

PATEO INNOVATION

User Manual

HEAD UNIT
Infotainment System
PCCM Plus 997/987 II; PCCM Plus 991/981 I
AnpingTan
V1.0
2024/12/2

Revision History

Version	Date	Author	CONTENTS
1.0	2024/12/02	AnpingTan	Initial Version

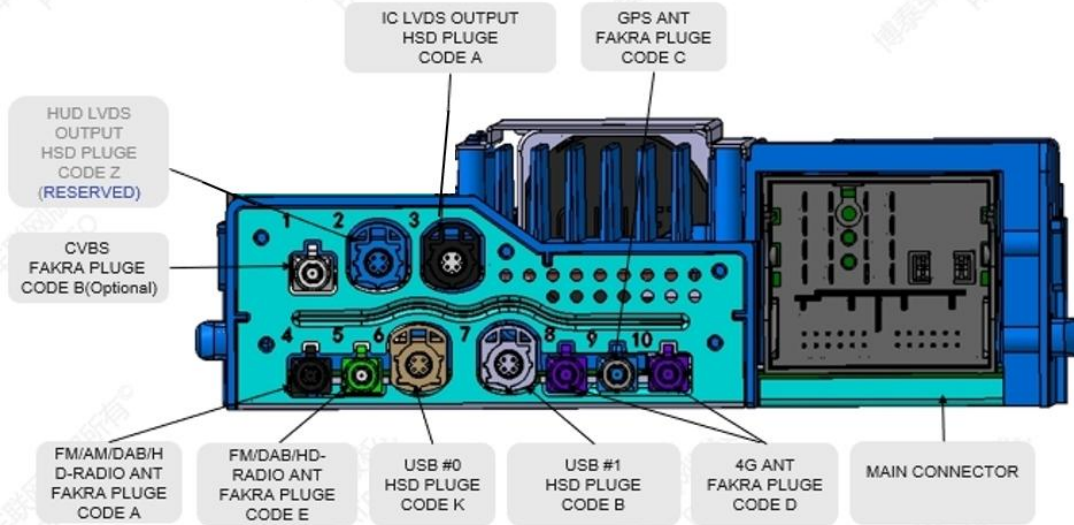
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1. Overview

This document specifies the specific requirements of the customer for the connectors, hardware and software functions, of the PCM3 Head Unit product.

2. Information of Connectors



3. Features of Hardware System

FEATURES	DESCRIPTION
DDR	8GB
UFS	128GB
DISPLAY	7 寸
FM/AM	Support
DAB	Support
MOST external Amplifier	Support
CVBS Reverse Video	Support
MIC (Analog)	External MIC * 1 + Internal MIC * 1
Amplifier (Internal)	4 Channels
USB	Front Panel USB TYPE C * 1 + backend USB 2.0 * 2
4G Netwrok	Support
CAN	1 Channel
Bluetooth	BT5.2
WiFi	802.11 a/b/n/ac
GNSS	support

4. Feature List

Module	Function	Sub-features
General	Startup Display	Disclaimer
		Porsche-Typical Start Screen
	Status Bar	Time
		Device Connection Status
		Signal
		Bluetooth Switch Status
	Launcher	Application List
		My Screen (MyScreen)
	Application Running in Background	
Tuner	Content Function Blocking (CFB)	
	Notification Centre	
	Setup Wizard	
	Dock Bar	Application Entry
	FM / AM	Full Band Scan
		Playback Controls
		Radio Station List
		Radio Station Name
		RDS Radio Display
		Favourite / Unfavourite
	DAB	Playback Controls
		Radio Station List
		Radio Station Information Display
		Favourite / Unfavourite
	Online Radio	Playback Controls
		Radio Station List
		Radio Station Information Display
		Favourite / Unfavourite
	HD Radio	Full Band Scan
		Playback Controls
		Radio Station List
		Radio Station Name Recognition
		Radio Station Information
		Favourite / Unfavourite
Local Media	Bluetooth Music	Supported Protocols
		Media Information
		Playback Controls
	USB Music	Supported Formats
		Media Information
		Playback Controls
		Playlist
Media List	Radio (FM/DAB/HD Radio)	
		List of favorites
	Online Radio	Top 100
		Languages
		Country

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	USB Music	Schools (Genres)
		Podcasts
		Playlist
		Artist
		Album
		Composer
		Song
		Tracks
		Compilation
		Audiobooks
Media Options	Adapt sorting of sources	
	Adapt sorting of favourites	
	Radio settings	Display traffic notices
		Station tracking to similar stations
		Online station tracking in case of weak reception
		Alarm messages
Navigation	Basic Features	Display View
		Map Information
		Vehicle Icon
		Route Information
		Enlarged View of Intersection
		Map Interface Operation and Display
		Go Home / Go to Office
		"Return to Vehicle Location" Button
		Tap to mute broadcast / unmute
		Tap to turn on / off "Traffic Display on Map Interface"
		Navigation Preferences
		Route Planning Information Display
		Route Management
		Guidance (TBT Information)
		Exit Navigation
		Alternative Route
		Dynamic Route Calculation
		Weather Warning
		Destination Parking Lot
		Route Editing
		Resumed Navigation
		Voice Broadcast
		Navigation Settings
	Offline Map	Storage Location
		Storage Location
		GPS Signal
		Path Guidance
	Online Map	POI Search
		Search Along Route
		Nearby
		At destination
		At stopover
		Presearch
		Search Results
		History
		Real-Time Traffic

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		Traffic Signs
	Map Update	Upgrade Method
	Route Prediction	
Vehicle	TRIP	Data Field
		Cumulative Total (Continuous)
		Since Ignition (Since...)
		Customization (Personal)
		Reset trip since
		Reset total trip values
		Reset max trip values
		Reset all trip data
	Assisted Parking	Reversing Camera Display
		3D Car Model
		Park Distance Control (PDC) area
	Personal Preferences Memory (Individual Memory)	Daytime Running Lights
		Afterglow Duration
		Automatic Rear Wiper
		Automatic Rear sensor
		Orientation light
		Screen button
		Air conditioning
		Effective Scope of Unlocking
		Auto-Lock
		Door opener
		Return Journey Options
		L/R driving
		PDC View
		Daytime Running Lights
		Afterglow Duration
		Ambient light
		Fade.out time
		Automatic Rear Wiper
		Automatic Rear sensor
		Lowering mirror
	Configure trip personally	
	Personal Speed limits	
Phone Call	Bluetooth Connection	Bluetooth Pairing
		Automatic Reconnection
		Synchronise Data after Successful Connection
		Clear Data after Disconnection
	Basic Services	Answer / Hang Up
		Steering Wheel Control
	Dual Phone Connectivity	Simultaneous Connection
		Functions Supported
		Set as Primary Phone
	Address Book	Synchronise Data Stored in the Phone
		Display Contacts in Alphabetical Order
		Support Indexing by First Letter

		Support One Tap to Dial
		Contact information
	Phone settings	Delete contacts
		Voicemail number
		Sorting criteria
		Mute navigation during call
	Call Log	Synchronise Data Stored in the Phone
		Contacts Sorted by Time
		Support One Tap to Dial
	Search for Contacts	Search by Initial Letter
		Search by Phone Number
	Favourites	Add favourite
		Favourites list
	Phone Call	Answer / On a Call / Hang Up
		Phone Call Window
	Dial Pad	Numeric Keypad Display
		Predictive Number Input
		Dial
	ADB	Android Function Debugging
	Connection Manager	Device name
	Apple CarPlay	
	Android Auto	
Settings	Factory Reset	
	Switchover for Day/Night Design	
	Brightness	5 to +5
	Touch tone setting	Off、Quiet、Medium、Loud
	Switch off central display	You can reactivate the central display by touching it.
	Navigation announcements	0 - 10
	ParkAssist	oud / regular / Quiet
	Volume lower when ParkAssist is active	0 - 5
	Speed-dependent volume adaptation (only without Bose or Burmester)	0 - 7
	Mute navigation during call	ON / OFF
	Connected Device Control	Bluetooth Switch
		List of Connected Bluetooth Devices
		Device Connection Control
		Device Permission Control
		Phone settings
		Bluetooth setting
		WiFi settings
		Configure Wi-Fi hotspots
		Select preferred phone
		Select device to use music
		Select equipment information
		Select device to use carplay
		Select device to use call
		List of known devices
		Serial number (IMEI)
	Connected Device	Connect new phone
		Connect new music player
		Connect Apple CarPlay
		Connect Android Auto

	Media setting	
	Navigation setting	Route Overview
		Avoid
		Alternative routes
		Display routes when starting route guidance
		Further navigation settings
	Notification centre settings	Receive vehicle messages
		Receive smartphone messages
		Receive information messages
	Set date and time automatically	on / off
	Set time manually	Time selection control
	Set date manually	Date selection control
	Set time zone automatically	on / off
	Set time zone manually	Time zone list selection
	Set time format	12h / 24h
	Set date format	DD.MM.YYYY MM/DD/YYYY YYYY-MM-DD
	Speed and Distance	km/h, km mph, mi
	Temperature	°C °F
	Consumption	l/100km mpg (US) mpg (UK) km/l
	Standby	TBD
	Software information	TBD
	Free and Open Source Software Notice	TBD
	Privacy	Legal Notice
		Data Privacy Information
	Set-up assistant	TBD
	Reset system to factory settings	TBD
Sound Effects Settings	Advanced Sound Effects	Treble and Bass
		Sound Field Focusing
		Surround (only Bose)
		Linear (only Bose)
		AudioPilot (only Bose)
		Smooth (only Burmester)
		Surround (only Burmester)
		Live (only Burmester)
		Sound Conditioner (only Burmester)
		Balance and fader
		Loudness
		Channel Settings
		Speed-Adjusted/-Dependent Volume Control
	MOST Bus	Bose Surround
		Bose Linear
		Burmester Listening Position
		Burmester Smooth
		Burmester Surround
		Burmester Live

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	Other Settings	
Others	Text Language	Languages Available in the Device
		Keyboard
		Languages Required for User Manuals
	System Upgrade (Update)	Upgrade (update) via USB
Radio Features	Features Required	Phase Diversity (FM/AM)
		MRC (DAB)
		Background Scan

5. RF frequency

FCC Frequency	GSM 850	824 ~ 849	869 ~ 894
	GSM 1900	1850 ~ 1910	1930 ~ 1990
	WCDMA Band II	1850 ~ 1910	1930 ~ 1990
	WCDMA Band IV	1710 ~ 1755	2110 ~ 2155
	WCDMA Band V	824 ~ 849	869 ~ 894
	LTE Band 2	1850 ~ 1910	1930 ~ 1990
	LTE Band 4	1710 ~ 1755	2110 ~ 2155
	LTE Band 5	824 ~ 849	869 ~ 894
	LTE Band 7	2500 ~ 2570	2620 ~ 2690
	LTE Band 12	699 ~ 716	729 ~ 746
	LTE Band 13	777 ~ 787	746 ~ 756
	LTE Band 17	704 ~ 716	734 ~ 746
	Bluetooth- SISO	2400 ~ 2483.5	2400 ~ 2483.5
	Bluetooth LE- SISO	2400 ~ 2483.5	2400 ~ 2483.5
	Wi-Fi 2.4GHz- SISO	2400 ~ 2483.5	2400 ~ 2483.5
	Wi-Fi 5GHz (U-NII-1) MIMO 2*2	5150 ~ 5250	5150 ~ 5250
	Wi-Fi 5GHz (U-NII-3) MIMO 2*2	5725 ~ 5850	5725 ~ 5850
	GPS L1 C/A	/	1559 ~ 1610
	GLONASS G1	/	1559 ~ 1610
	Galileo E1	/	1559 ~ 1610
Antenna Gain	FM	/	87.5 ~ 108
	AM (MF)	/	526.5 kHz to 1606.5 kHz
	DAB	/	174 to 240
	WWAN antenna gain: 6.85 dBi Bluetooth: 2.90 dBi Wi-Fi 2.4GHz: 5.90 dBi Wi-Fi 5GHz: 7.80dBi		

6. CE Caution:

RF Exposure

This equipment complies with CE radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

EU DECLARATION OF CONFORMITY


Hereby, PATEO CONNECT Technology (Shanghai) Corporation declares that the radio equipment type PCCM Plus 997/987 II/ PCCM Plus 991/981 I are in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following Internet address: <https://www.pateo.com.cn/>

Restrictions in the 5 GHz band:

According to Article 10 (10) of Directive 2014/53/EU, the packaging shows that this radio equipment will be subject to some restrictions when placed on the market in Belgium (BE), Bulgaria (BG), the Czech Republic (CZ), Denmark (DK), Germany (DE), Estonia (EE), Ireland (IE), Greece (EL), Spain (ES), France (FR), Croatia (HR), Italy (IT), Cyprus (CY), Latvia (LV), Lithuania (LT), Luxembourg (LU), Hungary (HU), Malta (MT), Netherlands (NL), Austria (AT), Poland (PL), Portugal (PT), Romania (RO), Slovenia (SI), Slovakia (SK), Finland (FI), Sweden (SE), Turkey (TR), Norway, Switzerland (CH), Iceland (IS), and Liechtenstein (LI).

The WLAN function for this device is restricted to indoor use only when operating in the 5150 to 5350 MHz frequency range.

	ES	LU	RO	CZ	FR	HU	SI
	DK	HR	BE	BG	DE	EE	IE
	EL	IT	Cy	LV	LT	SK	MT
	NL	AT	PL	PT	FI	SE	TR
	NO	CH	IS	LI			

The radio equipment is so constructed that it can be operated in at least one Member State without infringing applicable requirements on the use of radio spectrum.

Manufacturers:

PATEO CONNECT Technology (Shanghai) Corporation

Room 3701, No. 866 Dongchangzhi Road, Hongkou District, Shanghai, 200080, P.R.China

7. FCC Regulations

- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
 - Reorient or relocate the receiving antenna.
 - Increase the separation between the equipment and receiver.
 - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
 - Consult the dealer or an experienced radio/ TV technician for help.
- Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. To comply with FCC RF Exposure compliance requirements, this grant is applicable to only Mobile Configurations. The antennas used for the transmitter must be installed to provide a separation distance of at least 24cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

8. ISED Statement

ISED STATEMENT

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s).

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference,

including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

In order to avoid the possibility of exceeding the ISED radio frequency exposure limits, human proximity to the antenna shall not be less than 24cm (9.5 inches) during normal operation.

Afin d'éviter la possibilité de dépasser les limites d'exposition aux fréquences radio de la IC CNR102, la proximité humaine à l'antenne ne doit pas être inférieure à 24cm (9.5 pouces) pendant le fonctionnement normal.

9. Ending

This concludes the document