA 6G/s
- ▶ M.2 2280 PCIe, mPCIe (half / full size)



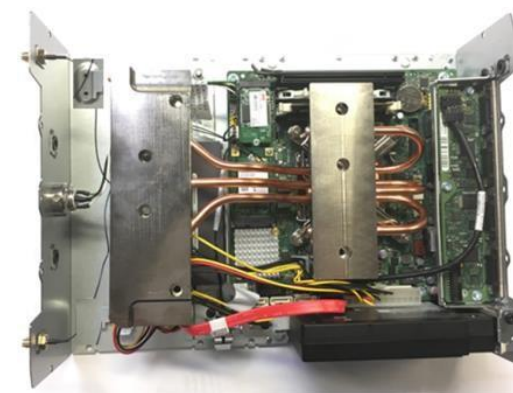
SMARTCASE™ I720 DESIGNED FOR INTEL [D343X-S](#) AND [D363X-S](#) MINI-ITX



Inside Features

- ▶ Heatpipe cooling solution:
 - ▶ No thermal paste
 - ▶ No mainboard deflection and mechanical stress
 - ▶ Constant contact pressure with CPU while over lifetime (180N)
- ▶ Intrusion switch
- ▶ 2.5" drive bay included with easy access via separate bottom cover
- ▶ Internal 65W PSU

Additional optional accessories



D3434-S



D3433-S



D3634-S



D3633-S

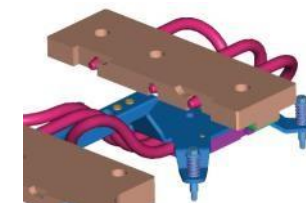
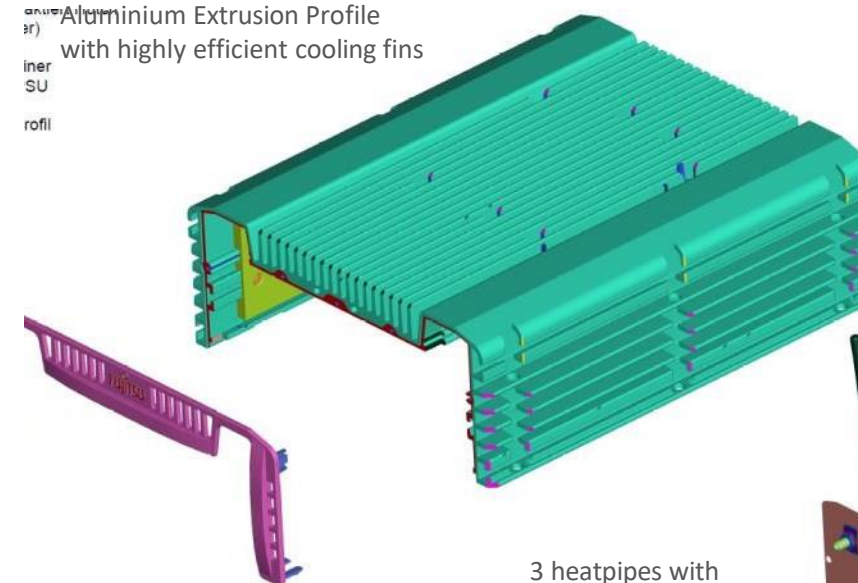


SMARTCASE™ I720 – FEATURES AND BENEFITS



Attribute	Benefit
Passive cooling with 3 heatpipes and 2 heat transfer areas	High efficient cooling without rotating fans
Adaption of cooling solution and CPU via standard LGA1151 spring screws	No mechanical stress to the motherboard (no mainboard deflection)
	No loss of or even undefined contact pressure due to lasting deformation of motherboard
	Constant reproducible contact pressure between cooling solution and CPU (permanent 180N)
Adaption of cooling solution and top cover (hutch) with screws and without thermal paste	Easy opening and closing of top cover (hutch)
	Constant contact pressure between cooling solution and hutch => guaranteed constant thermal transfer
Hutch and system unit are independent parts	Easy opening and closing of top cover (hutch) without risk of mechanical damage
	integrated protection against mechanical stress for heat pipes
IP 50 class	Dust protected
Integrated intrusion switch	Each opening will be detected and recorded in logfiles. Alert via DeskView or other manageability software.
SSD accessible via easy remove of front panel	Easy access to SSD guarantees fast exchange of SSD without opening total system
Integrated 12V power supply connected to hutch	No separate external AC adapter with risk for damage or loss
	Efficient cooling of AC adapter
	Possibility for integration of PSU with different DC in value or customized spec - upon request
M6 grounding contact	Option for proper grounding of the electrical system
Kensington lock	Antitheft protection
4 additional COM ports	flexible configuration for RS232, RS422 and/or RS485
One chassis kit, 4 different mainboards	
D3433-S and D3434-S	Support for Intel® 6th/7th gen core technology
D3633-S and D3634-S	Support for Intel® 8th gen core technology

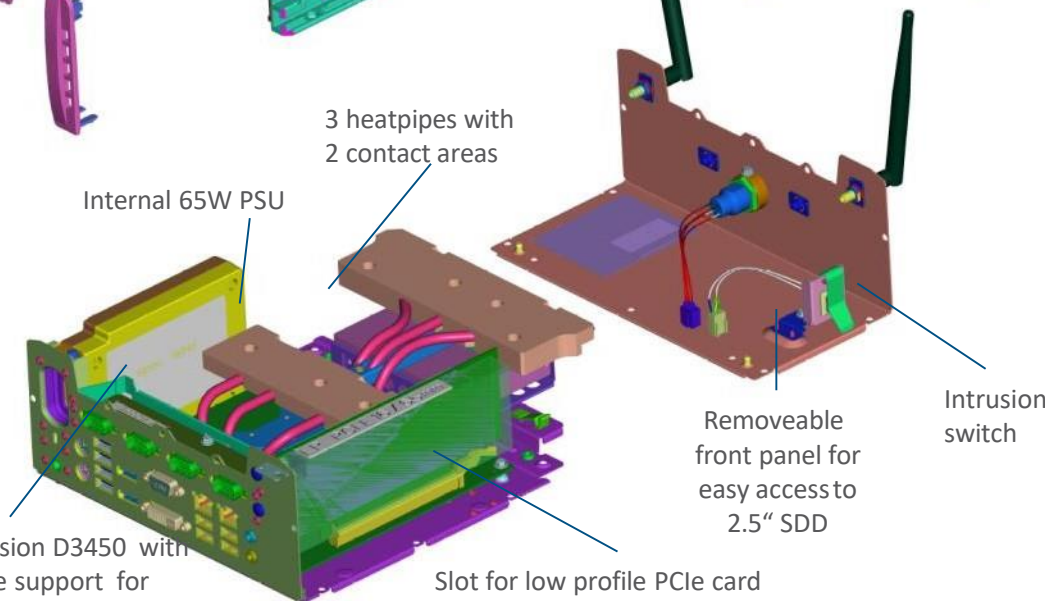
Aluminium Extrusion Profile
with highly efficient cooling fins



Standard LGA1151 spring screw cooler assembly (F=180N) with copper cernel

Internal 65W PSU

3 heatpipes with 2 contact areas



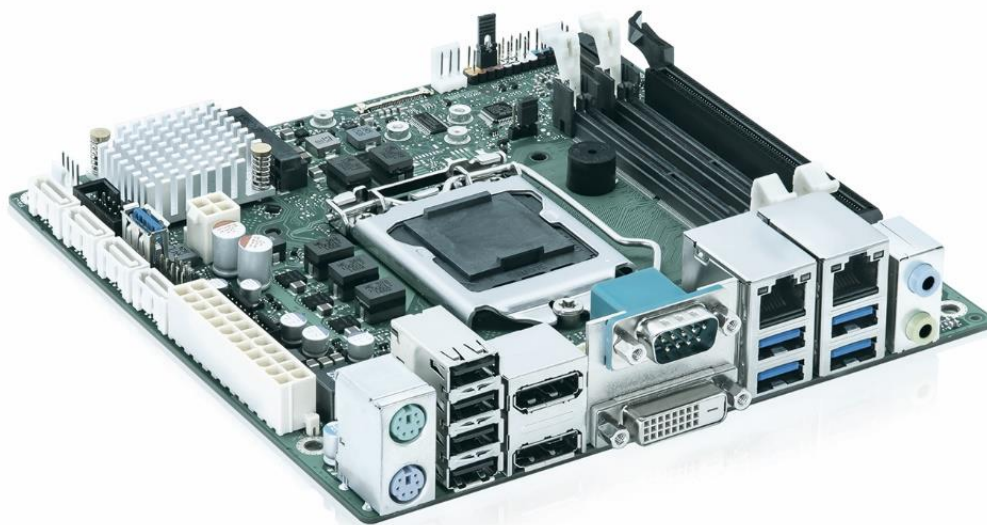
Intrusion switch

Removeable front panel for easy access to 2.5" SSD

Slot for low profile PCIe card (option upon request)

4 port COM extension D3450 with freely configurable support for RS232, RS422 and/or RS485

SMARTCASE™ I720 - MOTHERBOARD D3433-S MINI-ITX



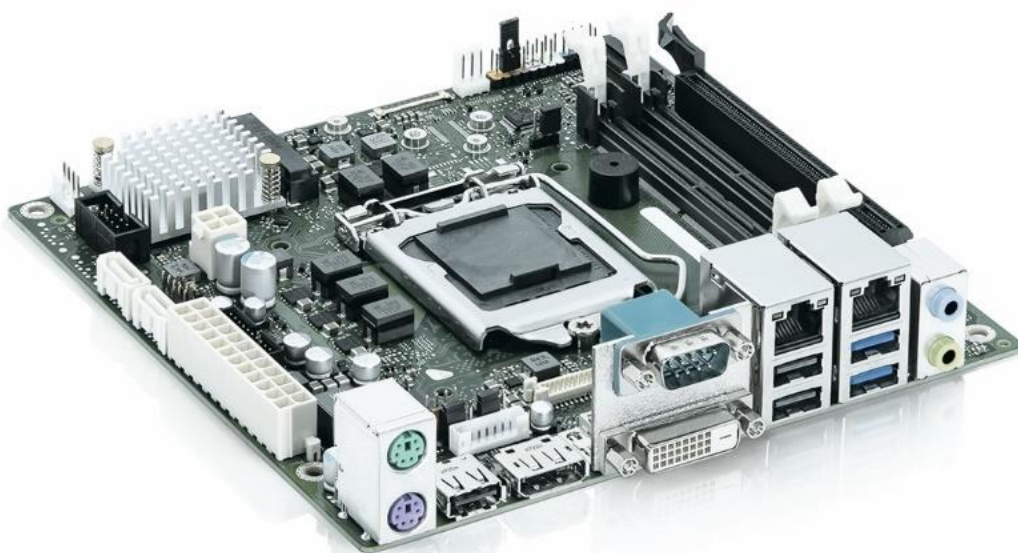
IoT Solutions
Alliance

Highlights

- ▶ Intel® Q170 Mini-ITX
- ▶ Supporting Intel iAMT9 11.0 / vPro 2015 (CPU support required)
- ▶ LGA1151 supports Intel® 6th & 7th Generation Core™ i7 / i5 / i3 Processors
- ▶ max. 65W TDP
- ▶ 32GB Dual Channel DDR4 2400 SO-DIMM; Non-ECC
- ▶ 2x Intel GbE LAN (incl. Teaming Support)
- ▶ Intel® HD Graphics (integrated in processor e.g. HD510/530)
- ▶ DVI-I, Dual DisplayPort V1.2, eDP and Dual Channel LVDS support 1x PCI Express x16 (Gen. 3) and 1x Mini-PCI Express onboard Infineon TPM V2.0; 8 Bit GPIO Port & multichannel Audio
- ▶ BIOS-POST/-Boot & OS - HW Watchdog
- ▶ USB 2.0/3.0 and USB socket (stick/dongle USB3.0) onboard m-SATA socket (SATA III) socket support (for Embedded OS) and onboard support for M.2 SSD

SMARTCASE™ I720 – MOTHERBOARD D3434-S MINI-ITX

Highlights



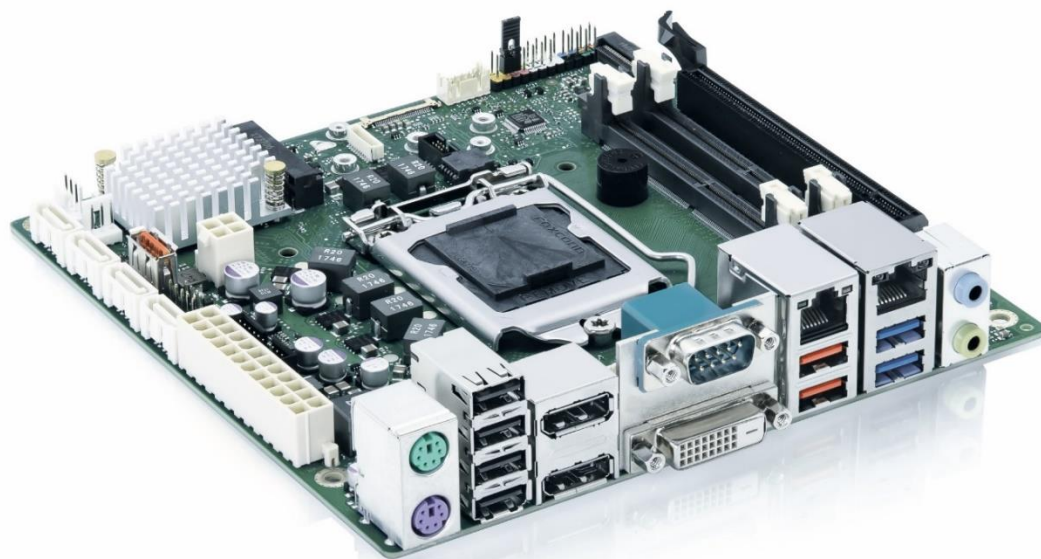
- ▶ Intel® H110 Mini-ITX
- ▶ LGA1151 supports Intel® 6th & 7th Generation Core™ i7 / i5 / i3 Processors
- ▶ max. 65W TDP
- ▶ Dual Channel DDR4 2400 SDRAM (SO-UDIMM), max. 32 GB; Non-ECC
- ▶ Intel® HD Graphics (integrated in processor e.g. HD510/530) 24Bit Dual Channel LVDS, eDP, 1x DP1.2, DVI-D
- ▶ PCI Express x16 (Gen. 3) and Mini-PCI Express
- ▶ 2x Intel® GbE LAN (incl. Teaming Support)
- ▶ Dual Power Supply (ATX-compliant & 12 V only) Intel® integrated TPM V2.0
- ▶ 8 Bit GPIO Port & multichannel Audio BIOS-POST/-Boot & OS - HW Watchdog
- ▶ 2 x USB 3.0, 3 x USB 2.0, 2 x SATA 6Gb/s,



IoT Solutions
Alliance

SMARTCASE™ I720 – MOTHERBOARD D3633-S MINI-ITX

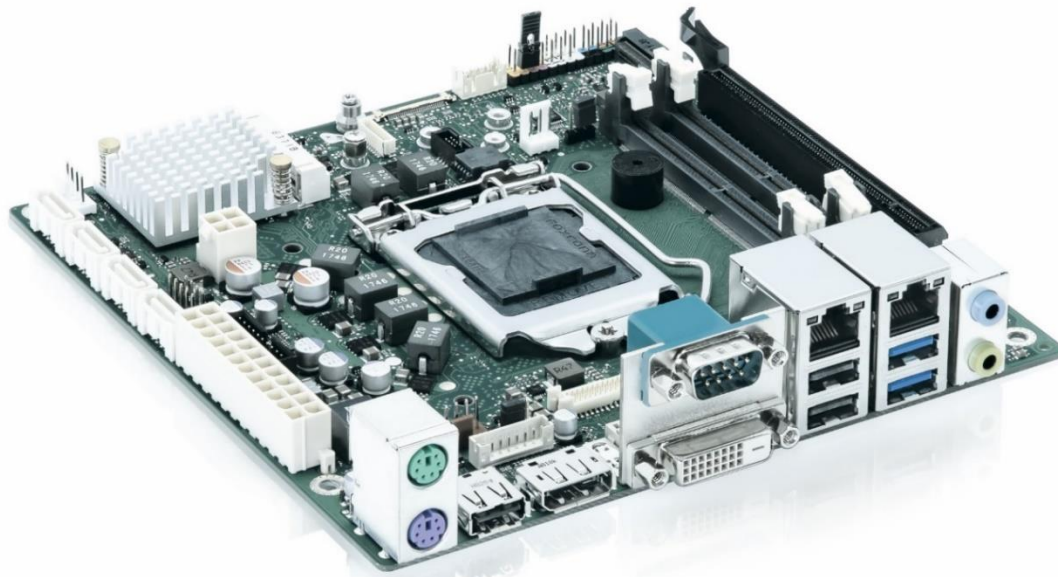
Highlights



IoT Solutions
Alliance

- ▶ Intel® Q370 Mini-ITX
- ▶ Supporting Intel AMT 12.0 / vPro
- ▶ LGA1151
- ▶ Powerful with Intel® 8th/9th Generation Core™ i7/ i5 / i3 Processors
- ▶ max. 95W TDP
- ▶ Dual Channel DDR4-2666, 2 SO-DIMM, max. 32GB
- ▶ PCI Express x16 (Gen.3)
- ▶ 2x Intel® GbE LAN (incl. Teaming)
- ▶ Intel® HD Graphics (DX12)
- ▶ 1x DVI-D, 2x DP V1.2
- ▶ Intel® High Definition 5.1 Audio; Infineon 2.0
- ▶ 8 Bit GPIO; second COM port, HW watchdog
- ▶ 6x USB 2.0, 4x USB 3.0, 2x USB 3.1, 4x SATA 6G/s
- ▶ M.2 2280 PCIe, mPCIe (half / full size)

SMARTCASE™ I720 - MOTHERBOARD D3634-S MINI-ITX



IoT Solutions
Alliance

Highlights

- ▶ Intel® H310 Mini-ITX
- ▶ LGA1151
- ▶ Powerful with Intel® 8th/9th Generation Core™ i7/ i5 / i3 Processors
- ▶ max. 95W TDP
- ▶ Dual Channel DDR4-2666, 2 SO-DIMM, max. 32GB
- ▶ PCI Express x16 (Gen.3)
- ▶ 2x Intel® GbE LAN (incl. Teaming)
- ▶ Intel® HD Graphics (DX12)
- ▶ 1x DVI-D, 1x DP V1.2
- ▶ Intel® High Definition 5.1 Audio; Infineon iTPM 2.0
- ▶ 8 Bit GPIO; second COM port, HW watchdog
- ▶ 5x USB 2.0, 4x USB 3.0, 4x SATA 6G/s
- ▶ M.2 2280 PCIe, mPCIe (half / full size)

AGENDA



01

PRODUCT OVERVIEW

02

SPECIFICATIONS

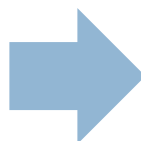
03

WHY CHOOSE OUR
PRODUCTS?

BENEFITS OF KONTRON SMARTCASE™

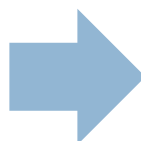


▶ Chassis



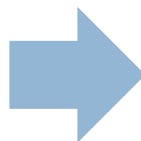
Professionally designed and manufactured

▶ Motherboards



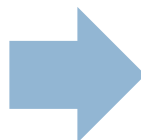
Quality designed and made in Germany, powered by Intel® and AMD platform technologies

▶ Cooling Solutions



Well-adjusted and approved

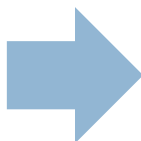
▶ Accessories



Comprehensive sets to enlarge usability and expandability:

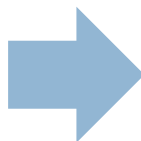
- ▶ Stands, Wallmount kits, VESA mount
- ▶ AC adapters (external and internal)
- ▶ Extension cables and PCIe riser card

▶ Certifications



CE, FCC, Safety, ... and thermally approved on system level

▶ Documentation



Detailed assembly instructions and mainboard technotes

BENEFITS TO INTEGRATORS

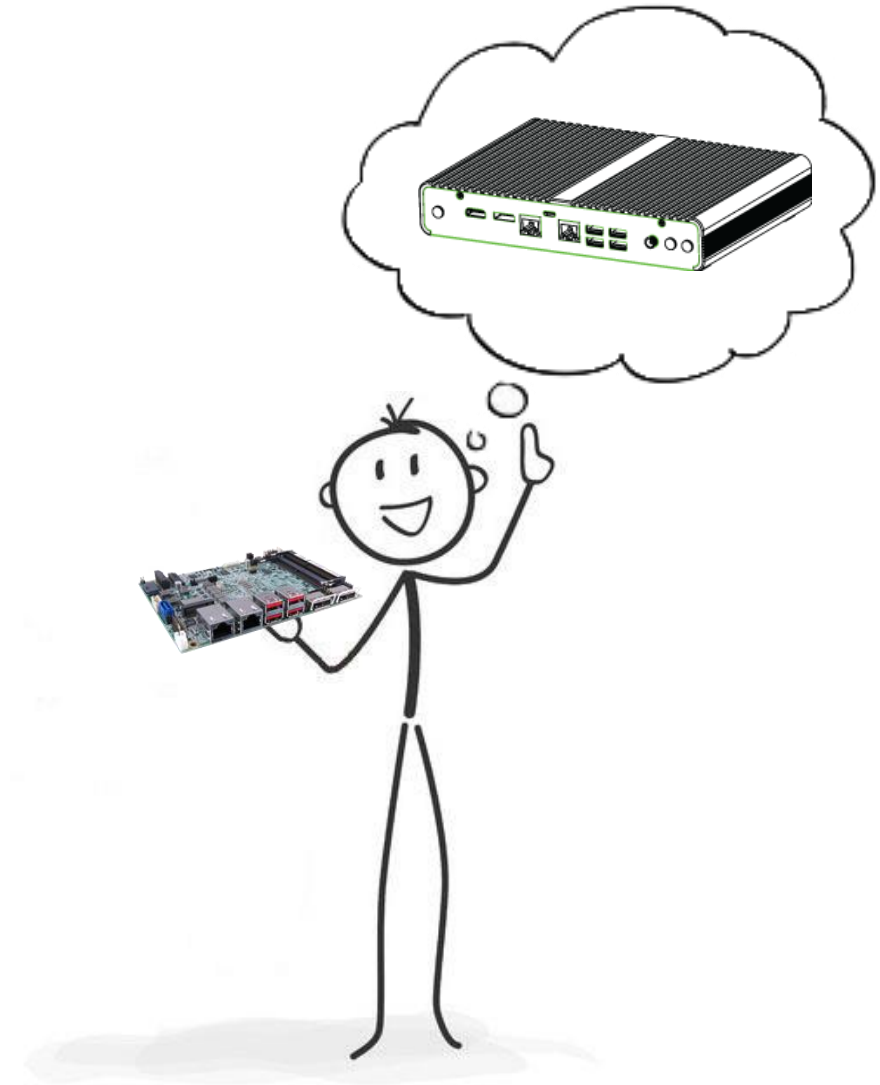
State-of-the-art platform to fulfill requirements for **IoT** and **intelligent edge** applications from the markets



More possibilities on the **variety** of **products** and **applications** developed based on one board



To **minimize human effort, time** and **cost** in product development



OUR CHANGING WORLD IS FILLED WITH
BOUNDLESS OPPORTUNITIES



**WE LOOK FORWARD TO
EXPLORING THEM WITH YOU**