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Qualcomm

Qualcomm Introduction at California Energy Commission ISO 15118 Charger Communications & Interoperability Workshop

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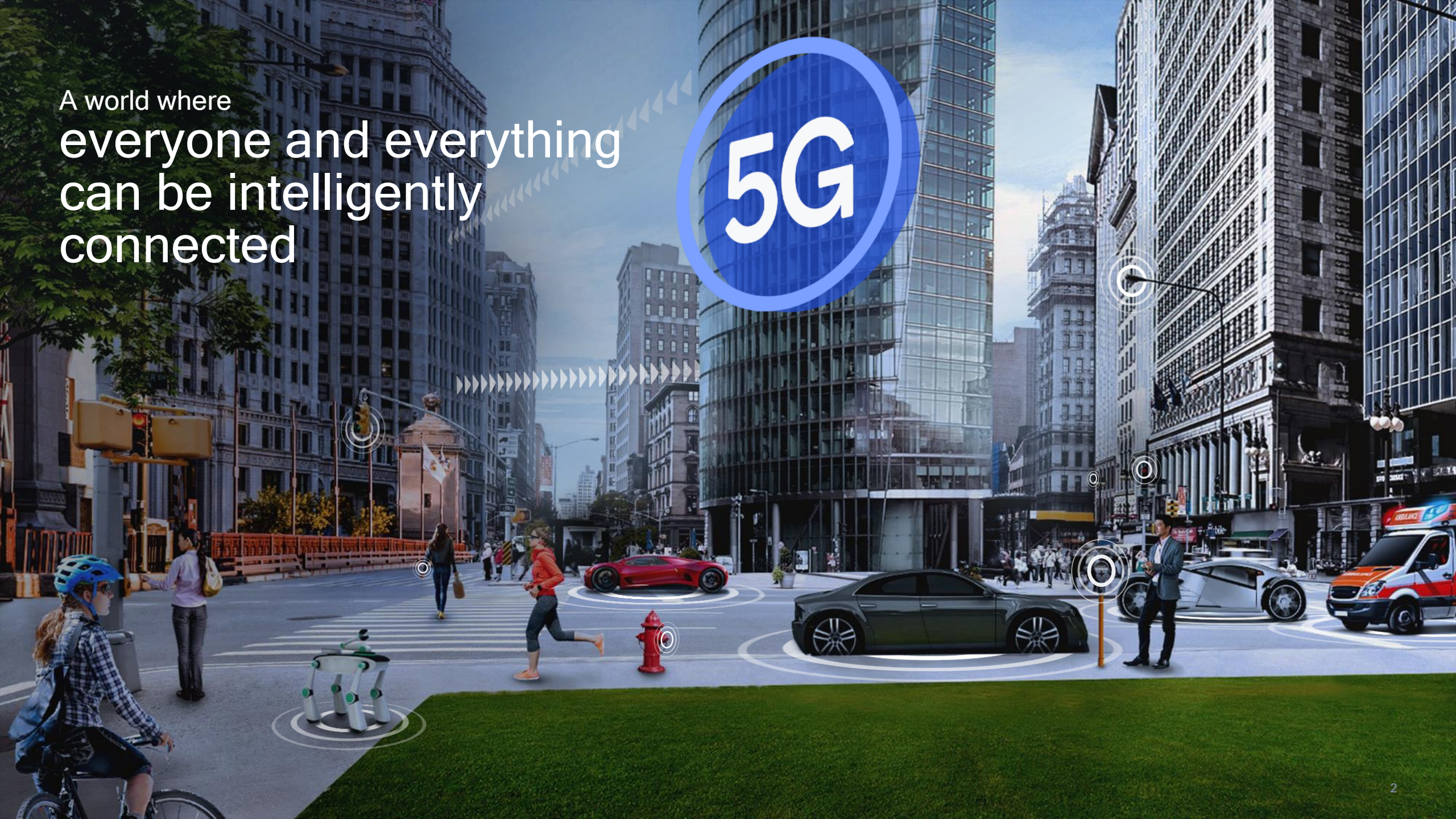
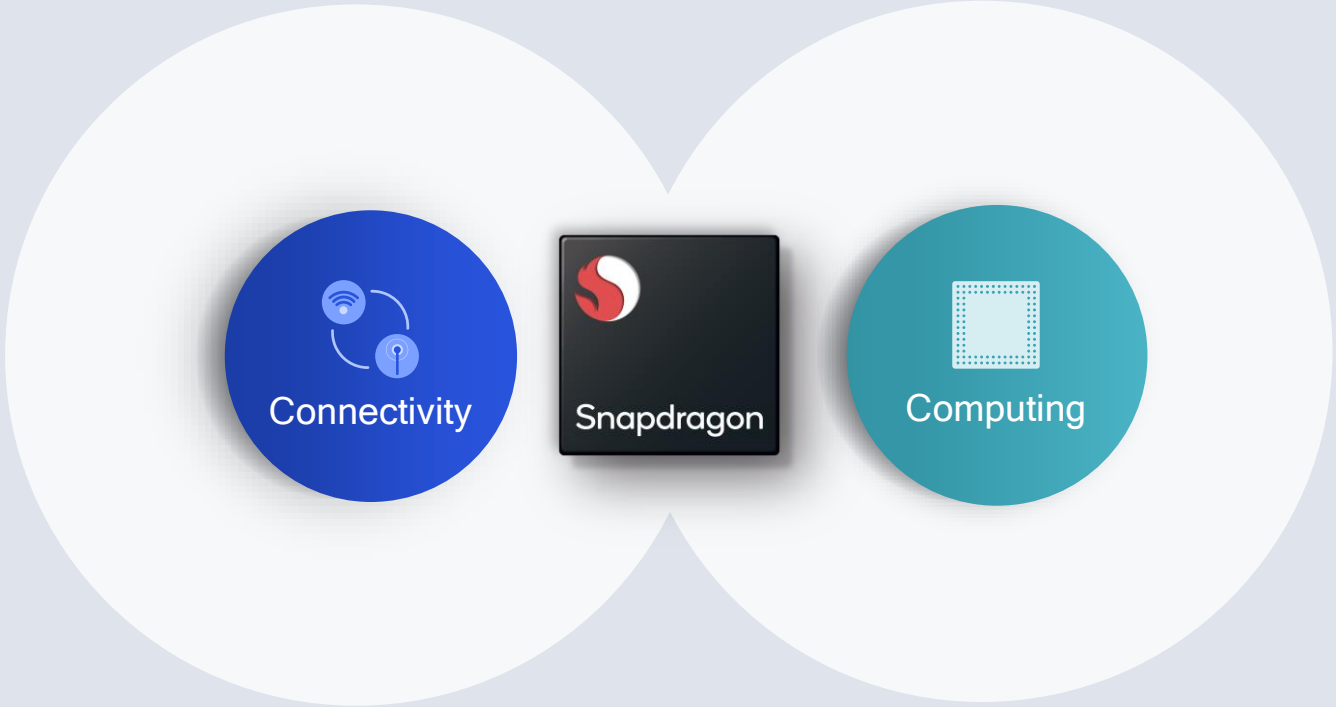

A world where
everyone and everything
can be intelligently
connected
5G

World-class technology portfolio



Wireless connectivity

2G/3G/4G/5G

802.11 n/ac/ax (Wi-Fi 6)

802.11ad (60GHz)

Bluetooth®

802.15.4

C-V2X

GNSS/Location

RF-Front End

Power amps

Acoustic filters

RF switches

LNAs

Antenna tuner

Envelope tracker

Processors

CPU/GPU/DSP/AI processor

Memory controller

Secure processing

Multimedia

Camera processing

Video

Voice UI

Display processing

Computer vision

Audio processing

AR/VR

Sensors

Components

Power Line Communications

Audio codecs

Audio amplifiers

Power management

Fingerprint

Product	Network Interface						Host Interface						
	HomePlug AV (200Mbps)	HomePlug AV+ (500Mbps)	HomePlug AV2 (SISO/MIMO)	HomePlug Green PHY	IEEE 1901	IEEE 1905.1	MII	RMII	RGMII	FE PHY	SPI	UART	I2C
AR6400+AR1500	X						X						
AR7400+AR1500	X				X		X				X	X	X
AR7410+AR1500	X				X				X		X	X	X
AR7420+AR1540	X				X		X	X		X		X	
QCA6410	X				X					X		X	
QCA6411	X				X					X		X	
QCA6415	X				X					X		X	
QCA7411L+AR1540		X			X				X				
QCA7450+AR1540			X		X				X				
QCA7500			X		X	X		X	X				
QCA7520			X		X	X		X					
QCA7550			X		X	X		X	X				
QCA7000	@ 10 Mbps			X							X	X	
QCA7005	@ 10 Mbps			X							X	X	

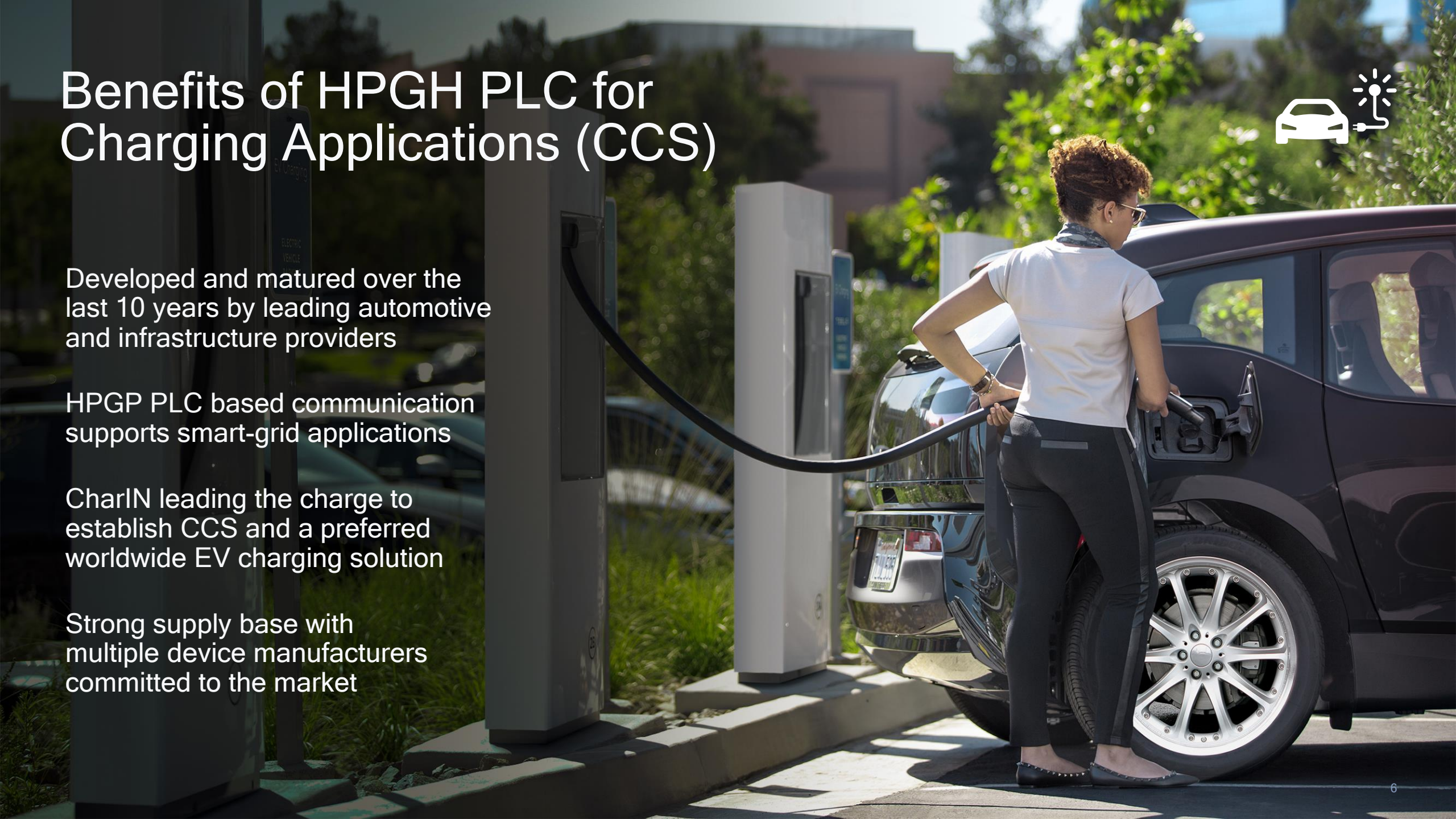
Power Line Communication (PLC) product portfolio

Qualcomm Technologies PLC HPGP chipsets offering

- PLC HPGP modem device compliant with PLC HPGP MAC/PHY specifications
- QoS as requested for PLC HPGP home area network
- Robust, reliable, and power efficient networking solution as per PLC HPGP specs
- Minimum bill of material (BOM) to enable PLC HPGP communication

	QCA7000-AL3C	QCA7000-AL3B	QCA7005-AL33
Description	HPGP single chip MAC/PHY	HPGP single chip MAC/PHY	HPGP single chip MAC/PHY
Digital Interfaces	SPI	SPI	SPI
Quality level	Commercial	Industrial	Enhanced Industrial (*)
Operating Ambient Temp. Range	0 °C to +70 °C	-40 °C to +85 °C	-40 °C to +85 °C
Case Temperature	0 °C to +105 °C	-40 °C to +110 °C	-40 °C to +110 °C
Package	QFN68 0.4mm pin pitch	QFN68 0.4mm pin pitch	QFN68 0.4mm pin pitch with wettable flanks

Benefits of HPGH PLC for Charging Applications (CCS)



Developed and matured over the last 10 years by leading automotive and infrastructure providers

HPGP PLC based communication supports smart-grid applications

CharIN leading the charge to establish CCS and a preferred worldwide EV charging solution

Strong supply base with multiple device manufacturers committed to the market

CharIN CCS Physical Layer (PHY) requirements are stable

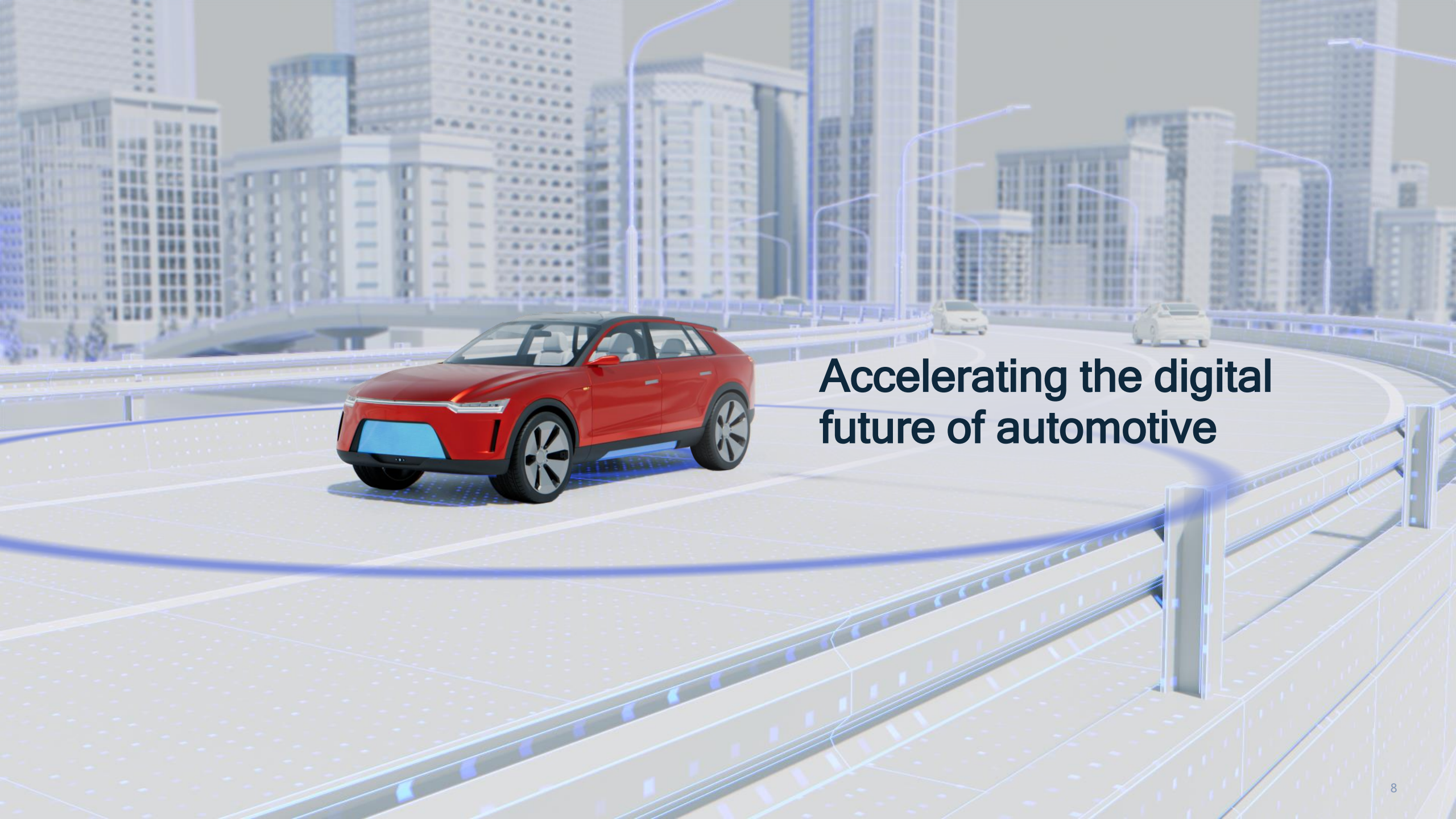
- No immediate need to add features to Qualcomm Technologies existing QCA700X offering
- Will monitor and work with CharIN to address any future updates impacting device requirements

The demand increase over the last 12 months is being addressed

- Expanding wafer supply
- Expanding capacity at existing assembly & test facility
- Bringing up additional assembly & test facility

Committed to securing capacity to meet long-term supply needs

Roadmap & supply outlook



Accelerating the digital future of automotive

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Thank you

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