



Digi PLConnect 7005

A robust, reliable, and energy-efficient solution for Power Line Communication connectivity

Digi PLConnect 7005 modules provide fast, simplified, and reliable integration of interoperable Power Line Communication (PLC) connectivity for your product.

The modules are based on the Qualcomm QCA7005-AL33 chipset and are ideally suited for applications such as electric vehicles, EV accessories, in-home charger units, public charging stations, and smart grid infrastructure.

The Digi PLConnect family combines cost-effective HomePlug Green PHY (HPGP) connectivity, low power consumption, and design flexibility in an ultra-compact form factor.

HPGP solutions offer a range of potential applications for automotive and smart grid systems. Digi PLConnect provides a compelling solution to enable an integrated EV and smart grid ecosystem.

Build your PLC solution fast

The Digi PLConnect 7005 Development Kit supports easy prototyping of PLC applications using Raspberry Pi 4 and 5, and the development board in the kit can be used as a Raspberry Pi HAT.

Designed for compliance, compatibility and flexibility

The Digi PLConnect 7005 modules and kit are designed for interoperability and compliance with industry and regulatory standards, including global EV charging requirements.

They offer multiple mounting options to accelerate development, testing and configuration — ensuring your product reaches the market quickly.

Related Digi devices and solutions



Modules



Development Kits



Gateways



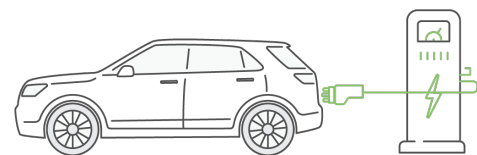
Digi Remote Manager

Key features, benefits and applications

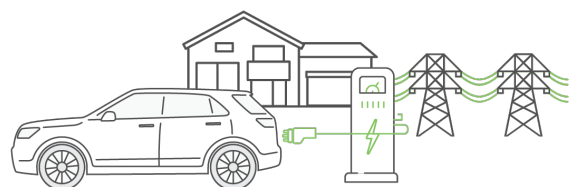
- Fully shielded module with 28 pads/pins
- Surface-mount and header-mount options
- Global EV charging standard compliance
- Industrial operating temperature
- External host connectivity (SPI and UART)
- External PHY interface
- Compliant with both HPGP and HPAC specifications
- Compliant with ISO 15118 (parts 1, 2 and 3) specifications
- Fully interoperable with IEEE 1901 family specifications
- Meets CCS type 1 and type 2 requirements

Application examples

Off-board conductive charging systems (EVSEs, home chargers)



Bi-directional V2H and V2G communication



Need custom engineering support?

[Contact Digi Wireless Design Services.](#)

DIGI PLCONNECT 7005

Specifications

Specifications		Digi PLConnect 7005
HARDWARE		
CHIPSET	Qualcomm QCA7005-AL33	
TECHNOLOGY	HomePlug Green PHY (HPGP)	
FULLY SHIELDED MODULE	28-pads/pins	
MOUNT OPTIONS	Surface-mount (LGA), through-hole (header)	
DIMENSIONS	Surface-mount (LGA): 18.5 mm x 25.5 mm x 3.75 mm (0.73 in x 1 in x 0.15 in) Through-hole (without header): 25.36 mm x 30.44 mm x 3.75 mm (1 in x 1.2 in x 0.15 in)	
HOMEPLUG GREEN PHY		
SPECTRUM	2 – 30 MHz	
MAX PHY RATE	Up to 10 Mbps	
MODULATION	OFDM	
SUBCARRIERS	917	
SUBCARRIER SPACE	24.414 KHz	
ROBO	4 Mbps (5x repeat code), 5 Mbps (4x repeat code), 10 Mbps (2x repeat code)	
STANDARDS	Home Plug 1.0, Home Plug AV	
FEATURES		
EXTERNAL HOST CONNECTIVITY	SPI, UART	
GPIO	4x GPIO pins, power-on configuration, boot source, host interface, SPI mode, 10k Ohm pull up/down	
SPI SLAVE INTERFACE	16 Mbps baud rate; signals: CLK, CS, MOSI, MISO, INT	
ETHERNET	Ethernet PHY interface	
THROUGHPUT	PHY: 10 Mbps; TCP: 4 Mbps; UDP: 5 Mbps	
OPERATING TEMPERATURE	-40 °C to 85 °C (-40 °F to 185 °F)	
STORAGE TEMPERATURE	-40 °C to 105 °C (-40 °F to 221 °F)	
POWER		
SUPPLY VOLTAGE	3.3 V	
MAX POWER DISSIPATION	250 mA	
TYPICAL POWER DISSIPATION	200 mA	
COMPLIANCE / APPROVALS*		
GLOBAL EV CHARGING STANDARD COMPLIANCE	ISO 15118-3, DIN 70121, SAE J2931/4, GB/T 27930 Functionality with External MCU	
REGULATORY APPROVALS	FCC Part 15, Subpart B; CE	

*Visit digi.com/resources/certifications for latest updates.

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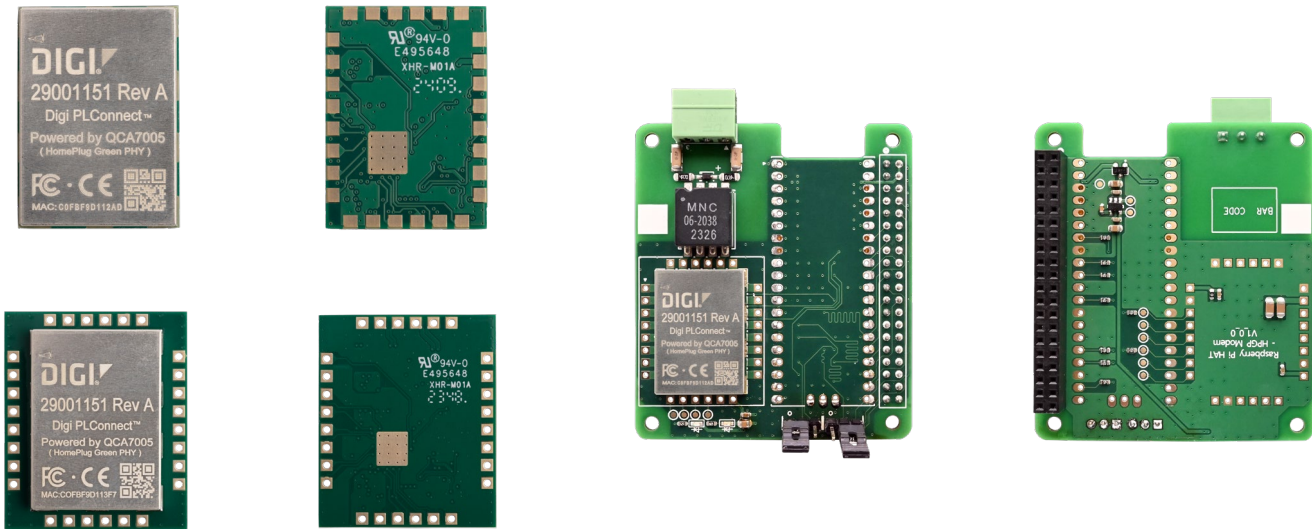
Part Numbers and Photos

Part Numbers	Modules
DIGI PLCONNECT 7005 MODULES — REEL	
PLC-7005-L-R500	Digi PLConnect 7005 — LGA, 500 pieces, reel
PLC-7005-H-R400	Digi PLConnect 7005 — header, 400 pieces, reel

Part Numbers	Development Kit*
DIGI PLCONNECT 7005 DEVELOPMENT KIT*	
PLC-7005-KIT	Digi PLConnect 7005 Development Kit for Raspberry Pi

*Raspberry Pi 4/5 (Pi HAT) required for development kit. Does not include Raspberry Pi hardware (sold separately).

Digi PLConnect 7005 Modules and Development Kit



The information provided in this document is preliminary and may be subject to change without notice.

For more information, please visit digi.com.



For more information about the Digi PLConnect, visit digi.com/plconnect

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