



CHANT SINCERE CO., LTD.



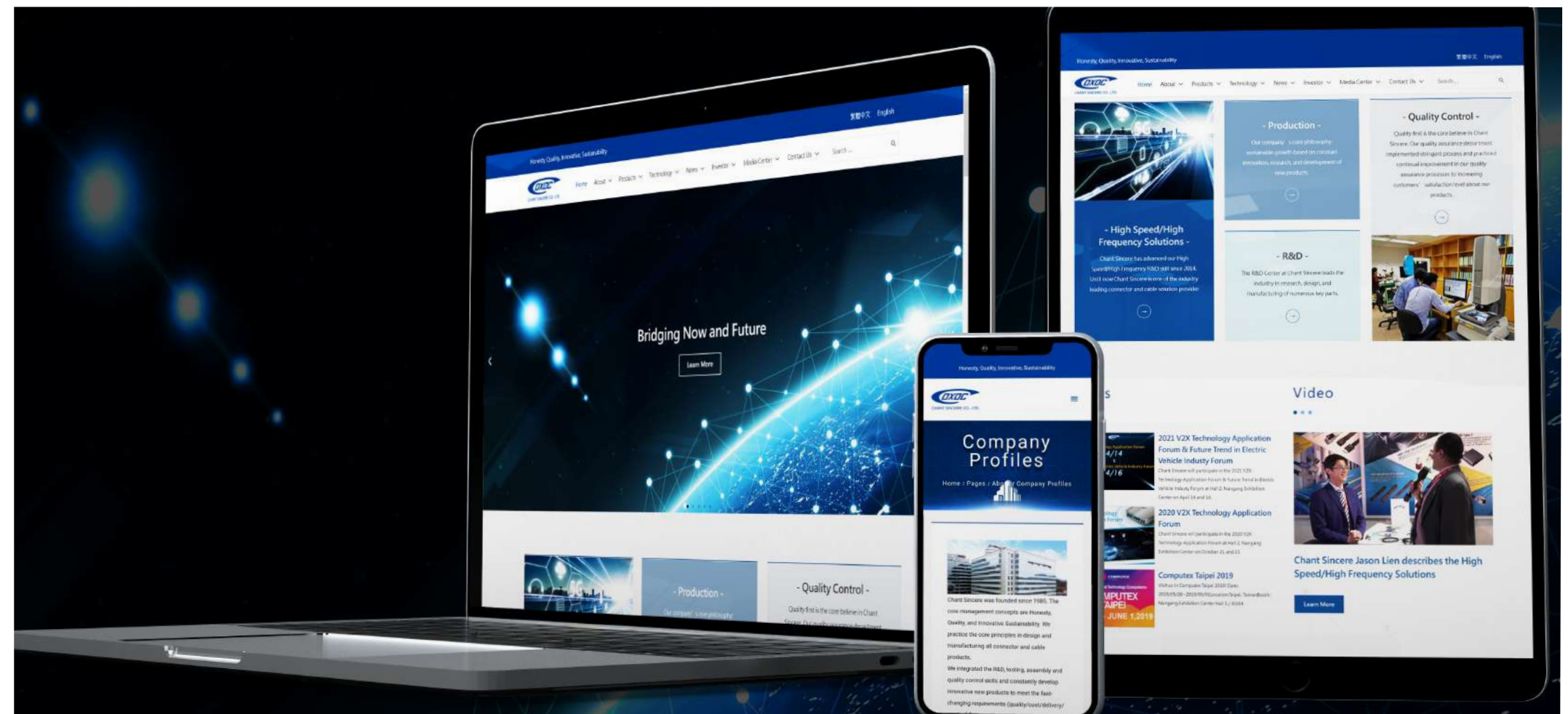
# Consumer Electronics

▾ USB Type C



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## About Chant Sincere

**Chant Sincere Co., Ltd.** was set up in 1985, with the management concept of "Integrity, Innovative, Quality, Sustainability" 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 several of product families to provide a total solution to customers.

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

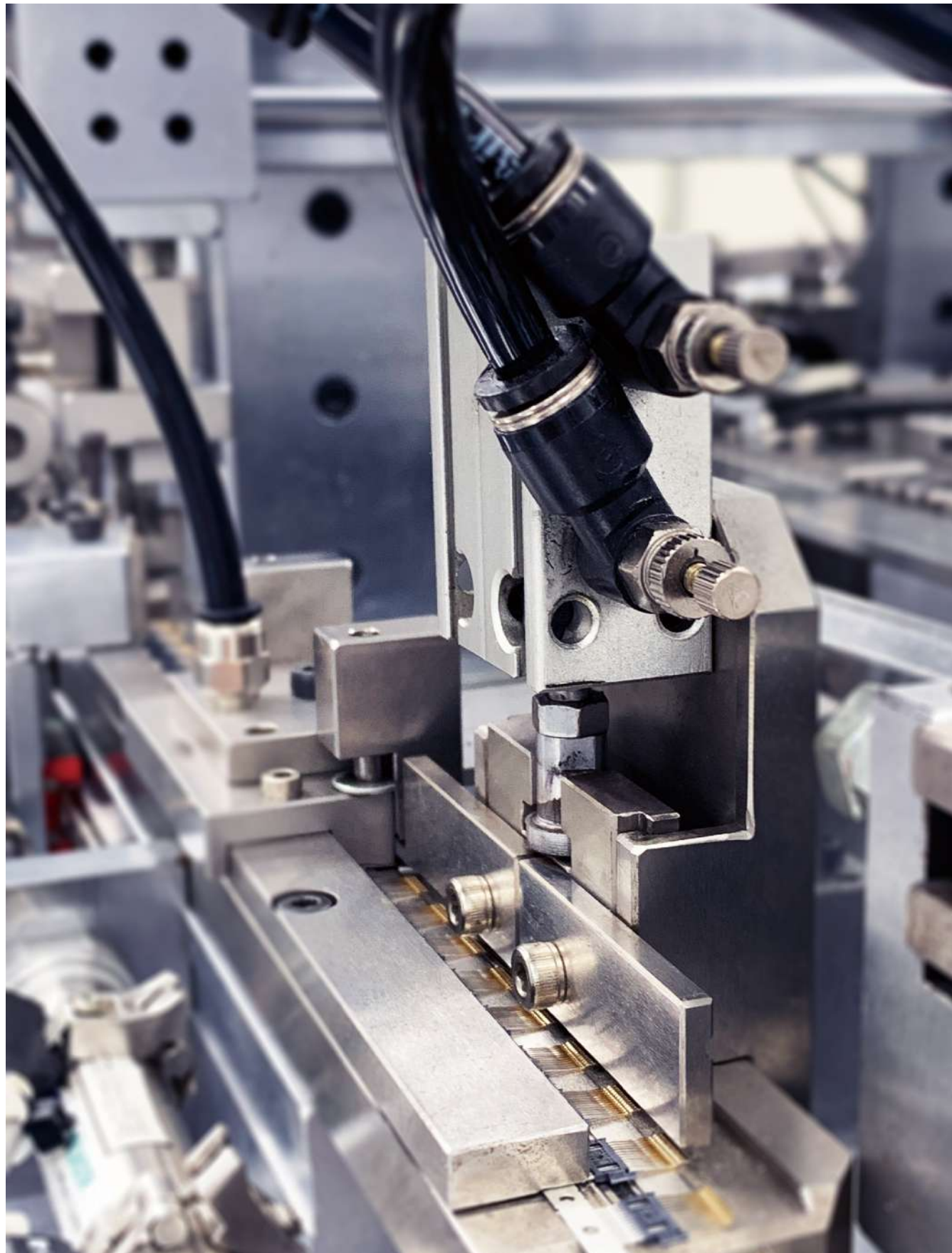
**Chant Sincere** won the "National Bedrock Award" & "Small Giant Award" from Taiwan Connector maker competition and got many "Best Supplier Awards" from Global customers. We are focusing on improving our design and manufacture technology, and we have been applying for a lot of international patents 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 & Video connector and cable (HDMI, DisplayPort)...etc.

Chant Sincere Co., Ltd. has been growing up as a global professional manufacturer for connector and cable.

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

- Over 40 Years Manufacture Experience
- National Awards Rising Sun Awards/Best Supplier Awards
- Vertical Integration (Design, Tooling, Manufacturing, Test)
- Automation Capability
- Precise Tooling Center
- Wide Range of Product Line
- ODM/OEM Capability
- Customized Capability
- Quality System (ISO, IATF)
- Systematic Testing Process





## Quality Systems

Chant Sincere (hereinafter referred to as C.S.) 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 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. C.S. integrated supply chain and devoted staff has enabled us to build a solid foundation and core capability to better serve our customers. It is principal to always meet and exceed customer expectation by providing superior products and services. Our ultimate goal is to create value for our customers by building collaborative and mutually beneficial relationships.



ISO 14064-1 / ISO 9001 / ISO 14001 / IATF 16949 / ISO 13485





## 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 connector 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 Gbps, 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 several 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 transmits data at 400Gbps speed.

At this speed, stringent requirement for signal integrity and operating temperature is inevitable 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 Type C

## USB Type C Application

USB Type 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 Type C Cable to Connect lots of devices to instead what we need several kinds of cables now.

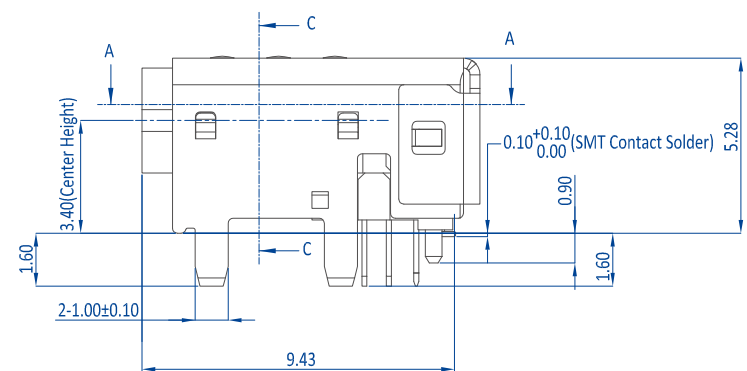
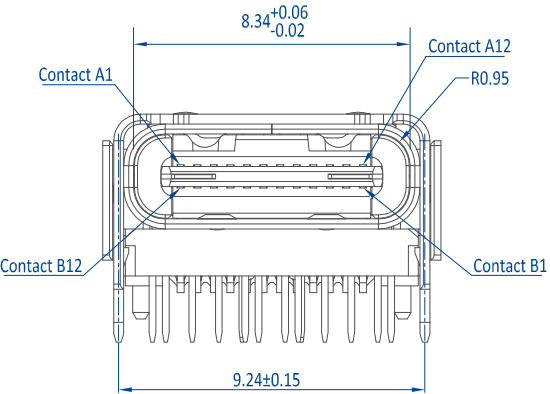
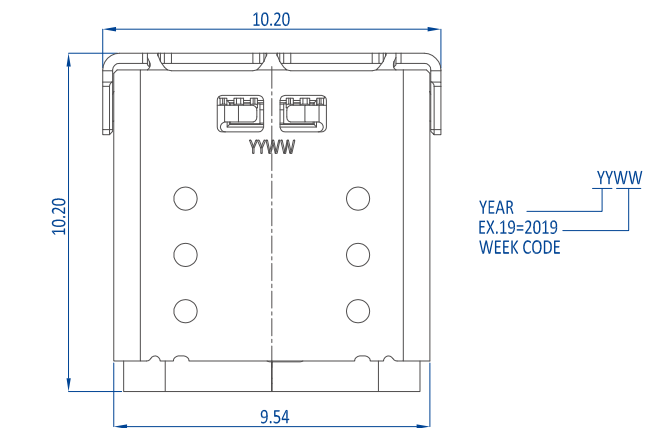
## Application

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

## Product Characteristics

- "Clip" sound to ensure plug-in accuracy
- Power Delivery up to 240W
- Better EMI & RFI protection
- 10,000 Cycles durability
- Alt-Mode which can support DisplayPort protocol

# USB4 Receptacle SMT+DIP CH=3.4mm



## Specification

Part No.	5331103XXXX
Contact	24
Material	
Housing	Thermoplastic, Rated UL94V-0
Contact	Copper Ally
Shell	Stainless Steel
Contact Plating	
Under Plate	50 ~ 80u" Nickel
Contact Area	30u" Gold
Solder Tails Area	100 ~ 150u" Tin (Matte)
Electrical	
Operation Voltage	20 V
Current Rating	7 A Max.
Insulation Resistance	100 MΩ Min. @100 VDC
Dielectric Withstanding Voltage	100 VAC/Minute
Temperature Range	-20°C to +85°C
Mating Cycle	10,000 Insertions



# USB Type C Connector

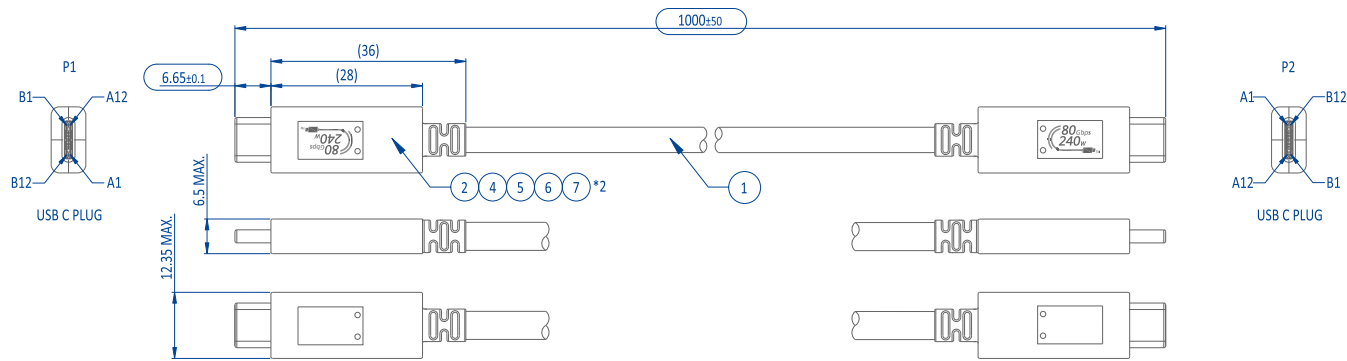
Product List	Description	Part No.
	USB4 40Gbps 240W Receptacle SMT+DIP CH=3.4mm	5331103XXXX
	USB4 40Gbps 240W Receptacle, Dual SMT CH=1.6mm	5331203XXXX
	USB Type C Receptacle Dual SMT, Top-Mount CH=1.68mm	5331202XXXX
	USB Type C Receptacle Dual SMT, Top-Mount CH=1.58mm	5331201XXXX
	USB Type C Receptacle Dual SMT, Vertical Insertion Distance=5mm	5331304XXXX
	USB Type C Receptacle Dual SMT, Vertical Insertion Distance=6.2mm	5331305XXXX
	USB Type C Receptacle Hybrid, Top-Mount	5331101XXXX

# USB Type C Connector

Product List	Description	Part No.	
	USB Type C Cable Plug Extruded Shell	5331702XXXX	
	USB Type C Receptacle Straddle Type	531702XXXX	
	USB Type C Receptacle Up Right Angle, DIP+SMT	5331401XXXX	
 IP Rating	USB Type C Receptacle Hybrid, Waterproof CH=0.3mm	5330101XXXX	
 IP Rating	USB Type C Receptacle 30u" Gold, Waterproof CH=2.28mm	5330301XXXX	
 IP Rating	USB Type C Receptacle Top-Mount, Waterproof Positions: 16	w/o Screw Lock	5337101XXXX
		with Screw Lock	5337102XXXX
 IP Rating	USB Type C Receptacle Top-Mount, Waterproof Positions: 24	w/o Screw Lock	5338101XXXX
		with Screw Lock	5338102XXXX



USB4 80Gbps 240W 1M Cable



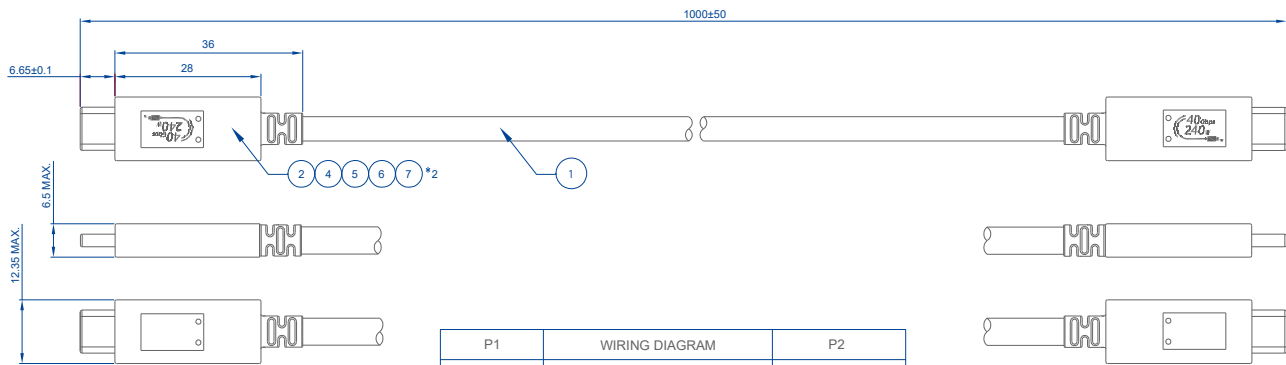
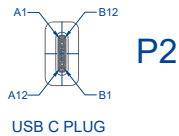
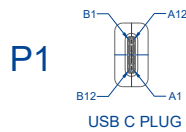
WITH E-MARKED IC TABLE	
E-MARKED IC (VENDOR)	VOLTAGE/CURRENT
ETRON PD3.1 (EPR)	48 V/5 A

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_PWRrt1 (GND_PWRrt2)	SDP1+SDP2 SDP3+SDP4 DRAIN		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	18	PWR_VCONN	YELLOW		B5	VCONN
A6	Dp1	4	UTP_Dp	GREEN		A6	Dp1
A7	Dn1	5	UTP_Dn	WHITE		A7	Dn1
A2	SSTxp1	6	SDPp1	RED (BLUE)		B11	SSRXp1
A3	SSTXn1	7	SDPn1	RED (WHITE)		B10	SSRXn1
B11	SSRXp1	8	SDPp2	BLUE (WHITE)		A2	SSTXp1
B10	SSRXn1	9	SDPn2	BLUE (BLUE)		A3	SSTXn1
B2	SSTXp2	10	SDPp3	GREEN (BLUE)		A11	SSRXp2
B3	SSTXn2	11	SDPn3	GREEN (WHITE)		A10	SSRXn2
A11	SSRXp2	12	SDPp4	SILVER (WHITE)		B2	SSTXp2
A10	SSRXn2	13	SDPn4	SILVER (BLUE)		B3	SSTXn2
A8	SBU1	14	SBU_A	VIOLET		B8	SBU2
B8	SBU2	15	SBU_B	PINK		A8	SBU1
SHELL	SHIELD	BRIAD	SHIELD	BRIAD		SHELL	SHIELD

Specification

Part No.	1334010XXXX
Contact	24
Material	
Housing	Thermoplastic, Black
Contact	Brass
Shell	Stainless Steel
Contact Plating	
Under Plating	50 ~ 100u" Nickel
Contact Area	30u" Gold
Solder Tails Area	100 ~ 150u" Tin(Matte)
Electrical	
Operation Voltage	48 V
Current Rating	5 A Max.
Contact Resistance	5 Ω Max.
Insulation Resistance	2M Ω Min
Temperature Range	-20°C to +80°C
Mating Cycle	10,000 Insertions
Environmental	
Safety Certificates	Halogen Free

USB4 40Gbps 240W 1M Cable



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_PWRt11 [GND_PWRt12]	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	18	PWR_VCONN	YELLOW	B5	VCONN	
A6	Dp1	4	UTP_Dp	GREEN	A6	Dp1	
A7	Dn1	5	UTP_Dn	WHITE	A7	Dn1	
A2	SSTXp1	6	SDPp1	RED(BLUE)	B11	SSRXp1	
A3	SSTXn1	7	SDPn1	RED(WHITE)	B10	SSRXn1	
B11	SSRXp1	8	SDPp2	BLUE(WHITE)	A2	SSTXp1	
B10	SSRXn1	9	SDPn2	BLUE(BLUE)	A3	SSTXn1	
B2	SSTXp2	10	SDPp3	GREEN(BLUE)	A11	SSRXp2	
B3	SSTXn2	11	SDPn3	GREEN(WHITE)	A10	SSRXn2	
A11	SSRXp2	12	SDPp4	SILVER(WHITE)	B2	SSTXp2	
A10	SSRXn2	13	SDPn4	SILVER(BLUE)	B3	SSTXn2	
A8	SBU1	14	SBU_A	VIOLET	B8	SBU2	
B8	SBU2	15	SBU_B	PINK	A8	SBU1	
SHELL	SHIELD	BRIAD	SHIELD	BRIAD	SHELL	SHIELD	

Specification

Part No.	1334002XXXX
Contact	24
Material	
Housing	Thermoplastic, Black
Contact	Brass
Shell	Stainless Steel
Contact Plating	
Under Plating	50 ~ 100u" Nickel
Contact Area	30u" Selective Gold
Solder Tails Area	100 ~ 150u" Tin(Lead Free)
Electrical	
Operation Voltage	20 V
Current Rating	5 A Max.
Contact Resistance	5 Ω Max.
Insulation Resistance	2M Ω Min
Temperature Range	-20°C to +80°C
Mating Cycle	10,000 Insertions
Environmental	
Safety Certificates	Halogen Free






# USB Type C Cable

Product List	Description	Part No.	
	USB4 80Gbps 240W 1M, Twisted Pair	1334010XXXX	
	USB4 40Gbps 240W 1M, Coaxial	Twisted Pair	1334003XXXX
		Coaxial	1334002XXXX
	USB4 20Gbps 240W 1M, Twisted Pair	13340050010	
	USB4 5Gbps 240W 2M, Twisted Pair	13340060010	
	C to A, Gen 2, 1M	1330101XXXX	

# USB Type C Cable

Product List	Description	Part No.
	C to C, 1M	1330204XXXX
	C to C, 1M, 30C with E-Marked IC (3.1)	1330209XXXX
	C to C, 1M8	1330204XXXX
	C to 2.0Micro B, 1M	1332402XXXX
	C to 3.1 AM, 1M with Dual Screw	1330103XXXX

# USB Type C Finished Product

Product List	Description	Part No.
	USB Type C Plug to HDMI F Smart Cable	1330601XXXX
	USB Type C Plug to micro USB 3.0 B Female	7313301XXXX
	USB Type C Female to USB 3.1 A Male Gen 2	7313302XXXX







 **CHANT SINCERE CO., LTD.**

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