CONNECT AND PROTECT

Interscale

nVent

SCHROFF

Small Form Factor Cases – Interscale

INTERSCALE PASSIVE OR CONVECTION COOLED

02613002

02613014

Plain case
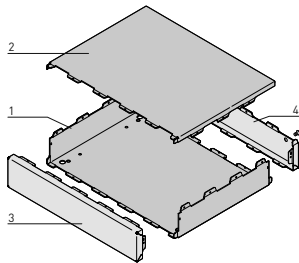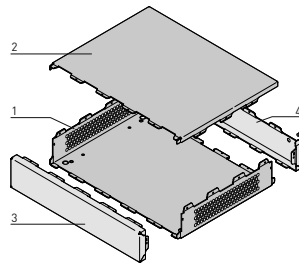
02613050

Perforated case

02613051

- Available plain or perforated for forced cooling with fans
- Modular case consisting of 4 easy to assemble parts
- Integrated EMC protection
- Ingress protection IP 30 (plain version)
- Color RAL 7016
- Small form factor or 19" rack mount
- Rigid construction only requires two screws
- Other dimensions, cutout shapes or locations, and screen printing available

DELIVERY INCLUDES (assembled)

Item	Qty	Description
1	1	Base with 2 side panels (plain or perforated), St, 1 mm, AlZn coated, RAL 7016 (anthracite gray); 19"-angle, 1,5 mm St, AlZn coated, RAL 7016 (only on 19" version case)
2	1	Top cover, Al, 1 mm, RAL 7016
3	1	Front panel, Al, 1 mm, RAL 7016
4	1	Rear panel, Al, 1 mm, RAL 7016
5	1	User manual
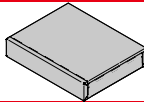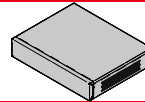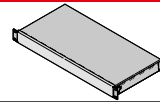
ORDER INFORMATION

Desktop cases

U	Height mm	Width mm	Depth mm	Desktop case plain Part no.	Desktop case perforated Part no.
1	43.65	132.55	132.55	**14820-133**	–
1	43.65	132.55	177.00	**14820-134**	–
1	43.65	221.45	177.00	**14820-154**	**14825-154**
1	43.65	221.45	221.45	**14820-155**	**14825-155**
1	43.65	310.35	221.45	**14820-175**	**14825-175**
1	43.65	399.25	221.45	**14820-195**	**14825-195**
1	43.65	399.25	310.35	**14820-197**	**14825-197**
2	88.10	221.45	177.00	**14820-254**	**14825-254**
2	88.10	221.45	221.45	**14820-255**	**14825-255**
2	88.10	310.35	221.45	**14820-275**	**14825-275**
2	88.10	399.25	221.45	**14820-295**	**14825-295**
2	88.10	399.25	310.35	**14820-297**	**14825-297**
3	132.55	310.35	221.45	**14820-375**	**14825-375**
3	132.55	399.25	221.45	**14820-395**	**14825-395**
3	132.55	399.25	310.35	**14820-397**	**14825-397**

19" cases

U	Height mm	Width mm	Depth mm	19" case plain Part no.	19" case perforated Part no.
1	43.65	443.70	221.45	**14821-105**	**14826-105**
1	43.65	443.70	310.35	**14821-107**	**14826-107**
2	88.10	443.70	221.45	**14821-205**	**14826-205**
2	88.10	443.70	310.35	**14821-207**	**14826-207**
3	132.55	443.70	221.45	**14821-305**	**14826-305**
3	132.55	443.70	310.35	**14821-307**	**14826-307**

Accessories

Fan mount with fans, 80 mm height	Page 5.124	Stacking aid	Page 5.130
Clip for horizontal rail mounting	Page 5.129	Rubber feet	Page 5.130
Wall or Desktop mounting bracket	Page 5.129	Plastic feet	Page 5.131
Plastic tip-up feet	Page 5.130	Assembly tool	Page 5.131

Small Form Factor Cases – Interscale

INTERSCALEFOR EMBEDDED NUC

02615019

- Perforated side panels for passive cooling (convection)
- Compliant with the SDT.03 embeddedNUC standard http://www.sget.org/standards.html
- Modular case consisting of 3 easy to assemble parts; body, top cover and front panel
- Rigid construction requires only two screws
- Board mounting studs installed
- Integrated EMC protection
- Color RAL 7016
- Max. heat dissipation without fan about 8 Watt
- Cutouts specific for IES (http://en.ies.de/) MB95 embedded NUC board
- Other dimensions, cutout shapes or locations and screen printing available

DELIVERY INCLUDES (assembled)

Item	Qty	Description
1	1	Base with 2 side panels (perforated) and rear panel, Al, 1 mm, RAL 7016 (anthracite gray)
2	1	Top cover, Al, 1 mm, RAL 7016
3	1	Front panel, Al, 1 mm, RAL 7016
4	4	Pre-installed studs with M2.5 Torx T8 screws for board mounting
5	1	User manual

ORDER INFORMATION

Height mm	Width mm	Depth mm	Part no.
34.00	112.00	106.50	14820-701

Accessories	
Horizontal rail mounting bracket	**Page 5.129**
Wall or Desktop mounting bracket	**Page 5.129**
Rubber feet	**Page 5.130**
Assembly tool	**Page 5.131**
Screwdriver	**Page 5.131**

NOTE

- Only the listed Interscale accessories are compatible

Part number in bold face type: ready for shipping within 2 working days
Part number in normal type: ready for shipping within 10 working days

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Small Form Factor Cases – Interscale

FAN MOUNT WITH FANS, 80 MM HEIGHT

1 fan
02617001

2 fans
02617002

- Fan mount for installation in the Interscale

DELIVERY INCLUDES (assembled)

Item	Qty.	Description
1a	1	Fan mount (1 fan), height 83 mm, width 83 mm
1b	1	Fan mount (2 fans), height 83 mm, width 165 mm
2a	1	Fan, 80 mm height, 80 mm width, 25.4 mm depth
2b	2	Fan, 80 mm height, 80 mm width, 25.4 mm depth
3	1	Mounting material 4 x M3x6 countersunk screw
4	1	Fan attachment (with cord)

ORDER INFORMATION

Description	Qty/PU piece	Qty	Part no.
1 fan	1	PU 1 kit	**24830-101**
2 fans	1	PU 1 kit	**24830-102**

TECHNICAL DATA of one fan

Voltage [VDC]	12
Dimensions H x W x D (mm)	80 x 80 x 25.4
Air capacity (free blowing) [m^3/h]	109.44
Noise level [dB (A)]	44.62
Max. stat. pressure [Pa]	95.41
Max. ambient temperatures [°C]	70

Small Form Factor Cases – Interscale

INTERSCALE FOR EMBEDDED NUC, CONDUCTION COOLED

Application: Case with connectors

02615021

Application: Case with connectors

02615009

- Integrated heat sink on top cover with 5 mm heat fins
- Compliant with the SDT.03 embeddedNUC standard http://www.sget.org/standards.html
- Modular case consisting of 3 easy to assemble parts; body, top cover and front panel
- Rigid construction requires only two screws
- Board mounting studs installed
- Integrated EMC protection
- Color RAL 7016
- Cutouts specific for IES (http://en.ies.de/) MB95 embedded NUC board
- Other dimensions, cutout shapes or locations, and screen printing available

DELIVERY INCLUDES (assembled)

Item	Qty	Description
1	1	Base with 2 side panels and rear panel, Al, 1 mm, RAL 7016 (anthracite gray)
2	1	Top cover with integrated heat sink, Al, 1 mm, RAL 7016
3	1	Front panel, Al, 1 mm, RAL 7016
4	4	Pre-installed M2.5 studs with Torx T8 screws for board mounting
5	1	User manual

ORDER INFORMATION

Height mm	Width mm	Depth mm	Part no.
43.65	112.00	106.50	14830-002

Accessories	
Flexible Heat Conductor (FHC), 20 mm	**Page 5.127**
Aesthetic Design Elements	**Page 5.127**
Rubber feet	**Page 5.130**
Assembly tool	**Page 5.131**
Screwdriver	**Page 5.131**

NOTE

- Only the listed Interscale accessories are compatible

Part number in bold face type: ready for shipping within 2 working days
Part number in normal type: ready for shipping within 10 working days

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Small Form Factor Cases – Interscale

INTERSCALE FOR MINI-ITX, CONDUCTION COOLED

Application: Case with connectors

02615011

Application: Case with connectors

02615010

- Integrated heat sink on top cover with 10 mm or 20 mm heat fins
- Modular case consisting of 3 easy to assemble parts; body, top cover and front panel
- Rigid construction requires only four screws
- Board mounting studs installed
- Integrated EMC protection
- Color RAL 7016
- Cutout for Mini ITX I/O panel, power connector (Phoenix Contact, 0710028) and power switch (Schurter, MCS 18 Front)
- Other dimensions, cutout shapes or locations, and screen printing available

DELIVERY INCLUDES (assembled)

Item	Qty	Description
1	1	Base with 2 side panels and rear panel, Al, 1 mm, RAL 7016 (anthracite gray)
2	1	Top cover with integrated heat sink, Al, 1 mm, RAL 7016
3	1	Front panel, Al, 1 mm, RAL 7016
4	4	Pre-installed M2.5 studs with Torx T8 screws for board mounting
5	1	User manual

ORDER INFORMATION

Height mm	Width mm	Depth mm	With 10 mm fins Part no.	With 20 mm fins Part no.
94.00	184.00	189.00	14830-005	**14830-006**

Accessories	
Flexible Heat Conductor (FHC), 70 mm	**Page 5.128**
Aesthetic Design Elements	**Page 5.127**
Horizontal rail mounting bracket	**Page 5.129**
Wall or Desktop mounting bracket	**Page 5.129**
Plastic tip-up feet	**Page 5.130**
Rubber feet	**Page 5.130**
Assembly tool	**Page 5.131**
Screwdriver	**Page 5.131**

NOTE

- Only the listed Interscale accessories are compatible

Small Form Factor Cases – Interscale

AESTHETIC DESIGN ELEMENTS FOR CONDUCTION COOLED
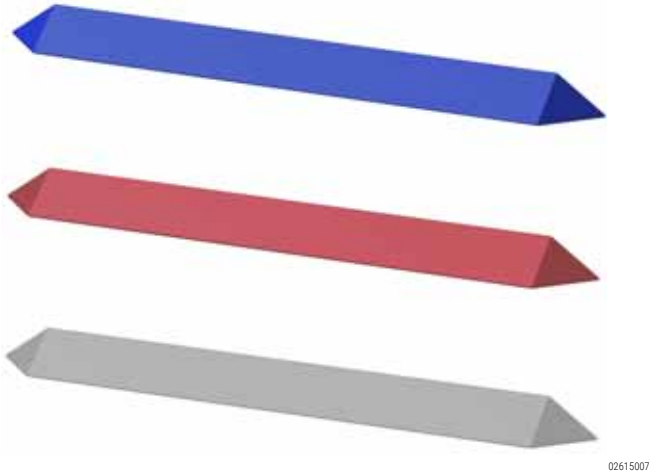
02615007

- Designs created to compliment the various heat fin heights
- Compatible with all Interscale C enclosures

DELIVERY INCLUDES

Item	Qty	Description
1	2	Aesthetic design element, Al

ORDER INFORMATION

	For case width	Colour, finish	Heat fin height		
			5 mm	10 mm	20 mm
	mm		Part no.	Part no.	Part no.
For embedded NUC case	112	Blue (RAL 5010)	24830-010	–	–
	112	Red (RAL 3027)	24830-011	–	–
	112	Siver (RAL 9006)	24830-012	–	–
For Mini-ITX case	184	Blue (RAL 5010)	–	24830-013	24830-016
	184	Red (RAL 3027)	–	24830-014	24830-017
	184	Silver (RAL 9006)	–	24830-015	24830-018

FLEXIBLE HEAT CONDUCTOR (FHC), 20 MM

02615016

- Patent pending conduction cooling solution for small form factor electronics
- Conductor block expands/contracts vertically to compensate for tolerance stack up and optimizes surface contact and pressure along the thermal path; eliminates the need for a thermal gap pad
- Provides industry leading conduction cooling performance, 10 % improvement over current conduction cooling methods
- Designed for Intel, AMD, Via, Freescale, NVidia and Texas Instrument processors that employ a BGA socket
- Secured to PCB with thermally conductive adhesive tape
- Compatible with Interscale C enclosures

DELIVERY INCLUDES (assembled)

Item	Qty	Description
1	1	Flexible heat conductor, assembled; thermal grease included
2	1	Adhesive tape, thermally conductive

ORDER INFORMATION

Height	Width	Depth	Part no.
	mm	mm	
19.75 ± 1.5 mm	22	22	24830-005

Part number in bold face type: ready for shipping within 2 working days
Part number in normal type: ready for shipping within 10 working days

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Small Form Factor Cases – Interscale

FLEXIBLE HEAT CONDUCTOR (FHC), 70 MM

02615017

- Patent pending conduction cooling solution for small form factor electronics
- Conductor block expands/contracts vertically to compensate for tolerance stack up, and optimizes surface contact and pressure along the thermal path; eliminates the need for a thermal gap pad
- Provides industry leading conduction cooling performance, 70 % improvement over current conduction cooling methods
- Designed for ATX/ITX/Mini ITX & COM using Intel core-i processors and AMD processors with the following sockets: Intel: LGA775, LGA1150, LGA1155, LGA1156, LGA1366, LGA2011 AMD: AM2, AM2(+), AM3, AM3(+), FM1, FM2, FM2(+)
- Secured to PCB with mounting brackets, sold seperately
- Compatible with Interscale C enclosures

Item	Qty	Description
1	1	Flexible heat conductor, assembled; thermal grease included
2	1	Frame, Al

ORDER INFORMATION

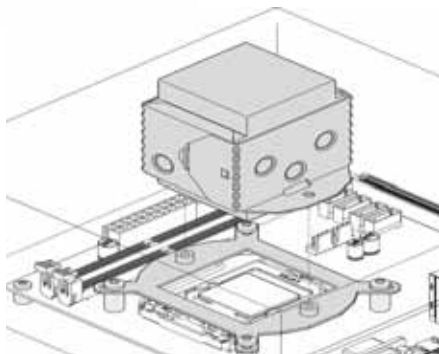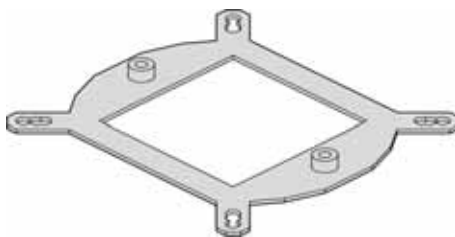| Height	Width mm	Depth mm	Part no.
68.50 ± 2.5 mm	50	50	24830-001
Accessories			
Intel mounting brackets for 70 mm FHC			24830-002
AMD mounting brackets for 70 mm FHC			24830-003

NOTE

- Please order the mounting bracket (Intel or AMD, listed under accessories) to assemble the FHC to the board

MOUNTING BRACKETS FOR 70 MM FHC

Bracket for Intel   02615053   Application: Intel mounting bracket   02615054

- Designed to secure the 70 mm Flexible Heat Conductor to PCB
- Utilizes keep out zones to not interfere with other board components
- Designed for ATX/ITX/Mini ITX & COM using Intel core-i processors and AMD processors with the following sockets: Intel: LGA775, LGA1150, LGA1155, LGA1156, LGA1366, LGA2011 AMD: AM2, AM2(+), AM3, AM3(+), FM1, FM2, FM2(+)

DELIVERY INCLUDES (assembled)

Item	Qty	Description
1	1	Mounting bracket with associated hardware

ORDER INFORMATION

Description	Part no.
Intel mounting brackets for 70 mm FHC	24830-002
AMD mounting brackets for 70 mm FHC	24830-003

Small Form Factor Cases – Interscale

CLIP FOR HORIZONTAL RAIL MOUNTING
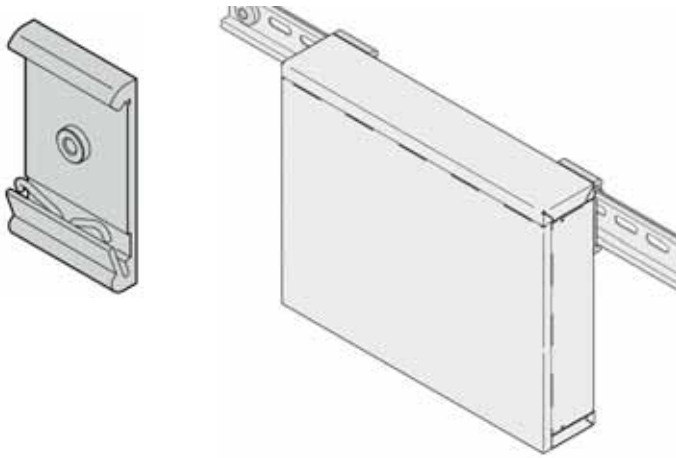
02613069

02613070

Example: Clip for horizontal rail mounted on case

- The clip can be used to fix the case to a horizontal rail
- The clip is bolted to the case instead of the feet and can then be fitted onto the rail

DELIVERY INCLUDES

| Item	Qty	Description
1	2	Clip, Al profile, clear anodized, width 30 mm, 52 mm, snap mounting for 35 mm DIN rails EN 50022; M4 self-clinching nut
2	2	Screw, T20, M4 x 6
3	1	User manual

ORDER INFORMATION

Description	Qty/PU piece	Part no.
Clip for horizontal rail mounting	2	**24820-002**

NOTE

- Not compatible with embedded NUC cases or Interscale 19" cases

WALL OR DESKTOP MOUNTING BRACKET
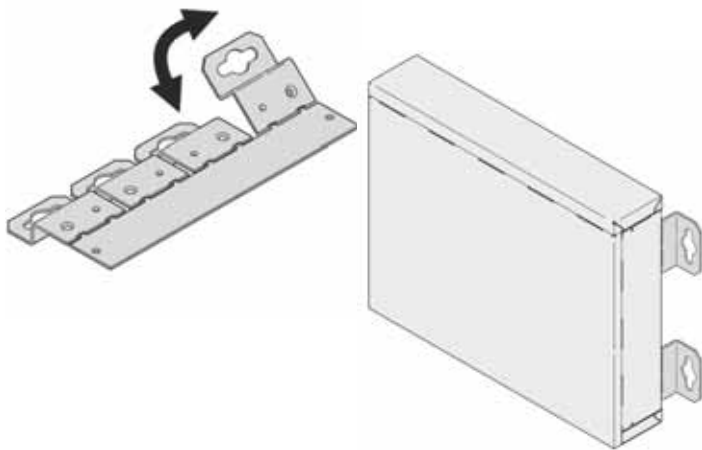
02615052

02615051

Example: Mounting bracket mounted on the case

- Bracket for wall or desktop mounting
- Provides 14 mm clearance from mounting surface for cable management
- Able to assemble / disassemble case while mounted

DELIVERY INCLUDES

Item	Qty	Description
1	4	Mounting bracket, St, 1.5 mm, finish AlZn

ORDER INFORMATION

Description	Qty/PU piece	Part no.
Wall or Desktop mounting bracket	4	**24820-005**

NOTE

- Not compatible with embedded NUC cases or Interscale 19" cases

Part number in bold face type: ready for shipping within 2 working days
Part number in normal type: ready for shipping within 10 working days

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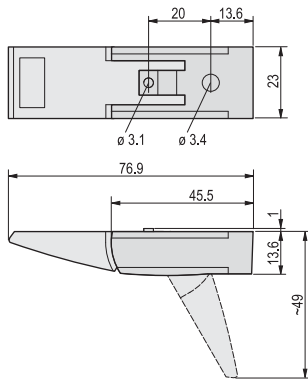# Small Form Factor Cases – Interscale

01810004

Application example
02613008

02906050

- Can be used instead of standard feet
- Carrying capacity: 25 kg per foot
- Mounting holes in bottom of casing

DELIVERY INCLUDES (kit)

Item	Qty	Description
1	4	Foot, PA, UL 94 V-0
2	4	Anti-slip protection, TPE
3	2	Tip-up device, PA, UL 94 V-0
4	1	Assembly kit

ORDER INFORMATION

Description	Qty/PU piece	Part no.
Tip-up feet, anthracite, similar to RAL 7016	4	**20603-002**

NOTE

- Not compatible with embedded NUC cases or Interscale 19" cases

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STACKING AID
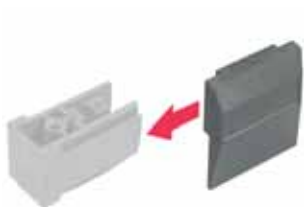
01810005

Application example Interscale
02613020

- Stacking aid is clipped onto tip-up feet (please order tip-up feet separately)

DELIVERY INCLUDES (kit)

Item	Qty	Description
1	4	Stacking aid, PA ,UL 94 V-0

ORDER INFORMATION

Description	Qty/PU piece	Part no.
Stacking aid, anthracite, similar to RAL 7016	4	**20603-003**
Accessories		
Plastic tip-up feet anthracite, similar to RAL 7016, 4 pieces		**20603-002**

NOTE

- A plastic tip-up feet are required for mounting, please order separately
- Not compatible with Interscale 19" cases, Interscale for embedded NUC cases or Interscale conduction cooled cases

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RUBBER FEET

02615020

- Toolless installation; secures via adhesive
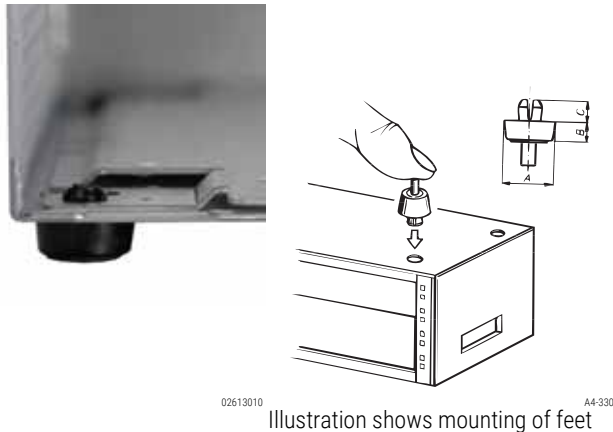- Compatible with all Interscale cases

DELIVERY INCLUDES (assembled)

Item	Qty	Description
1	4	Rubber feet, height 2.2 mm, Ø 7.9 mm

ORDER INFORMATION

Description	Part no.
Rubber feet	21102-025

Small Form Factor Cases – Interscale

PLASTIC FEET

02613010

A4-330

Illustration shows mounting of feet

Dimensions			Hole diameter
A	B	C	
mm	mm	mm	mm
16	7.2	4	7

- Plastic feet with rubberized base
- Toolless installation; fixed by pressing in the expanding pin

DELIVERY INCLUDES

Item	Qty	Description
1	1	Plastic foot, PC, UL 94 V-0, black, with anti-slip protection

ORDER INFORMATION

Description	Qty	Part no.
Plastic feet	SPQ 50 [1]	**60224-009**
Plastic feet	PU 4 [2]	**24820-004**

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ);
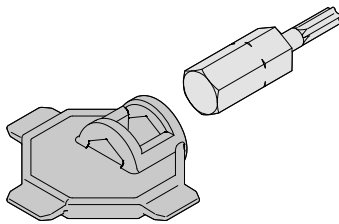please order at least the SPQ quantity or a multiple
2) PU - Part no. includes one packing unit (PU); delivery is exclusively made in PU

NOTE

- Not compatible with Interscale 19" cases, Interscale for embedded NUC cases or Interscale conduction cooled cases

ASSEMBLY TOOL

02613064

- Plastic tool with bit can be used for bolting together and opening the case
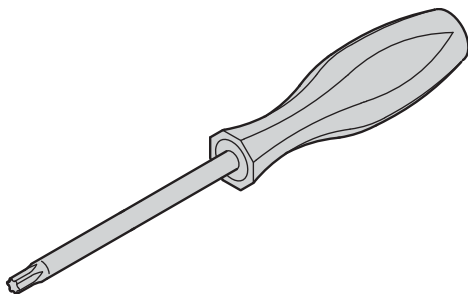- Compatible with all Interscale M and C enclosures

DELIVERY INCLUDES

Item	Qty	Description
1	1	Assembly tool (plastic)
2	1	Bit, Torx, T10

ORDER INFORMATION

Description	Part no.
Assembly tool	**24820-001**

SCREWDRIVER

AZA45925

- Used for securing PCBs to studs
- Compatible with all Interscale M and Interscale C enclosures

ORDER INFORMATION

Description	Part no.
Torx screwdriver, M2.5, T 8 Torx	**64560-026**

Part number in bold face type: ready for shipping within 2 working days
Part number in normal type: ready for shipping within 10 working days

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