OXOC

詮 欣 股 份 有 限 公 司
CHANT SINCERE CO., LTD.

USB C

COXOC

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Contents

About Chant Sincere

■ **Chant Sincere Co., Ltd.** was set up in 1985., With the management concept of "Honest, Innovative, Quaity, Longterm" to design and manufacture connector and cable. Keep developing new innovative products and integrating vertically from R&D, tooling, assembly and quality control to meet the demands (quality/cost/delivery) from customers. Chant Sincere Co., Ltd. Has been constructing various of product families to provide a total solution to customers.

The connector and cable products are widely used in many different application , such as Computing, Industrial & Automation, Telecommunication, Automotive, Waterproof, Consumer and Medical Industry.

■ **Chant Sincere** won the "National Bedrock Award" & "Small Giant Award" from Taiwan Connector maker competition and got many "Best Supplier awards" from Global customers. We are focusing on improving our design and manufacture technology, and we have been applying for a lot of international patents for our products including I/O connector, Board to Board connector, Waterproof connector, Industrial Connector, Automotive connector, Memory Card connector and adaptor, High Speed connector/cable (USB3.1), Audio & Vidio connector and cable (HDMI,Display Port)...etc.

Chant Sincere Co., Ltd. Has been growing up as a global professional manufacturer for connector andcable.

The Core Competence of Chant Sincere Co.,Ltd. including.

■ Over 36 Years Manufacture Experience

■ ODM/OEM Capability

■ Vertical Integration (Design, Tooling, Manufacturing, Test)

■ Automation Capability

■ Precise Tooling Center

■ Wide Range of Product Line

■ Systematic Testing Process

■ Customized Capability

■ Quality System (ISO,IATF)

■ National Awards Rising Sun Awards/Best Supplier Awards

ISO13485
IATF16949
ISO14001
ISO9001
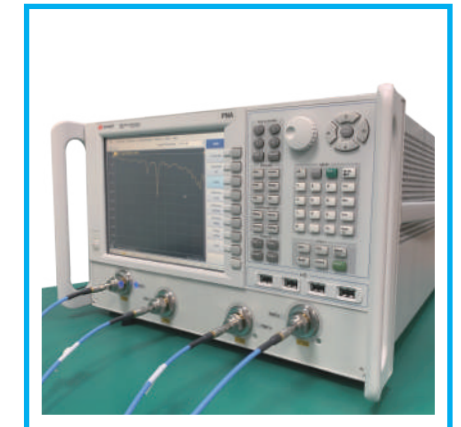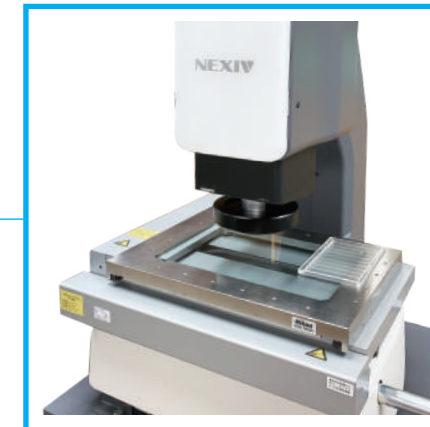
Quality systems

COXOC Quality Assurance department meets our customers' quality requirements by practicing continual improvement in our quality assurance processes and increasing customers' satisfaction in the quality of our products.

The effectiveness of COXOC QA operation is certified by well-known organizations such as ISO9001 Quality Assurance Management System, ISO 14001 Environmental Management System, ISO/IATF 16949 for Automobile Industry Quality Management System, and ISO13485 Medical Devices Quality Management System, COXOC integrated supply chain and devoted staff has enabled us to build a solid foundation and core capability to better serve our customers. It is COXOC principal to always meet and exceed customer expectation by providing superior products and services. COXOC ultimate goal is to create value for our customers by building collaborative and mutually beneficial relationships.

Competencies & Technology

The R&D Center at Chant Sincere leads the industry in research, design, and manufacturing of numerous key parts. This center has successfully developed for both wired and wireless solutions for computer peripherals, communication systems, and automobiles/industrial/medical equipment. Our solid R&D team formed a strong foundation in advance manufacturing technology and superior quality control that also enabled high value adding service for customers.

USB type C connectors is an example of the fruits of our research. This miniature and unidirectional interface provides many useful functions such as lighting data transfer rate up to 10 Gbits/s, DP ALT Mode high-definition video signal support, and brilliant 100W charging capability. Chant Sincere advanced the research further into higher specs such as USB 3.2 and USB 4.0 and offers customized solution for various of industrial applications. We delivered comprehensive solutions in bridging the diverse need for new interface and solve on-going product design issues for customers.

QSFP-DD is an ultra-fast interface that transmit data at 400Gbps speed. At this speed, stringent requirement for signal integrity and operating temperature is inviable which imposed huge challenges for the industry. At Chant Sincere, we implemented comprehensive computational software, state of art measuring equipment and eminent R&D capability to aid the solution delivering process. The analysis process includes simulation under CST MSW (Time Domain Simulation), ANSYS HFSS (Frequency Domain Simulation) for signal integrity as well as real-time measurement using test boards and PNA (up to 43.5GHz) to deliver quality reports for signal integrity (S-parameter, Gain compression, conversion gain/loss, noise level). We further performed simulation of its operating temperature using Icepak (Heat transfer and fluid flow simulator). This enabled the performance optimization for heat dissipation solution. With the above R&D skills we successfully delivered the desired professional service within the shortest time frame for our customers.

USB C

USB C Application

- USB C is a new interface defined by USB IF and it can`t compatible with USB 2.0/3.0 A/B/micro B. However, it contains multi-function in one connector such as 10 Gb/s, Alt-Mode and PD function. In the future, we can use one USB C Cable to connect lots of devices to instead what we need several kinds of cables now.
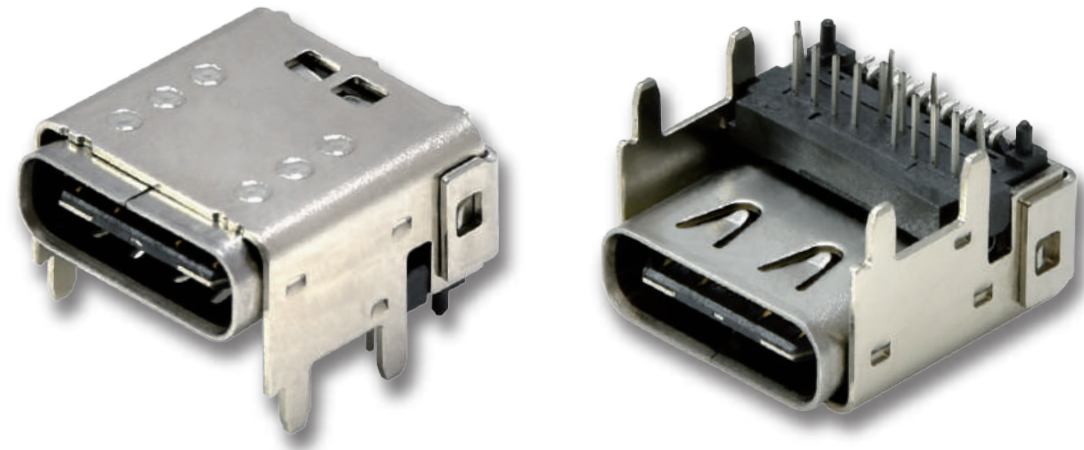
Application

- PC/NB
- Monitor/TV
- Mobile device
- Storage
- Vehicle device

Product Characteristics

- "Clip" sound to ensure plug-in accuracy
- Power Delivery up to 100W
- Better EMI & RFI protection
- 10,000 Cycles durability
- Alt-Mode which can support DisplayPort protocol

■ USB4 Type C Recep. Right Angle, Top-Mount

■ Specification

Description	USB4 Type C Recep. Right Angle, Top-Mount
Part no.	317JH24DTFCN4CC
Contacts	24

Material	Housing	Thermoplastic, rated UL94V-0
	Contact	Copper Ally
	Shell	Stainless Steel

Contact Plating	Under Plating	50 ~80 u" Nickel
	Contact Area	30 u" Gold
	Solder Tail Area	100~150 u" Tin(Matte)

Electrical	Operation Voltage	20 V
	Current Rating	7 A Max.
	Insulation Resistance	100MΩ min. @100V DC
	Dielectric Withstanding Voltage	100 VAC/minute
	Temperature Range	-20°C TO +85°C
	Mating Cycle	10,000 Insertions

■ Drawing
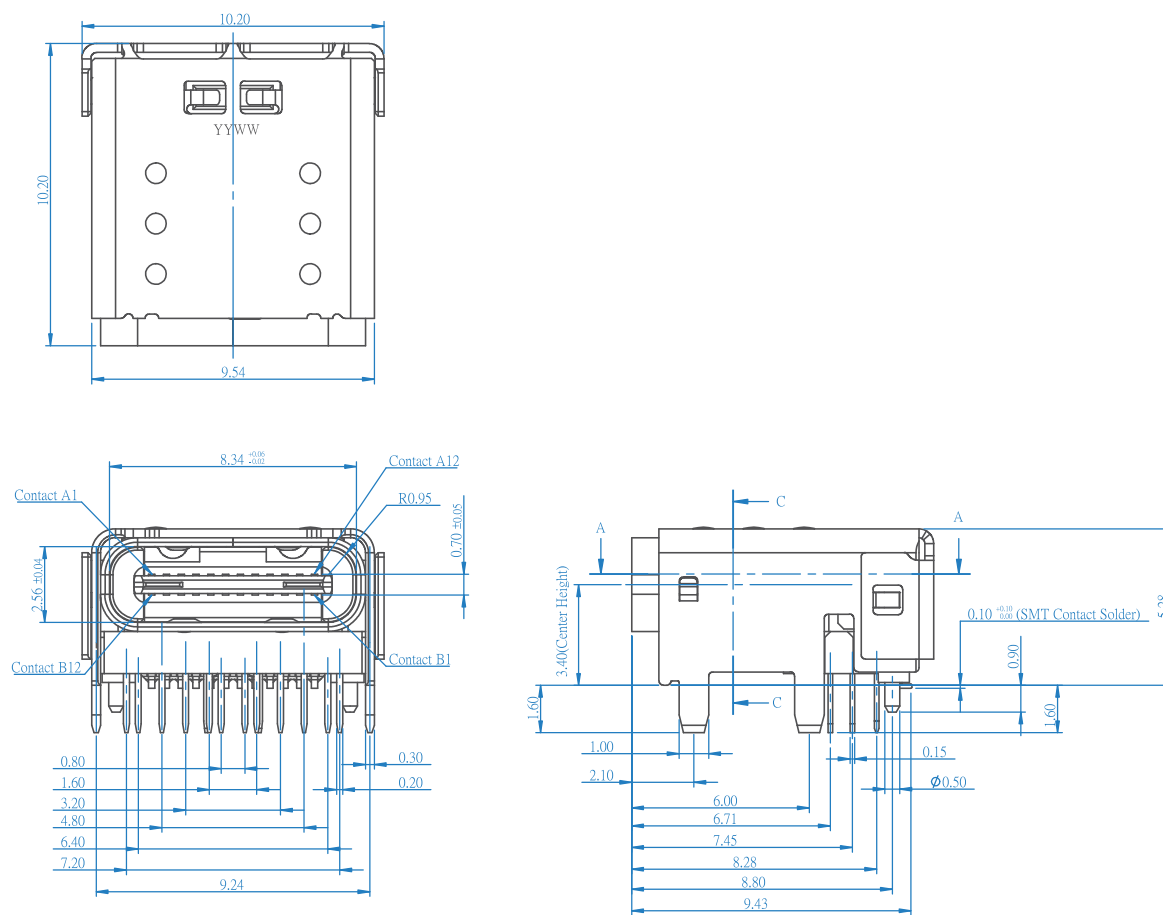
■ USB C Connector

Product List	Description	Part no.
	Cable Plug Extruded Shell	317CD24ADTFN713
	USB C Recep. Straddle Type	317CD24BCTFBN1A3
	USB C Recep. Dual SMT, Top-Mount CH:1.68mm	317DC24BSSF4N2C3
	USB C Recep. Dual SMT, Top-Mount CH:1.58mm	317DC24BSSF4N1C3
	USB C Recep. Dual SMT, Vertical Insertion Distance: 5mm	317DH24BDTF7N03C
	USB C Recep. Hybrid, Waterproof CH:0.3mm	349AG24BCTA5N2C3

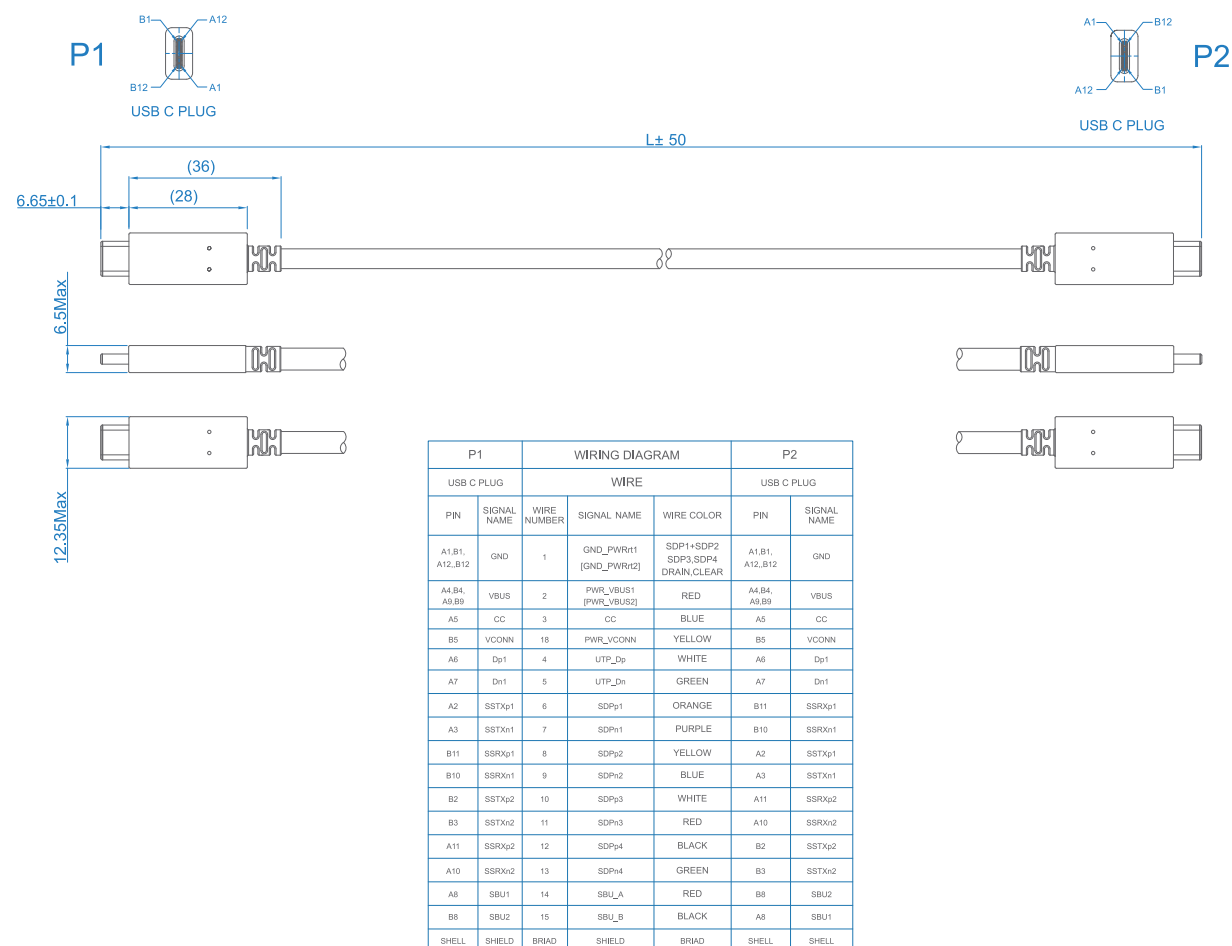| Product List	Description	Part no.
	Cable Plug 22Pin, PCB: 0.8mm	317CD22AZTF27A13
	Cable Plug 24Pin, PCB: 0.8mm	317CD24AZTF2NA13
	USB C Recep. Dual SMT, Vertical Insertion Distance: 6.2mm	317DH24BDTF7N13C
	USB C Recep. Hybrid, Top-Mount	317JD24BZTF3K3C3
	USB4 Gen3x2 Recep. Hybrid, CH: 3.4mm	317JH24DTFCN4CC

■ USB 3.1 Gen 2 C-C Cable, 5A (PD 3.0)

■ Drawing

P1   USB C PLUG
P2   USB C PLUG

L± 50
(36)
(28)
6.65±0.1
6.5Max
12.35Max

P1		WIRING DIAGRAM			P2	
USB C PLUG		WIRE			USB C PLUG	
PIN	SIGNAL NAME	WIRE NUMBER	SIGNAL NAME	WIRE COLOR	PIN	SIGNAL NAME
A1,B1, A12,B12	GND	1	GND_PWRn1 [GND_PWRn2]	SDP1+SDP2 SDP3,SDP4 DRAIN,CLEAR	A1,B1, A12,B12	GND
A4,B4, A9,B9	VBUS	2	PWR_VBUS1 [PWR_VBUS2]	RED	A4,B4, A9,B9	VBUS
A5	CC	3	CC	BLUE	A5	CC
B5	VCONN	16	PWR_VCONN	YELLOW	B5	VCONN
A6	Dp1	4	UTP_Dp	WHITE	A6	Dp1
A7	Dn1	5	UTP_Dn	GREEN	A7	Dn1
A2	SSTXp1	6	SDPp1	ORANGE	B11	SSRXp1
A3	SSTXn1	7	SDPn1	PURPLE	B10	SSRXn1
B11	SSRXp1	8	SDPp2	YELLOW	A2	SSTXp1
B10	SSRXn1	9	SDPn2	BLUE	A3	SSTXn1
B2	SSTXp2	10	SDPp3	WHITE	A11	SSRXp2
B3	SSTXn2	11	SDPn3	RED	A10	SSRXn2
A11	SSRXp2	12	SDPp4	BLACK	B2	SSTXp2
A10	SSRXn2	13	SDPn4	GREEN	B3	SSTXn2
A8	SBU1	14	SBU_A	RED	B8	SBU2
B8	SBU2	15	SBU_B	BLACK	A8	SBU1
SHELL	SHIELD	BRAID	SHIELD	BRAID	SHELL	SHELL

■ Specification

Description		USB 3.1 Gen 2 C-C Cable
Part no.		C8F1M3C23GXXX
Contacts		24
Material	Housing	Thermoplastic, Black
	Contact	Brass
	Shell	Stainless Steel
Contact Plating	Under Plating	50 ~100 u" Nickel
	Contact Area	30 u" Selective Gold
	Solder Tail Area	100~150 u" Tin(Lead Free)
Electrical	Operation Voltage	20 V
	Current Rating	5 A Max.
	Contact Resistance	5Ω Max.
	Insulation Resistance	2MΩ Min
	Temperature Range	-20°C TO +80°C
	Mating Cycle	10,000 Insertions
Environmental	Safety Certificates	Halogen Free

■ USB C Cable

Product List	Description	Part no.
	C to A, Gen 2, 1M0	C8F1K3A09SE1M0
	C to 3.1B, 1M0	C8F1L3A03E1M0
	C to 2.0A, 1M0	C8F2K3A04E1M0
	C to 3.0AF, 50mm	C8F5N3B04E05C
	C to C, 1M0	C8F1M3C23G1M0

Product List	Description	Part no.
	C to C, 1M8	C8F1M3C23G1M8
	C to 2.0B, 1M0	C8F2L3A01E1M0
	C to 2.0Micro B, 1M0	C8F4L3A01E1M0
	C to 2.0Mini B, 1M0	C8F6L3A01E1M0
	C to C, 2.0 Cable, 1M0	C8F7M3A01E1M0

■ USB C Recep. Right Angle, Top-Mount

■ Drawing

P2

18   19

2   1

HDMI FEMALE

A1   B12

A12   B1

P1

USB C Plug

51.5±1   50±5   (35.5)   6.55 MIN

3.5

25.5±0.5

12.5±0.5

(7.9)

(12.2)

■ Specification

Description		USB C to HDMI 2.0 Smart Cable
Part no.		C8FBN3B02E05C
Contacts		22/19
Material	Housing	Thermoplastic, Black
	Contact	Brass
	Shell	Stainless Steel
Electrical	Operation Voltage	5 V
	Current Rating	0.9 A Max.
Environmental	Safety Certificates	RoHS
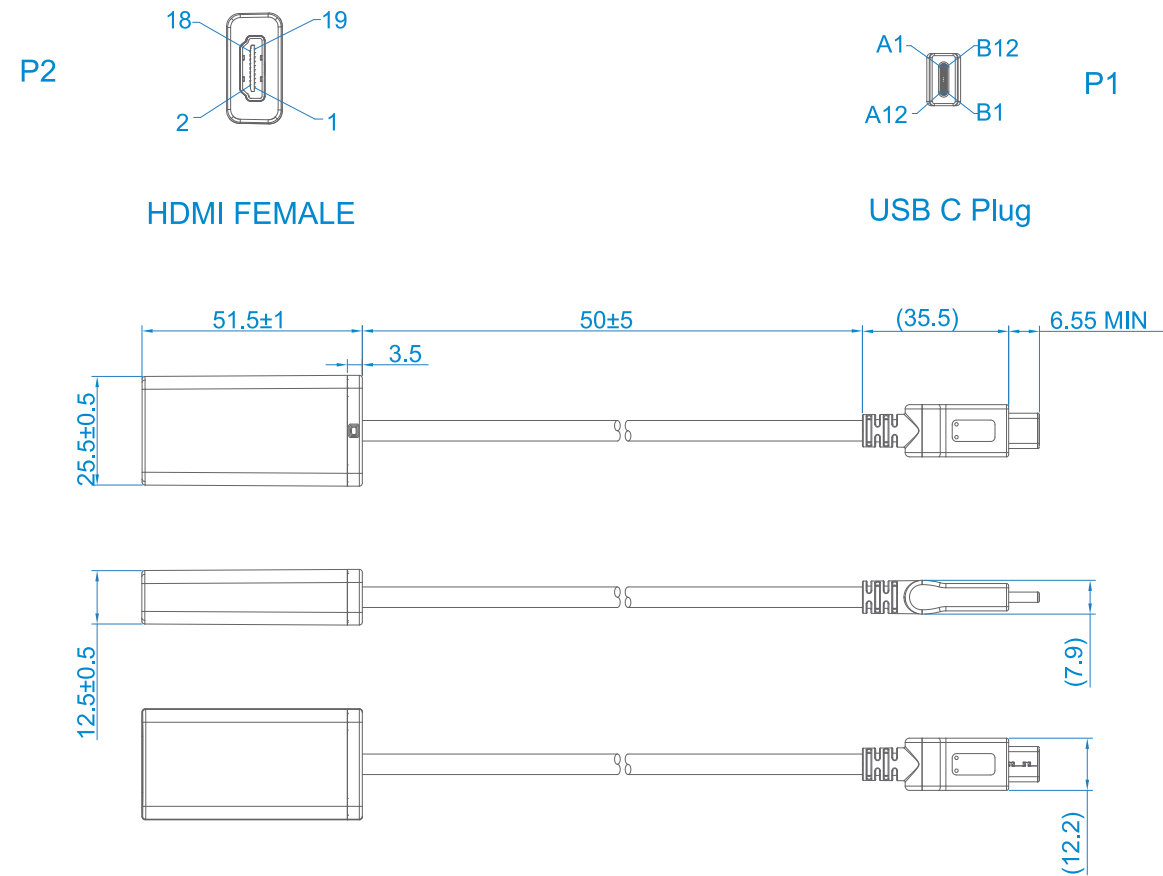
■ USB C Finished Product

Product List	Description	Part no.
	USB C Plug to SATA F Smart Cable	C8FAN3B01E05C
	USB C Plug to RS232 Smart Cable	C8F9K3B01E05C
	USB C Plug to HDMI F Smart Cable	C8FBN3B02E05C
	USB C Plug to mini DP F Smart Cable	C8FCN3B02E05C
	USB C Plug to VGA F Smart Cable	C8FDN3B02E05C
	USB C Plug to USB 3.0 A Female	GA02ADC00XAB0
	USB C Plug to USB 3.0 A Female	GA02BDC00XDB0

Product List	Description	Part no.
	USB C Plug to USB 3.0 A Female	GA02CEC000DB0
	USB C Plug to micro USB 3.0 B Female	GA03ADC002AX0
	USB C Female to USB 3.1 A Male Gen 2	GA06AEC000AB0
	USB C Plug to USB 3.0 A Male	GB04BDC00XXB0
	USB C Plug to USB 3.0 A Male	GB04CDC00XXB0
	USB C Plug to USB 2.0 A Male	GB05ADC000AX0
	USB C Plug to SD 4.0	GB07AHC00XAB0

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